A study on
digital-based argumentative writing in English
of South Korean university students

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Abstract

In higher education in South Korea, English proficiency has been specifically emphasised by the government (Kang, 2015; Kang, 2018; Kim, 2017; Shim & Park, 2008; Williams, 2015). However, writing skills have had little attention in education settings, including higher education institutions (Kim, 2018; Shin, 2018; Park, 2020; Shin & Hyun, 2020; Yu, 2019), despite a series of educational reforms.

Students in South Korean higher education are now facing practical and specific needs for argumentative writing in English (Shim, 2016; Shin, 2018). However, the overall context of English education does not fully reflect their real needs (Kim, 2018; Kwon, 2012; Kwak, 2017; Shim, 2016). South Korean universities require their students to reach a specific level at one of the English proficiency tests (Kim, 2018; Ma, 2018; Shim, 2016), most of which include at least one argumentative writing task. Additionally, the certificate of English proficiency test is widely used as the basic skills reference for their career (Kim, 2018). In the meantime, writing proficiency has increasingly gained its own weight in English language tests (Kim, 2018; Ma, 2018; Shin, 2018), adding to the burden on students to develop their writing proficiency (Kim, 2018; Ma, 2018).

Despite students' need for improvement in English writing proficiency, including English argumentative writing, writing courses given by South Korean higher education institutions are still rare (Kim, 2018; Ma, 2018; Shin, 2018; Yu, 2019) and often allow little room for reviewing tasks (Kim, 2018; Ma, 2018; Shim, 2018), even though they commonly use a process-based approach. Furthermore, in immediate response to their needs, higher education institutions in both the public and private sectors have maintained narrow academic attention, focusing on test-specific writing skills (Kim, 2018; Shin, 2018). All these situations have resulted in a lack of educational opportunities for students to receive theoretically and systematically well-designed instruction in developing their argumentation skills (Shin, 2018).

For South Korean students learning English as a foreign language (EFL), argumentative writing in English includes acquiring an understanding of and the skills for both critical thinking and English-specific conventions for the target genre of writing (Ahn & Park, 2019;

Choi, 2008; Shim, 2016). To promote a fast and concrete understanding of argumentation in English, representative organisational structures are often used in instructional practices. While many of the courses for English argumentative writing in South Korea are limited to the delivery of instructions, or creating a rough claim-evidence link in a paragraph, this simple formula-based approach may have a limited influence on the level of argumentation that university students in South Korea are able to develop (Choi, 2008). To enhance students' in-depth knowledge of and skills for making arguments in English, a systematic and effective instructional model is necessary, targeting argumentation development and investigated by rigorous research. However, with a traditionally narrow focus on writing in English education, studies on English writing itself, including argumentative writing, have been limited, despite the importance of this area.

As a way of introducing systematically presented models into instruction in English argumentative writing, the Toulmin model can be an effective option. It suggests a detailed, sequenced, intensively explained process for the logical framework for writing in English. In this sense, it is necessary to explore how to modify and apply Toulmin's components into the courses for English argumentative writing in South Korean higher education.

In addition to the practical applicability of the Toulmin model, it is necessary to consider the common context in which writing courses in South Korean higher education institutions provide some phases for drafting and revision/editing, which are broadly anchored in the process-based writing approach. Considering the practical challenge caused by a lack of time for drafting in writing courses (Kim, 2018; Ma, 2018; Shim, 2018), online-based classes can be a better option, enabling more flexibility in time and space. Even before the Covid-19 outbreak, diverse synchronous and asynchronous digital writing environments have been utilised in the field of higher education in South Korea to enhance students' writing performance and also increase the connectivity between learners and teachers. However, the digital environments for English writing in South Korea are still based on a lack of rigour in terms of research evidence, which signals the need for more research into how best to develop digital writing platforms and incorporate necessary support for users.

With the two main areas of English argumentative writing and digital learning environments for writing combined, this study explores the effectiveness of a digital-based argumentative writing course in South Korea, as well as the pedagogical implications. To investigate the effects of digital course development for instruction in English argumentative writing for university students in South Korea and derive insights in digital course design for English argumentative writing for university students in South Korea, this study used a sequential mixed-methods design: quantitative phase followed by qualitative phase for collection and analysis of data sets. The English argumentative writing course in this study applies the Toulmin model (1958; 2003) as a specific teaching strategy, with a cycle of drafting and exchanging feedback using the process-based writing approach. To provide the online group with a digital-based collaborative writing[1] environment for feedback exchanges, the writing platform, *Scholar*, was used. In this study, 43 undergraduate students in South Korea participated in a writing course for one semester, 22 participants in a control group (offline course) and 21 participants in an intervention group (online course). They participated in pre- and post-writing tests, two sessions of interviews, and narrative writing for reflection. Also, ten university teaching staff and e-developers took part in one individual interview session each, to provide professional views on the online instructional design that is implemented in the English argumentative writing of this study.

In terms of the effectiveness of the online writing course for developing argumentation skills in English, the findings from the quantitative analysis show both online and offline courses had a positive impact on improvement and retention. Although the statistical results present no indication that the online class had higher learning gains than the offline group by any significant difference, this result is supported by the findings from the qualitative analysis, which indicates that the online group performed better in terms of the quality and the quantity of peer feedback. In addition, the findings from the qualitative analysis suggest that the writing course in this study helped students to develop their knowledge and sensitivity in argumentation in English, and the online course facilitated enhanced engagement in feedback tasks. Moreover, despite recognising the value of face-to-face

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[1] In this study, the term, 'collaborative writing,' means individual student's essay writing supported by external feedback, including peer and teacher feedback, not co-authorship in writing one shared essay together.

interaction for English argumentative writing, the qualitative findings suggest that the anonymity and convenience of the online writing course in this study encouraged participation in feedback. Finally, the findings from teaching staff and e-developer interviews reveal generally positive perceptions of and evaluations of the usefulness and applicability of the Toulmin model for English argumentation development, and the collaborative writing environment of *Scholar*.

Impact Statement

Although English proficiency in argumentative writing is more required than ever before in South Korean higher education, where English is taught as a foreign language, it is still difficult for students to find appropriate writing courses that develop their understanding of and skills in English argumentation (Kim, 2018; Shin, 2018; Yu, 2019). The lack of focus on English writing has resulted in few English writing courses in South Korean higher education institutions (Kim, 2018; Shin, 2018; Shin & Hyun, 2020; Yu, 2019), which instead maintain a test-focused approach to English writing (Kim, 2018; Shin, 2018), especially argumentative writing. This narrow focus on argumentative writing fosters students' reliance on the private sector to acquire testing skills and writing techniques for organisational structure and key expressions, which is far from developing proficiency in English argumentation.

Given the fact that writing instruction is commonly accompanied by feedback and assessment on essays, some digital writing tools have been used for teaching English argumentative writing, particularly in the private sector, to support or replace traditional writing classrooms. However, most of these tools are limited to providing writers with accuracy-focused feedback, using Automated Writing Evaluation (AWE) or Automated Essay Scoring (AES) systems, incorporating limited capacities of instruction in critical thinking and writing strategies. The context of use for digital writing tools also indicates test-centred writing practices, discouraging students from developing in-depth knowledge of and skills for argumentative writing.

Considering the potential of a representative exemplary framework to facilitate students' understanding of English argumentation structure, it is essential to critically evaluate and practically implement a specific model for English argumentation to draw out its pedagogical implications. However, in the South Korean academic context, the currently limited focus on writing in English education can be attributed to the lack of studies in the field of English writing, including argumentative writing. Therefore, there are few practical applications of English argumentation models to improve classroom instruction, while instructional tools have been under-researched.

As a practical and systematic framework for English argumentation, the Toulmin model (1958; 2003) has already been used for academic writing in some professional areas. This elaborated argumentation model for writing sheds light on how the learner's argumentation skills develop, which has not been actively discussed and studied for creating writing courses and instructional materials that target argumentation development.

Moreover, although writing courses in South Korean universities often embrace some characteristics of the process-based writing approach, using a cycle of drafting and proofreading, due to time constraints they have little room for feedback exchanges in essay development (Kim, 2018; Shim, 2018). With a plethora of newly developed digital learning interfaces and devices, many of the higher education institutions in South Korea have actively implemented a variety of digital and remote learning options for their students. It is necessary to note that argumentative writing is generally required in higher education – where e-learning is widely used – rather than in any other education stage in South Korea. However, the possible benefits of digital advances have so far had little influence on developing collaborative learning environments for English writing, including argumentative writing, in South Korean higher education institutions. Moreover, digital tools for writing need to be developed and implemented based on relevant pedagogical implications, so that writing instruction will become more adaptable, not just for the students' independent learning beyond the classroom.

All in all, this study contributes to research findings in the field of EFL university students' argumentative writing development, and, therefore, development in instructional design and resources for ESL argumentation. The research findings of this study provide practical knowledge of and pedagogical implications for public and private sectors, which will be relevant to the English curriculum and materials development, offline and online English education institutions, and English writing teaching staff. It is anticipated that the writing course design of this study, both online and offline, might be wholly or partially applied to produce programmes for English academic writing, including English argumentative writing. To allow for the dissemination of this study to practitioners in relevant fields, part or all of the findings will be submitted to academic journals related to Applied Linguistics, English writing, academic writing, digitalised language learning and teaching, including: The Journal

of Academic Writing, British Association of Lecturers in English for Academic Purposes (BALEAP), European Association for the Teaching of Academic Writing (EATAW), Journal of Literacy Research (JLR), etc. It is expected that the publication of this study will encourage EFL practitioners to understand the pedagogical implications of their students' understanding of English argumentation and, then, to develop specific writing courses and teaching materials to improve their argumentative writing.

Chapter 1 Introduction

1.1 Context of English Learning in South Korea

In the case of South Korea, English as a foreign language has been regarded as one of the core subjects in the school curriculum and one of the compulsory liberal arts subjects for all students in higher education. This means that, as a compulsory subject in the national primary and secondary curriculums, English plays an important role in academic achievement at every level of school education and, ultimately, university admission. The mandatory class hours for English as a subject, which are officially allocated to primary and secondary school curricula by the government, also demonstrate the importance which the subject plays in schools. In 2008, under a range of new policies, English education was strengthened with increased class hours in the primary school curriculum (Bae et al., 2011).

Even beyond its importance for university entrance, universities normally require students to take at least one English course as a compulsory subject in liberal arts (Kim, 2018). This general trend in running compulsory English courses in South Korean higher education can be partially supported by research on the current state of English courses in the country (Kim & Lee, 2019; Kim & Lim, 2013; Ko, 2014; Shin, 2018). However, these studies have been limited to looking at some cases of university programmes for English (Kim, 2018; Shin, 2018; Yu, 2019), or at the practice of English teaching among all South Korean higher education institutions (Kim, 2018; Lee, 2014; Ha, 2017; Shin, 2018).

English is still emphasised in the form of foreign language certificates such as TOEFL, IELTS and so on, which are used as part of an individual's basic skills reference (Choi, 2008). In fact, the emphasis on English proficiency as an essential skill in one's academic career is based on global competitiveness rankings as a goal of the Korean government (Bae et al., 2011; Kang, 2015; Kang, 2018; Kim, 2017; Shim & Park, 2008; Williams, 2015), along with major education reforms which started in the 1980s (Bae et al., 2011). In the light of these reforms, higher education institutions started to implement English-medium instruction (EMI) in the 1990s (Kang, 2018; Kim, 2015; Kim, 2017; Kim & Lim, 2013; Park, 2011; Shim & Park, 2008; Williams, 2015), which has had a strong impact on English education, moving towards globalisation in higher education in South Korea. In this sense, it will be necessary to look at

the social and political background surrounding English education and its different practices in South Korean higher education. A detailed analytic explanation of the historical context in South Korean education will later be presented in the relevant sub-section.

1.2 The Current Position of Argumentative Writing in South Korea

Among the four main language skills – *listening, speaking, reading and writing* – writing is unusually considered one of the most difficult to acquire, as writing is used to assess progress and make academically important decisions (Jun, 2008; Kim, 2018; Leki, 2007). Despite the time and effort which non-native writers of English invest in this skill, they are highly likely to have difficulties in writing English (Belcher & Connor, 2001; Graham & Perin, 2007; Hyland, 2003; Jun, 2008; Kim, 2018; Kim & Kim, 2005; Kim, 2020b; Leki, 2007; Ma, 2018; Park, 2020; Shin & Hyun, 2020; Spack, 1997; Xin, 2007). However, university students in South Korea perceived that writing was the least important skill for their current and future success (Shin & Hyun, 2020), while listening was the most important for their current EMI success (Kym & Kym, 2014; Shin & Hyun, 2020; Yu, 2019). Compared with primary and secondary education, English writing in the South Korean higher education curriculum might have more room in courses that combine all four skills, but a lower emphasis on writing shows that it is considered the least important area in classrooms (Kim, 2020b; Kwon, 2012; Ma, 2018; Ryu, 2014; Shin & Hyun, 2020; Yu, 2019). Also, whereas most of the compulsory English courses in Korean universities are not for a specific skill but for comprehensive skills, including the four English skills (Kim & Lee, 2019; Kwon, 2012; Kwak, 2017; Ma, 2018; Shin, 2018; Yu, 2019), many of the general courses focus more on listening, speaking, and reading, rather than writing (Kwon, 2012; Shin & Hyun, 2020), and spend more time on these three skills than on writing (Kwon, 2012; Shin & Hyun, 2020).

The greater reliance on spoken English, such as listening and speaking skills, is a result of English education reforms in South Korean higher education since the 1990s, which emphasised practical English skills with the introduction of Communicative Language Teaching (CLT) as a new English teaching method (Kim, 2007; Kim & Lim, 2013; Kwon, 1995; Lee & Kim, 2010; Park, 1997; Song & Park, 2004). In the process of English education reforms in the higher education sector, writing has had a relative lack of emphasis in

compulsory English courses (Kwon, 2012; Shin, 2018; Shin & Hyun, 2020; Yu, 2019), either excluded or provided as a one-time task (Ryu, 2014; Ma, 2018). However, since the writing test was introduced in TOEIC in 2006, the importance of writing has been on the rise in higher education (Ma, 2018; Shin, 2018), and, therefore, writing-focused English courses started to open in some universities in South Korea (Kim, 2018; Kwon, 2012; Shin, 2018; Tak, 2012; Yu, 2019). Considering the practical importance of writing skills for English writing tests such as TOEIC, TOEFL and IELTS, it is likely that argumentative writing as a type of formal writing started to be introduced and implemented for the presentation of understanding and knowledge of a topic in university-level English writing courses. Although some English courses in universities focus partially or mainly on writing arguments for English tests, it is undeniable that most teaching in this genre is not based on the actual needs of the students (Choi, 2008; Shim, 2016).

In fact, argumentative writing is considered more relevant to evaluation and assessment (Shim, 2016), rather than the usual writing tasks in South Korea. This is because argumentative essays on specific topics, unlike free writing essays for creativity, are generally learned and written to present formal writing skills and English language conventions, and these essays are often evaluated by teachers or testers for specific writing assessment measures (Choi, 2008; Shim 2016). The importance of writing proficiency, which is tested as part of holistic English proficiency by official English-related tests such as TOEFL, IELTS and so on, is an extension of its assessment-related functional purpose in Korean society (Choi, 2008; Shim, 2016). In addition to the fact that writing seems to be one of the most difficult of the four language skills (Jun, 2008; Kim, 2018; Park, 2020; Shin & Hyun, 2020), and therefore among the last to be learned, the frequent use of argumentative writing as a way of verifying writing proficiency might have led those learning English in South Korean higher education to narrow their academic attention with test-specific writing courses, which are popular in universities and private institutions (Choi, 2008; Kim, 2009; Kim, 2018; Shim, 2016).

As official English test scores are used as one of the course requirements for higher education in South Korea (Kim, 2018), there has been a growing need to improve writing proficiency for argumentation (Shim, 2016), which is a type of writing proficiency. However,

the general context of outcome-based learning for English argumentative writing has encouraged many of the courses to focus mainly on preparation for English writing tests (Choi, 2008; Shim, 2016), facilitating argumentation development only on a superficial level (Ahn & Part, 2019; Choi, 2008). The courses for argumentative writing often include copying and memorising conventional organisational structure, undertaking a set of drills and exercises on arguable writing topics (Choi, 2008), developing a simple pair of a claim and its reasons, and introducing sample essays on given topics. Other than exercise-based sessions, courses for relatively more advanced learners can be made up of sessions for actually writing essays of around 300 words, which is the minimum length of TOEFL essays, and then revising or editing them.

While pattern-based courses, as an easy and quick introduction to argumentative writing, might help Korean English learners to improve their argumentative writing skills, they are not enough for the students to develop the quality of argumentation itself (Choi, 2008). In other words, argumentative essays which are created through technical training look well organised on the outside, but on the inside may lack logical links, coherence, consistency or systematic connection (Ahn & Part, 2019; Choi, 2008; Chung, 2012; Kim, 2007). Consequently, the overpacking of skills for argumentative writing, which are often taught in argumentative writing courses, can make South Korean students neglect the process of establishing arguments in English (Choi, 2008), by failing to identify the logical gaps between sentences in their essays. However, the best way to demonstrate and instruct reasoning in students might be one of the most daunting tasks for teachers. That is because the critical thinking required to identify the coherence of a logical argument is a different issue (Chung, 2012), due to the linguistic and cultural differences between Korean and English (Ahn & Part, 2019; Choi, 1988; Choi, 2008; Chung, 2012; Kang & Oh, 2011; Kim, 2005; Kim, 2007Park, 2014; Wang, 2000), and not easy to cover in English writing courses.

The practical learning environment for argumentative writing in South Korea signals a need for good models of argumentation, to show explicitly how the building blocks for logical argument are systematically arranged, so that students can understand and follow the actual process of piecing together the blocks of logic to complete more than one paragraph of an argumentative essay. As the Toulmin model (1958; 2003), which was originally created

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for the field of law but has since been used for academic writing in different fields of specialisation, illustrates a detailed visual procedure for making a claim, this model can help South Korean students to identify, apply and test their logical process for argumentative writing. This model has also been under-researched in both English learning and teaching as a foreign/second language, although the South Korean English learning environment has good potential for teachers to instruct students in how to be convincing and for students to follow its logical framework step by step.

1.3 Process-based Writing Approach in the General English Writing Courses

Regardless of the main purpose of argumentative writing courses in South Korea, English argumentative writing courses generally include the process-based writing approach, which goes through some drafting stages with peer and/or teacher feedback and revision/editing. It is common for English writing courses in South Korea, including argumentative writing courses, to be followed by actual writing and proofreading undertaken by students, which is sometimes accompanied by teacher feedback. In fact, many of the English learners have already been doing their own writing work via a series of recursive and collaborative composing processes, which are key aspects of the process-writing approach, encouraged since the 1960s.

With the process-based approach embedded in English argumentative writing courses, the composition of learning tasks in the courses is based on the level of target students, who are at a low- and intermediate-level of writing and available class time over one semester. This indicates that students usually lack the English writing proficiency to produce a long essay, exchange confident feedback with each other or else undertake some drafting stages for a writing topic. Also, teachers rarely spend enough time providing students with detailed proofreading and editing (Kim, 2018; Ma, 2018; Shim, 2018; Tak, 2012). These practical limitations imply that South Korean students in higher education develop their argumentative essays by individual work, rather than collaborative work, and also through some drafting stages for themselves. As a result, students cannot have the full chance to gain feedback from others for progress in their argumentative essays (Kim, 2018), which the process-based writing approach can offer.

However, compared with studies on other English skills, studies on writing, including studies on process-based writing, are relatively rare (Shin, 2018) and traditionally have a narrow academic focus. Most of the studies on English writing in South Korea are about the application of process-based writing approaches into school curricula for teaching English writing (Joo, 2010; Keum, 2007; Oh, 2012; Seo, 2011; Shin, 2019; Yang, 2018), suggestions on English writing instruction based on its approach (Joo, 2010; Jwa, 2020; Kim, 2020a; Kim, 2020b; Park, 2020; Shin, 2019; Oh, 2012; Yang, 2018) and rhetorical differences between Korean and English argumentative writing (Choi, 1988; Jwa, 2020; Kang & Oh, 2011; Kim, 2005; Yoon, 2018; Wang, 2000). Recently, some corpus-based studies, including Coh-Metrix analysis, on Korean students' English argumentative writing, have been conducted (Ahn, 2018; Choi & Park, 2020; Park, 2014; Jeon & Choe, 2019; Jeong & Kim, 2014). Therefore, it is important to investigate how to develop instructional design, particularly for English argumentative writing, and apply it to the online learning environment.

In terms of time restrictions in class hours (Kim, 2018; Ma, 2018; Shim, 2018; Tak, 2012), students should have their own time to write and proofread their essays beyond the classroom. For collaborative tasks such as revision and editing by peers, they might need some extra time to read and provide feedback on the essays of others. Considering the possible benefits of collaboration in process-based writing, which is subject to active participation and collaboration between peer writers, teachers need to come up with possible and realistic ways to save time for and facilitate collaborative work. As an easy and convenient way of exchanging work without time and space constraints, digital platforms have been providing and expanding their potential for interactive working as a type of community of practice (Lantolf & Torne, 2006; Vygotsky, 1987). However, as South Korean universities rarely offer online English writing classes for their students (Ryu, 2014), many of the online courses for English writing in South Korea are non-free courses offered by private institutions (Ryu, 2014). In this sense, it is important to consider how to enhance interaction for collaborative learning in a writing community during process-based writing classes, along with making sure that the digital affordances for English argumentative writing are utilised and maximised. Therefore, while English argumentative writing courses in South Korean higher education rely on the process-based writing approach, they should take more care of

the basics in English argumentative writing, not just to prepare for English writing tests but also to develop argumentation skills in English.

1.4 Aims and Research Questions of This Study

This study aims to explore and derive instructional and design-relevant insights for English argumentative writing in the South Korean digital-based learning environment. It is based on the writing-process approach for a general course and includes Toulmin's logical framework for explicit and specific argumentation instruction. The main research question is: 'What are the reported effects of digital course development for instruction in English argumentative writing for university students in South Korea?' To answer this question, four subsidiary questions were generated: 'What are the effects of the use of digital platform for English argumentative writing on argumentation for learners?', 'What are the effects of the use of digital platform for English argumentative writing on learners' retention for argumentation?', 'What are the learners' attitudes and opinions of the used instructional design and digital environments for argumentation improvement?' 'What are the views of specialists in English education on argumentation on the digital instructional design of existing issues and further modification?'.

For this research, a sequential mixed-methods design was used. It involved collecting data in two phases: first, a quantitative phase, and then a qualitative phase to explain or follow up on the initial data in more depth. In the first, quantitative phase of the study, pre- and post-test I & II data was assembled by evaluating participants' argumentative essays, to be collected from 43 university students in South Korea. This was performed to explain the effects of a series of digitalised learning designs for English argumentative writing, based on the process approach to their writing proficiency. The delayed second post-test was conducted to investigate the long-term retention of the participants. In the second qualitative phase, 21 participants in the intervention group were interviewed in groups for two sessions to explore Korean university students' attitudes towards and perceptions of the developed instructional design. After the first interview session, the delayed second interview sessions were performed to find out how their thoughts had changed as time went on and to reduce peer effects on their discussion. Also, for a more in-depth study on

their attitudes and perceptions, the intervention group was asked to submit reflective statements, which were a kind of narrative essay on their thoughts and feelings when they were going through each topic. Additionally, education professional interviews with five English writing lecturers in South Korean universities and four e-learning content and/or programme planners and developers in South Korea were conducted, to explore the applicability of the developed digital instructional design to the South Korean digital learning environment for English argumentative writing.

Chapter 2 Literature Review I: Writing Development

2.1 The Background to English Education and English Medium Instruction in South Korean Higher Education

As briefly mentioned in the introduction, it is necessary to understand the social and political changes which provided the foundation for English education, especially in higher education, in South Korea. It is noticeable that English education policies in higher education in South Korea have been firmly based on clear social and economic requirements, which have also been part of the future-oriented and goal-oriented perspectives for the connection between South Korea and the rest of the world.

From the 1980s to the mid-1990s, the South Korean government undertook major educational changes through national reforms, moving into the age of information and globalisation in the mid-1990s especially (Bae et al., 2011). With the aim of 'advocating liberalisation, diversification, and specialisation, numerous reforms were introduced, including student-focused university operation, university diversification and specialisation, systems to support [the] self-efforts of each university, liberalisation of university student quotas, globalisation and advancement of university education and research, and expansion of job-related continuing education opportunities' (Bae et al., 2011, p. 26). Among the drastic revamps across the field of education, a range of new higher education policies was introduced. Since the late 1990s, in line with the stronger competitiveness of higher education institutions, 'Brain Korea 21 (BK 21), the New University for Regional Innovation (NURI), university specialisation, and university structural reform projects' (Bae et al., 2011, p. 26) were all part of the comprehensive national schemes to improve the capability of higher education and research.

In the meantime, as South Korea started to lay greater stress on the value of English, with experience hosting major international events raising the banner of globalisation across the country, as well as advanced competitiveness in the global markets of the 1980s, higher education institutions started to roll out English-medium instruction (EMI) in the 1990s (Kang, 2018; Kim, 2015; Kim, 2017; Kim & Lim, 2013; Park, 2011; Shim & Park, 2008; Williams, 2015). Among the range of national schemes in the South Korean higher education

sector, BK 21 broadly reflected the underlying preference of globalisation features, especially the selection criteria for applied science research groups in this project. This national project was launched in 1999, aiming to enhance both the quantity and quality of research by increasing the internationalisation of Korean universities (Bae et al., 2011; Kang, 2018). To achieve these goals, its weighting schemes for the globalisation of graduate education were comprised of three indicators: 'share of lectures in English only, percentage of foreign faculty and percentage of foreign students,' which made up 5% in the education area (25% in total) (Seong, Popper, Goldman, Evans & Grammich, 2008, p. 217).

Besides the EMI values, which were embraced in the BK 21 project, the Study Korea Project, as another national plan for internationalisation in higher education, demonstrates the importance of EMI. This project has been running since 2004 to recruit more international students into South Korean higher education institutions and, ultimately, to build up a globally strong foundation for education and employment in South Korea (Kang, 2015; Korean Association of International Educators, 2013; Ministry of Education and Human Resources Development, 2005). This national initiative has included expanding English-taught programmes by increasing the number of bilingual classes and foreign academic staff (Korean Association of International Educators, 2013). In line with the national drive towards internationalisation in the higher education field, about 30% of the university courses in South Korea are taught in English (Byun, Jon & Kim, 2013; StudyinKorea, n.d.), and some universities are providing English-only courses in a Department of International Studies (StudyinKorea, n.d.).

In addition to the Study Korea Project, the national initiative of globalisation in Korean higher education took one more step forward with the World Class University (WCU) project. This scheme started in 2008 to internally nurture talent in South Korean academia (Kang, 2015; Korean Association of International Educators, 2013), based on the premise that enhanced competitiveness in higher education can create economic value and engagement in the network of international knowledge, which can, in turn, promote internationalisation (Kang, 2015). This project for promoting research-oriented South Korean higher education institutions had three major aims: creating new departments or courses with both foreign and domestic scholars involved, inviting and employing full-time foreign scholars in existing

departments for collaborative teaching and research, and supporting the invitation and utilisation of the world's best scholars on a non-full-time basis (Korean Education Development Institute, 2012, p. 13). Although this project did not include explicit statements on EMI, it was assumed that the English language would be used as the medium of instruction and research for connecting and recruiting international academic personnel (Kang, 2018).

For South Korean higher education institutions, their level of internationalisation is one of the evaluation factors in the higher education sector, applied by the Development Assistance Committee (DAC) of the Organisation for Economic Co-operation and Development (OECD). As this level has improved, the universities in South Korea have become more appealing to foreign students and researchers (Bae et al., 2011). As a result, an increased number of international students and scholars have entered South Korean higher education, encouraging the universities to provide English-taught courses (Bae et al., 2011; Kang, 2018; Kim, 2017). While the number of non-Korean students in South Korean universities continues to increase, the number of South Korean students studying abroad has been increasing more drastically (Bae et al., 2011; Mani & Trines, 2018), since the government introduced a deregulation policy in the higher education sector, which included more liberal studying abroad policies introduced in the 1990s (Bae et al., 2011). The increasing number of Koreans studying at an overseas higher education institution can also increase the need for EMI courses in Korean universities, in the sense that EMI was expected to enhance readiness or preparation for English-only classes before studying abroad (Brumfit, 2004; Kym & Kym, 2014).

All in all, the universities in South Korea have been swept up in the tide of liberalisation and globalisation, and have begun to focus more on enhanced national competitiveness and productivity. A range of internationalisation initiatives, including the expansion of English education at every level and EMI programmes in higher education, have together led to a greater emphasis on English in education.

2.2 Constructivism and Sociocultural Theory

Language acquisition is a fundamentally cognitive process. Therefore, teachers of a foreign language are committed to discovering effective ways to help students learn a target language. In the sense of abstract activities, which occur in the process of learning a language in a human brain, teachers should be well aware of how linguistic knowledge develops in order to find out what can facilitate this process. Among a variety of acquisition theories, cognitive psychologists have indicated and explained how human beings learn a language and how their language acquisition can be effectively promoted. The following sections briefly outline constructivism and sociocultural theory, which is based on Vygotskyan constructivism. Technology-enhanced writing development, as well as the process-based writing approach, is founded on these two theoretical frameworks, both of which were the fundamental grounds of writing development and second language learning circumstances. By dealing with these learning theories, which are related to each other, the theoretical background and pedagogical dimensions for this study will be established.

2.2.1 Constructivism in Learning

In the 20th century, constructivism emerged as a philosophical viewpoint on the construction of knowledge. Constructivism is an educational theory that explains how learners' understanding and knowledge are constructed, based on their prior experience and knowledge. In other words, constructivism is a theory of knowledge, *epistemology*. For this theory, the widely discussed philosophical views of Jean Piaget (1950; 1967) and Lev Vygotsky (1978), the two outstanding constructivists, are vital. In particular, for the constructivism framework, two major theoretical branches have been developed: the individual constructivism of Jean Piaget and the social constructivism of Lev Vygotsky.

First of all, constructivism originated from Jean Piaget's work in cognitive development, which is defined as individual cognitivism. Piaget (1950; 1967) started to see children's play and exploration as an important process in their cognitive development, which had not been seriously considered before. Piaget's views were focused on the knowledge formation of independent learners through assimilation and accommodation. Individuals assimilate new information by incorporating it into their current knowledge framework, and, at the

same time, they accommodate new information by modifying their existing cognitive framework to include this new information.

There are a variety of views among constructivists, but there are still several common features. According to constructivism, human beings construct knowledge and meaning based on their own experience. This theory emphasises the process of learning. Constructivism sees that learning takes place based on previous knowledge, the *schema*, by selecting and transforming information, establishing hypotheses and making decisions. It is meaningful that instruction should be planned and developed based on this prior knowledge. Teachers as facilitators should help learners to discover facts or establish new ideas, providing rich and authentic sources to learn from. This is why constructivism is called a problem-oriented learning approach, in which learners are expected to construct their own reality anchored on personalised understandings of the learning materials (Beatty, 2003). Through this knowledge-discovering process, learners keep building new schemata and extending existing ones.

In this theory, learners' own perspectives and problem-solving experiences are highly regarded. Their cognitive imbalance stimulates learning, enabling authentic learning to take place. During the learning process, reflective thinking is the driving force, and language is considered important for both thinking and learning. Learners' thinking is stimulated and deepened by communication between the members of the community, that is, their classroom. These concepts support collaboration and negotiation of meaning in learning, which technology-enhanced language learning is firmly based on and which the process-based writing approach fundamentally relies on. Also, learning methods, such as project-based learning, and specific activities and techniques, such as creating graphic organisers and outlining, have been invented to help students construct individual semantic structures of information in the light of constructivist theory. These warm-up activities fall into the category of pre-writing tasks: taking a set of steps to achieve the outcome of a completed piece of writing.

Other than Piaget's individual constructivism, Lev Vygotsky (1978) developed his own constructivist paradigm. Based on Vygotsky's psychological theory, all the mental

functioning of human beings is mediated by symbolic tools or signs as cultural artefacts. Language use is the primary means of mediation, which is the central construct of the theory. The language of humans is used to mediate and regulate their relationship to the world, to each other and themselves. That is to say, our language formulates and shapes our thoughts.

Concerning the pivotal concept in this psychology, which is *mediation*, learning is a mediated process through the use of symbolic tools. More importantly, learning is a socially mediated process. That is another important idea: the social origin of mental functioning. Within this framework, developmental processes occur through participation in a variety of contexts, while language processing is emphasised for the development of higher mental processes. According to Vygotsky (1978), learning takes place through social interaction, rather than through isolated independent processes, and learning also moves from social patterning to individual processing.

With regards to the social nature of learning, Vygotsky's most important heuristic concept is called the Zone of Proximal Development (ZPD), which has triggered numerous research studies in developmental psychology, education and applied linguistics. According to Vygotsky (1978), it represents 'the distance between the actual developmental level as determined by independent problem solving, and the level of potential development as determined through problem-solving under adult guidance or in collaboration with more capable peers' (p. 86). The ZPD has interested educators due to its developmental potential in learning via the sense of assisted performance. In other words, the ZPD indicates that, in the future, one will be able to do independently what one can do today with another's help, which is a positive indication for one's upcoming development. Collaborative learning with others through the ZPD, which includes instructional support measures, known as *scaffolding* (Scheiter, 2014), is the most important finding of Vygotsky and has had a significant impact on education, including language learning. Particularly in instructional settings, which are intentionally designed learning environments, learning through collaboration can stimulate qualitative developmental changes (Lantolf & Thorne, 2006). Therefore, the notion of ZPD can be used as a pedagogical tool as well as a model for development.

More importantly, the fundamental concept of the ZPD, and its practical way of supporting learners via scaffolding, provides strong evidence that the whole classroom setting, including all the learning contents, should be tailored to the needs, levels and any other requirements specific to the background of students. In other words, the ZPD, including scaffolding, allows the active engagement of other people, such as teachers and peers, and the coordinated instructional management of teachers in language learning. Vygotsky's socio-psychological approach also provides a theoretical basis for social-cultural theory (SCT), which is more relevant to this study, and which is one of the language learning and teaching theories that will be addressed in the following section.

2.2.2 Socio-cultural Theory and Second Language Acquisition

Socio-cultural theory (SCT) has its origin in the writings of the Russian psychologist Lev Vygotsky (1987) and his colleagues and has also drawn implications related to language learning and teaching from Vygotskian psychology. Along with Vygotsky's work (1978), other academic work by scholars such as A.N. Leontiev (1978) and James Wertsch (1985) also helped give SCT a theoretical foundation (Ellis, 2008). Whereas socio-cultural second language acquisition is rooted in common aspects of general social approaches, it should not be understood as synonymous with a range of social approaches. This is because socio-cultural theory provides specific claims about how social context and interaction mediate language learning and its relevant research studies (Ellis, 2008). Here, some major scholars and their claims in the area of SCT will be introduced.

Vygotsky, who laid the groundwork of socio-constructivism as a psychologist, considered language as the means for mediating higher levels of thinking. However, Michael Halliday, as a linguist, focused more on the way in which language is used as a tool in communication, and on the communicative use of language to develop language itself (Wells, 1994). While Vygotsky highlighted word-level language for thinking processes, Halliday provided more specific, detailed and structural claims about language, which is a semiotic system ranging from phonological to pragmatical functions. While Vygotsky and Halliday have somewhat different views, they agreed that language is a powerful semiotic tool in the sense that its semiotic system encodes the culture's theory of experience, and enables language users to

interact with each other to coordinate their activity and simultaneously to reflect on and share their interpretations of experience (Wells, 1994, p. 72).

The importance of language as a semiotic tool, which was claimed by Vygotsky and Halliday, was also argued for by Lantolf and Thorne (2006). They explained that language was a communicative activity, which means that it should be understood as associated with social events. Lantolf (2000a) claimed that mediation in second language learning can use social interaction with others or the individual learner's private speech, both of which are genuinely social. Therefore, development is related to 'the appropriation by individuals of the mediational means which others already made available in their environment in order to improve control over their own mental activity' (Lantolf, 2000a). This highlights the notion that social speech becomes internalised as inner speech, which can be self-regulated by the individual. The linguistic interaction which occurs in second language (L2) learning indicates that the L2 acquisition process is shared between the individual and others, and not purely based on the individual (Ellis, 2008).

In the mediating process, verbal interaction is vital, and therefore SCT argues that language learning is processed by dialogic interaction (Ellis, 2008). In this concept of dialogic discourse in language learning, it is important to see how social interaction can help learners to learn a new language. Concerning the issue of how to assist leaners, Lantolf and Thorne (2006) emphasised the ZPD in SCT, because the ZPD is closely related to the development of assisted performance and also provides a formative aspect of assessment, which underlines what learners can do with the help of others, rather than worrying about what they can do alone.

In particular, scaffolding, as a springboard for learners, has shed light on second language or foreign language acquisition (Cromley & Azevedo, 2006; Haghparast & Mall-Amiri, 2015; Hammond et al., 2012; Miller et al., 2015; Lantolf, 2000a, 2000b; Lantolf & Thorne, 2006). Despite different perspectives on the notion and range of scaffolding itself, Hasan (2018) argued that these analytic views share a common feature, saying that 'scaffolding is understood as an expert's supportive behaviour for the novice learner to become independent, to be able to solve a learning problem and carry out a task' (p. 39).

Rahimi and Noroozisiam (2013) mentioned that the social and motivational context of the writing process is important, because writing itself is not considered an individual or context-isolated product any more. In terms of L2 writing, scaffolding can underlie the theoretical basis of support for students in educational settings. For writing skill development, scaffolding is divided into three parts: instructional, cognitive, and motivational (Cromley & Azevedo, 2006). Firstly, learners can be assisted by instructional scaffolding to understand concepts, provide answers, or summarise and plan their tasks. Cognitive scaffolding takes place when a teacher's instructions help learners correct their errors and find solutions on their own. Lastly, learners can be motivated by a teacher's feedback, including both positive and negative responses. The three perspectives of scaffolding focus on the possible assistance from instructors, which poses questions about how they should lead students to better self-regulated learning.

Actually, collaborative learning based on the ZPD has provided theoretical grounds and been actively applied to collaborative writing tasks such as learning writing through feedback from others and computer-mediated communication (CMC) (Hyland, 2014). Moreover, as the affordances of learning tools have drastically improved, a more enriched collaboration between learners can likely take place in a variety of ways, both inside and outside the classroom (Ferris & Hedgcock, 2014; Hyland, 2014). Therefore, teachers should consider how to encourage students to engage with and responsively react to peers to improve their language learning.

When we think about the more pedagogical implications of social constructivism, it is significant that social constructivism emphasises the background of a specific culture where an individual lives. Learners build up their own knowledge, which is influenced by their historical and cultural system, including language. At the same time, social interaction with more knowledgeable members of society is also crucial for the knowledge-shaping process, which means that their common symbolic system should be well adapted for social meaning acquisition. Therefore, it is necessary and important to consider the background and culture which a learner depends on in their learning process, because culturally embedded features affect their knowledge construction.

As SLT supports the inter-relation between academic discourses, including EFL writing, and socio-cultural conventions, it considers students' social and cultural backgrounds to understand their critical arguments when they learn academic EFL writing (Mckinley, 2015). SLT provides a valuable foundation for developing academic discourse and critical thinking as cultural practices, which reflects the social and political context for EFL students' writing tasks (Mckinley, 2015). Concerning critical argument, a discussion for dealing with gaps between opinions is a social activity, embedded in social and political contexts (van Eemeren & Grootendorst, 1984). Therefore, social constructivism can be considered an appropriate lens through which to view EFL writing and argumentation (Mckinley, 2015).

2.2.3 Summary of Constructivism and Socio-cultural Theory in Second Language Acquisition

As social constructivism provides the theoretical background of socio-cultural theory, so socio-cultural theory in second language acquisition encourages a communicative learning environment through dialogic collaboration, facilitating learning via the assistance of others, and thus forming a ZPD (Vygotsky, 1987; Lantolf, 2000a; Lantolf & Torne, 2006). Based on this theoretical foundation, it is more likely that second language learning can be carried out beyond the boundaries of the classroom, with more participants simultaneously contributing to one another's language learning. More importantly, the basic concept of ZPD, and the concept of scaffolding as ZPD's support mechanism, underline the instructional intervention to facilitate language learning, including second language writing (Cromley & Azevedo, 2006; Haghparast & Behdokht, 2015; Hammond et al., 2012; Hasan, 2018; Miller et al., 2015; Lantolf, 2000a, 2000b; Lantolf & Thorne, 2006).

Moreover, social constructivism stresses the fact that learners' background and culture are influential (Vygotsky, 1987; Lantolf & Torne, 2006). This sheds light on the importance of a particular language learning context for second/foreign language learners: for example, linguistic and rhetorical differences between their mother tongue and target language. As genre-based approaches highlight, teachers and course developers should deal with cultural differences, as well as linguistic differences, for teaching materials and instructions. Besides, ZPD teaching methods signal how teachers can assist students to learn in scaffolding interventions, such as writing tasks and feedback in the classroom. In this sense, it might be

necessary to take into account learners' specific characteristics, including culturally and linguistically different conventions between L1 and L2, by considering, planning and managing writing tasks and interaction processes with the target language, rather than leaving the learners to free and autonomous dialogic interactions among themselves.

All in all, the literature that has been reviewed in this section produces the following recommendations:

- Should allow more participants inside and/or beyond classrooms for a more communicative and cognitively challenging learning environment, in order to promote higher critical thinking process based on social constructivism;
- should facilitate interactive and collaborative learning tasks which students can undertake individually or with others' help, to encourage mediating through social interaction, as the ZPD emphasises the constructive potentials of collaborative learning;
- should determine and develop learning materials, and plan their provision in an EFL learning environment, including when to provide teacher feedback, so that students can be assisted to continue tasks by their peers and teacher, as ZPD implies;
- should consider a variety of socio-cultural conventions and characteristics in language, culture, learners, classroom settings and so on, to develop a specific learning course design and materials, which can help to reduce any possible gaps between learners and their target language, and encourage mediation in language learning.

As discussed, constructivism as a learning theory serves as the fundamental foundation for socio-cultural theory, and socio-cultural theory in L2 acquisition provides an overarching rationale behind using a socially interactive environment for L2 learning. In addition to social constructivism and SLT's general properties in L2 language learning, constructivism provides the theoretical basis for the process-based writing approach, which is going to be discussed in the next chapter. Also, SLT influences writing conventions, including ways of developing arguments, on L2 and EFL students' written discourse. In particular, the importance of

interactive feedback between peers in the process-oriented writing framework can be supported by SLT L2 learning. For more effective collaboration by ZPD, teachers should consider how to group students, provide supporting materials and instructions, and encourage students as writers and readers at the same time to take part in the cyclic event of writing. As a result, the overarching L2 learning theory can be incorporated into writing theories, in particular the process-based writing approach.

2.3 Approaches in Writing Development

This section gives an overview of the academic approach to writing development, first by positioning argumentative writing in relation to the process-writing approach and models of argument. To narrow down the most appropriate writing instruction model for this study, it is necessary to explore relevant writing models for argumentation and debate. Relevant models of argument are explored in this section, so that the critical analysis of these models will help to create an instructional design and specific activities. Consequently, this section aims to explore the inherent characteristics of writing and argumentation, and to discover the reasons to adopt related theories for their successful implementation in second language writing on arguments.

2.3.1 Process-based writing approach

First, the process-writing approach was influenced by cognitivism, emphasising the learner's thinking process through knowledge construction, as discussed above. However, the process-based writing approach follows a set of re-writing processes up to the final draft, not focusing on any specific consideration for different genres of writing. According to social constructivism, the learner's own background and culture have an impact on shaping their knowledge, therefore the gaps between their first language and their target language should be seriously taken into account. Moreover, genre-specific features in the writing conventions of the target language are part of the cultural norms in a society, which means that learners should identify and understand them for language interaction. In this sense, when writing arguments, the learners' main task is to focus intensively on the rhetorical conventions of the reasoning and debating process of their target language.

Since *The Composing Process of Twelfth Graders* by Janet Emig (1971) was published in the early 1970s, the process movement and allied pedagogies in first and second language writing started to emerge. This approach originated in the process movement for teaching writing in L1, while it has also had a great influence in teaching L2 writing. The method, with its focus on writers (Zamel, 1976), is basically divided into expressivist and cognitivist views. Since expressivists consider writing a creative act, they argue that writing instruction should be personal and non-directed work to encourage the learner's own voice (Ferris & Hedgcock, 2014). Meanwhile, cognitivists view writing as a problem-solving process, which shares common features with the recursive and individualised process of writing voice (Ferris & Hedgcock, 2014; Hyland, 2016). The cognitivists' view, as articulated by researchers like Flower and Hayes (1980; 1981), has had a considerable impact on first and second language writing theories. This approach considers writing recursive, not linear, and focuses on the cognitive process of writing as a problem-solving process. It points out the need to develop students' problem-solving skills – such as planning, defining rhetorical problems, proposing solutions and generating grounded solutions – and to develop their mental processing strategies to create and revise a text (Hyland, 2003; Ferris & Hedgcock, 2014).

In fact, before the process approach was applied for L2 writing classrooms, writing instructions for ESL/EFL learners were largely based on language forms such as grammar, expressions and vocabulary, which were influenced by behaviourism and structuralism as the dominant language learning theory of the time (Raimes, 1983). Even in the early 1980s, ESL/EFL learners were provided mainly with grammar-based and pattern-based drills at the sentence level for writing instruction, so that they could practice expanding from sentences to paragraphs and then from paragraphs to a complete essay (Leki, 1992, p.5). The tradition of form-focused learning in L2 writing means that L2 learners were rarely allowed to have the freedom to create their own essay.

From the end of 1970s, the grammar-based approach to L2 writing ran into criticism from EFL scholars such as Zamel (1976; 1982; 1987) and Raimes (1983; 1985), who were influenced by the process movement for teaching writing to L1 learners. Zamel criticised the grammar-based and pattern-product approach, because the stress on surface-level linguistic accuracy seldom helped students to learn how to write, and the knowledge of textual

structures had little relation with the creative process of writing (p. 28). Also, she argued that ESL leaners, even those at an advanced level, should learn writing as L1 learners do, meaning the primary focus should be on the expressive and creative process of writing (p. 34). Therefore, Zamel (1982) highlighted that EFL writing classes should be like classes for native English speakers, which recognise the importance of generating, formulating, and refining one's ideas (p. 195).

As the process approach started to attract the attention of ESL teachers in the early 1980s, textbooks based on this approach were published, providing ESL learners with genuine experiences in L2 writing (Zen, 2005). ESL learners were expected to enjoy more time and freedom when writing on topics, and the focus was on fluency rather than accuracy (McDonough, 1985). Since the revision process is a fundamental phase along the way to the completion of an essay, it became important to teach effective strategies at each stage of the writing process (Mangelsdorf, 1992; Spack, 1984). Therefore, the process approach brought changes to ESL writing classes and increased attention in the academic exploration of ESL writing itself (Zen, 2005).

As the writing process, with specific techniques at each stage, is highlighted in the process approach, it is necessary to review its common and noticeable features. According to this approach, the process of writing consists of three stages: the pre-writing stage, the writing stage and the post-writing stage (Spack, 1984). During the pre-writing stage, writers formulate topics, generate ideas and make an outline or create a schematic organiser before the actual writing begins. In the writing stage, they write what they want based on the work done in the pre-writing stage, and go on developing their writing through drafting. In the post-writing stage, writers can edit, revise and rewrite with feedback from others like teachers or peers, which enables cooperative writing. Along with the writing, teachers guide the process and develop students' writing strategies for each stage, such as idea generation, drafting, revision and so on.

Under the perspective of writing as a process, there have been two major research teams: Flower and Hayes (1980; 1981), and Bereiter and Scardamalia (1987). Firstly, the model created by Flower and Hayes has significantly influenced the process writing movement.

Their model is called a cognitive model, which is also called a computer model in the sense that protocol analysis is used. The model suggests a composing process that has interactive, intermingling and simultaneous features. In this model, composing itself is considered a goal-oriented activity, to be reviewed and evaluated in the feedback cycle. In their 1980s model, there are three major elements: task environment, cognitive writing process and writer's long-term memory (Hayes, 2000). The task environment refers to the rhetorical context and the text produced so far, while the cognitive writing process continues through planning, generating the text and revising with monitoring. The knowledge of topic, audience and plans in the long-term memory are all used for writing. With those three important factors, this model shows the simultaneously interactive process of writing.

Later, this model was modified, segmented and then enlarged. According to the new model (Hayes, 2000), the organisation of the writing process is broadly divided into two parts: the task environment and the individual. In this new framework, the task environment is located outside an individual writer, and the cognitive writing process and the writer's long-term memory are positioned together in the boundary of the individual writer. The task environment is also divided into the social environment and the physical environment. The individual part is categorised into four interactively operational parts: motivation/affect, working memory, cognitive process and long-term memory. Among those four compartments, the working memory has the central role in writing, and the newly-added elements of motivation and affect are regarded as important during writing in this model as intrinsic features of a writer.

The writing model of Flower and Hayes focuses on the writer's internal world while writing, and schematises the interactive traits of a variety of elements that are necessary to write. However, this model fails to instruct learners on how to write and how to develop their writing via diverse genres, since the text itself cannot be shaped by topic, audience or any environmental features (Hyland, 2003). Especially for ESL writers, who lack linguistic competence in English, it is far more difficult to approach the structure and rhetorical conventions of writing in the target language. Thus, clear and detailed instruction from teachers is required to help students go through the whole writing process. For the enriched instruction of learners, teachers can provide and explain features of the target structure and

genre before students begin writing, in order to assist them to write independently, and get actively involved in all the writing stages. In addition, this model does not offer any detailed criteria for students to follow, which can make them feel vague or unclear about what and how they should write. Also, an excessive focus on the cognitive process of an individual writer ignores the importance of the socially interactive nature of writing through feedback from others.

Overall, Flower and Hayes' model lacks pedagogical guidance for specific application and necessitates instructors to adapt to their specific context, meaning that instructors need to think about the ways it can be practically applied to a target classroom environment. To overcome the prescriptive pedagogic approach, it is necessary to consider students' backgrounds and different classroom contexts and, then, decide how best to help students write on their own. Therefore, teachers should make detailed plans and create tasks and materials for students, considering how to introduce the tasks, organise peer groups, develop guides like writing rubrics, and so on.

Figure 1: General organisation of the new model (Hayes, 2000)

THE TASK ENVIRONMENT

The Social Environment
- The audience
- Collaborators

The Physical Environment
- The text so far
- The composing medium

THE INDIVIDUAL

MOTIVATION/AFFECT
- Goals
- Predispositions
- Beliefs and Attitudes
- Cost/Benefit Estimates

WORKING MEMORY
- Phonological Memory
- Visual/Spatial Sketchpad
- Semantic Memory

COGNITIVE PROCESSES
- Text Interpretation
- Reflection
- Text Production

LONG-TERM MEMORY
- Task Schemas
- Topic Knowledge
- Audience Knowledge
- Linguistic Knowledge
- Genre Knowledge

Another writing model based on the process approach was suggested by Bereiter and Scardamalia (1987). It is noticeable that their model explains the differences between skilled and unskilled/novice writers. Their model characterises skilled writers as knowledge-transforming beings, critically using writing tasks to analyse problems and continuously interacting between their developing knowledge and the text. They are also actively involved in reworking thoughts and changing ideas or the text. On the other hand, unskilled writers are described as knowledge-telling beings, talking about a task, a topic and a genre based on their memory. Given this characteristic feature of novice writers, they as less active writers and are less likely to make a plan or revise their writing.

Figure 2: Bereiter and Scardamalia's (1987) writing process model for skilled and unskilled writers

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Knowledge-telling Model of the Writing Process	Knowledge-transforming Model of the Writing Process
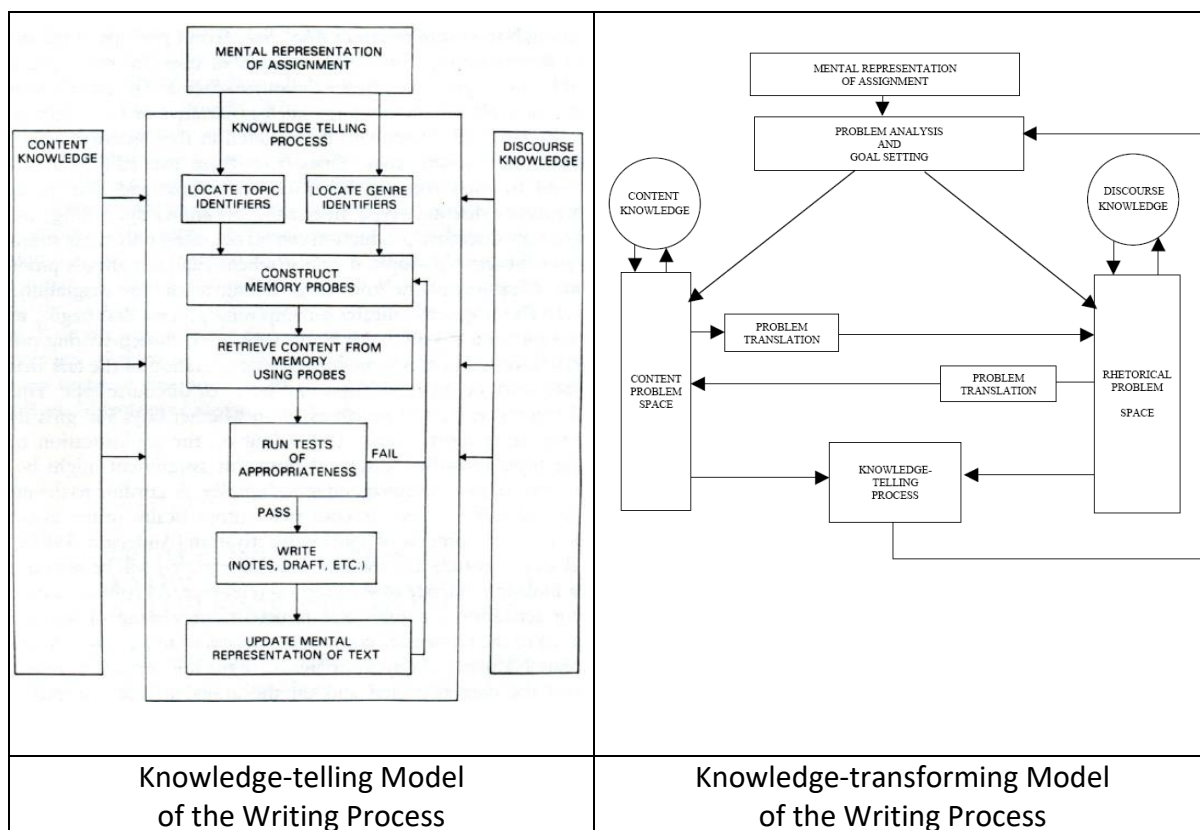
The process approach to writing has historically had a significant impact on L2 writing research and instruction, representing the part of process-based writing that is included in ESL classes or textbooks (Zen, 2005). That is to say, the process approach has already permeated into our everyday writing practices, and it is almost impossible to conceptualise effective L2 writing without some use of the process approach (Atkison, 2003). In summary, its huge influence is based on the following points: the status of writing in second/foreign language classes; writing process research indicating the complex nature of writing in a foreign language; development into a field of serious inquiry (Zen, 2005, p. 195).

Despite the major impact that the process approach has had, some of the questions that have been raised about this approach remain unanswered. This writing process, based firmly on pedagogy, includes the reflection process in writing and points out the need to perform various cognitively challenging tasks and deal with diverse genres to develop writing skills. Also, it emphasises the role of feedback and revision in the transforming process. However, this framework does not account for how unskilled writers can move to the level of skilled writers (Hyland, 2002), nor for the writers who are located in the middle of these two boundaries. That is to say, it is not clear what happens in the intervening stage

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between knowledge-telling and knowledge transforming. Actually, as Hyland (2002) has already pointed out, there would be no clear-cut boundary between the two types of writers, so it would be more reasonable to understand the distinguishable traits of the two categories of writers in the line of a continuum from unskilled to skilled writers. Additionally, it is unclear if the writing process of this model occurs to all learners in different types of learning situations.

The process-writing approach has made positive contributions to teaching and researching writing, in terms of how to develop writing strategies and how to deal with the critical thinking skills of writers through their own writing process, turning attention away from language form and accuracy to the writing process and the writer's creativity. In particular, it has had great impact on teaching writing in a first language and implied that learners should be respected as independent writers. Furthermore, the process of revising multiple drafts before submission is quite naturally done in almost all writing situations. This implies the strong potential of the process-based writing approach, because collaborative interaction as both a reader and writer at the same time can contribute to writing task development in a specific writing environment.

Despite all these contributions, process-based writing has also been criticised in the sense that it cannot provide a comprehensive explanation of how learners perform writing tasks and learn to write. Although the cognitive process is essential in this approach, it is not easy to discover and illuminate the mental process of writers when writing. Moreover, there is no clear evidence that process writing techniques lead to significantly better writing (Hyland, 2002).

Besides, an exclusive emphasis on the psychological aspects of writing cannot guarantee an understanding of the social nature of writing and/or language and text structure, which is necessary for effective writing. Horowitz (1986) criticised the process-based writing approach, arguing that ESL and EFL learners rarely need to write in English, and, thus, have little need for the typical styles of writing in the process-writing approach, such as self-exploratory essays. Concerning the lack of need for free writing essays, he pointed out that cultural factors might lead to a negative impact for some ESL and EFL learners writing

private stories, if they are not familiar with delivering personal narratives, resulting in difficulties with their writing practices. He also argued that the process-oriented approach needs self-reflection as a way of socialising the acts of native learners within their own community, which is not relevant to ESL and EFL learners and which does not address their difficulties in writing.

As socio-cultural perspectives in both L1 and L2 writing gain more attention and value, L2 writing is considered a socially and culturally situated activity, not just a cognitive and individual process, as explained in the process approach (Zen, 2005, p. 195). This socio-cultural viewpoint on L2 writing suggests that learners should know the purpose and the context of their writing, as well their own writing process (Zen, 2005, p. 196). Especially, EFL student writers who come from more collective cultures are more likely to be at a disadvantage in process-based writing (Ramanathan & Atkinson, 1999), which signals that L2 learners from many Asian countries might be unfamiliar with open and critical feedback. In addition, Horowitz (1986) argued that considering multiple drafting stages as one of the significant features of the process-based approach might not help writers to develop academic writing which necessitate its own regulations. Therefore, writing instruction based on the process approach, which focuses on the private and cognitive processes of writing, might not be effective for enhancing the preparedness of students for the authentic writing activities they may encounter in their real life.

Furthermore, pedagogically, this approach has been attacked due to the lack of clear guidance on how to construct different kinds of texts (Ferris & Hedgcock, 2014). In particular, genre-specific writing styles such as argumentative writing cannot be developed by the personalised and recursive writing processes. Moreover, genre-sensitive essays might not be improved by feedback, particularly if the feedback is given by student writers rather than teachers. These points mean it is unlikely that an improvement in writing proficiency will naturally be followed by learners' self-initiated writing and revision work, which is the essence of the process-based writing approach. Therefore, there is a good deal of room for teachers to think about how to assist learners during the writing process, such as what to provide in terms of clear instructions and effective teaching materials, and how to apply them in the classroom.

In addition to the need for teacher intervention in the writing process, there is another big issue that should not be overlooked in terms of pedagogical implications for the learners of English as a second or foreign language. In the sense that students often have limited linguistic and rhetorical knowledge, it might be challenging for them to take part in the process of developing their writing, even though peers participate in revision and editing tasks. It specifically means that ESL or EFL students need more explicit and direct instructions from teachers, especially in the early stages, which requires them to do further work for their students. In other words, it is less likely that writing processes with feedback will go on effectively unless intentional interventions from teachers are provided. In this sense, the process-based writing approach might need to be modified, so that student writers are better prepared to write and evaluate writings. This also indicates that teachers need more room for providing them with preparatory work, including genre characteristics, before the actual writing stage, and also need more responsibility for monitoring the peer feedback process, in order to clarify major errors or misunderstandings between students.

2.3.2 Social Literacies in Writing

Considering the fact that writing itself is classified as literacy, which is the ability to read and write, it is often understood as a literacy skill. However, based on the socio-cultural theory, learning literacy is not just mastering the skill of how to read and write, but also of social practices arising through interaction between people. The notion of *social literacy*, which was born out of socio-cultural theory, should therefore be reviewed to find links between learning literacy and social and cultural contexts.

2.3.2.1 Social Literacies

Traditionally, it is common to view literacy as a linguistic skill rather than a social practice. However, Street (1984) divided multiple literacies into two models: *autonomous* and *ideological* literacy. This division helped to create the category of new literacy studies. The traditional view of literacy is based on the assumption that literacy itself will have effects on other social and cognitive practices automatically. This means that literacy can be directly introduced to improve cognitive and economic aspects, regardless of the social and economic conditions. However, ideological literacy points out that literacy is a social

practice, depending on the way that people view the world, including reading and writing in a specific context. In this sense, the interaction between teachers and learners is also a social practice, influenced by what model of literacy they have learned and how they think about literacy.

Basically, literacy is the prerequisite of writing, and it is common that learners of English as a second or foreign language have a relatively limited level, which usually discourages them from working effectively and responsively as independent writers and readers in the writing process. As both reading and writing constitute literacy, it has traditionally been regarded as an ability gained from learning, which promotes logical thinking, access to information and participation in society (Hyland, 2016). However, the concepts of literacy have changed from the previously separate, skill-based understanding to interactive ways of constructing social meaning in a specific context. This social view of literacy has developed the idea of social literacies, which highlight mutual meaning-making processes in the reading and writing practices of an individual, and are related to personal background such as identity, social relationship and so forth. In this regard, Barton (2007) pointed out the personalised, situation-based and system-based traits of literacy, because each person develops different literacies in accordance with their own domain of life.

This socially oriented perspective on literacy implies that literacy learning is not an independent process of acquiring linguistic proficiency, but a mutual process of meaning-making in community with others. As Barton (2007) explained, literacy practices develop at a specific time and place, which means that teachers should consider the personal characteristics of learners, including their own mother tongue, target language level, study attitude or tendency and so forth. In fact, they all signal the necessary focus on writing genres, like the genre-based approach. Especially in the context of learning English as a second or foreign language, teachers need to consider both linguistic and conventional differences between a learner's mother tongue and English, the different forms of task development and group formation in accordance with their English level, and the level of their autonomy in communicative language learning environments to promote more socially interactive construction of meaning. In other words, ESL or EFL teachers might have wider

considerations in what transferrable skills between L1 and L2 are and how to develop target tasks and manage classroom interaction strategies.

In this sense, argumentative writing as one of the formal writing styles requires student writers, especially foreign writers, to learn and use the specific knowledge and skills in this genre. Writing argumentatively cannot just be an extension of general writing skills in English, or a transference of knowledge about this writing style from a first language to a second/foreign language. Instead, it requires the relevant rhetorical conventions of argumentation that have been agreed on in English writing culture. Therefore, student writers of English should learn the basic style of the logic-making framework in English, as well as its rhetorical devices, with explicit instruction from teachers. As a way of explicit teaching of English argumentation, teachers and material developers can look at effective models for English argumentation and adjust them to the standards and goals of a specific instructional setting.

2.3.2.2 Writing as a Situated Act

The view of writing as a socially situated act was modelled by Lea and Street (1998; 2000; 2006), focusing on student writing in higher education in the UK. They categorised three levels of student writing approaches: skills, socialisation and academic literacies. They stated that students should learn a set of skills like grammar and spelling as basics where they otherwise lack writing ability. This is based on a behaviouristic view, focusing on so-called training. Also, concerning socialisation, they considered the process of learning writing in higher education to be an acculturation process, by entering the institutional culture. In this socio-constructivist sense, student writing is a medium of representation, not focusing on the institutional practices and rhetorical features of writing. Therefore, regarding academic literacies, universities were viewed as places of discourse and power, and academic practices were considered to be a reflection of epistemological and identity-related issues beyond just skill or socialisation issues. As literacies of social practices, a variety of communicative rhetorical activities, such as genres, were regarded as necessary to learn, along with language itself. Since language skills are not automatically transferrable between writing cultures, academic literacies need to change between one discourse setting and

another, which necessitates a literacy curriculum that locates student writing in more socially communicative meaning-making practices.

Although this focus on writers is the same as the process-writing approach, the socio-cultural approach considers writing as a social act with more emphasis on the experiences and understanding of writers in the contexts they encounter (Hyland, 2016). In this sense, it is hard to specify a teaching method, but it still has an important message for teachers: that they should consider writing classrooms a communicatively interactive meaning-making environment. This approach sees classrooms as writing communities, interacting with the personal history of individual writers. Classroom arrangements, especially student grouping and the way that students work together with tools for constructing their relationships, are regarded as important. Teachers need to increase the confidence and motivation of students by encouraging them to discuss texts and use teacher or peer feedback, as well as collaboratively and productively participating in writing in a community with evaluation and review work.

However, this approach fails to explain the effect of wider communities, beliefs and expectations on readers of written texts in the classroom (Hyland, 2016). In fact, the fast development of a digitalised learning environment, with technologically advanced e-learning devices, is widening the potential for a more instant, interactive, participative, collaborative and comprehensive relationship between writers and readers, where those roles become more interchangeable and responsive in class, or even beyond class hours (Beatty, 2010). Therefore, teachers and teaching/learning material developers need to widen the possibilities for learning to write in more communicative environments (Beatty, 2010; Hyland, 2016). At the same time, they should consider how to plan and manage the interactive work between readers and writers when they develop their own learning situations with technically improved forms of assistance. This means it might be more reasonable to adjust writing to a widened communicative space, especially in a digitalised learning environment, and simultaneously set higher expectations on readers as contributors to this collaborative writing process. In this process, readers should have the responsibility to be active participants, while teachers need to motivate them with clear and detailed review tasks and guidelines.

2.3.2.3 Genre-based Writing Approach

While the process-based approach focuses on writers, a different view of writing – the genre-based approach – appeared in response to this method. In other words, there is a paradigm shift from writers to readers, as the genre-based writing approach focuses on the latter (Feez, 2002; Hyland, 2004). The process-based writing approach has been criticised as a cognitive-oriented approach that pays little attention to how the texts are conventionally structured and used (Ferris & Hedgcock, 2014; Paltridge, 2007).

In fact, there are variations in approaches to genre, including Systemic Functional Linguistics (SFL), based on work in Australia; the New Rhetoric, created for North American writing contexts; and English for Specific Purposes (ESP) (Hyland, 2004; Ferris & Hedgcock, 2014). Among these three approaches, Systemic Functional Linguistics, which sees genre as a form of purpose, is thought to be the most clearly explained and pedagogically successful (Hyland, 2004). It was led by the Sidney School, including Halliday (1989), Halliday and Martin (1993), Christie (1991), Rothery (1996), and so on. The genre pedagogy of SFL is based on Vygotsky's (1978) ZPD and Bruner (1986). In other words, scaffolding makes clear the necessity of the teacher's role in genre learning.

According to the views that focus on readers, writing is an attempt to communicate with readers for specific purposes. Therefore, writers need to follow certain social conventions for organising messages (Hyland, 2004; Ferris & Hedgcock, 2014; Paltridge, 2007). Here, a specific set of writing conventions is called a genre, which is the combination of cultural and cognitive aspects (Johns, 2003). In particular, the cultural aspect refers to the social conventions which readers and writers share together, whereas the cognitive aspect is combined with their prior knowledge. Also, Martin (1992) said that genre is a staged, goal-oriented social process.

In this sense, the understanding and skills for a specific genre mean that literacy can be regarded as a social practice (Hyland, 2004; Paltridge, 1994). The view of literacy as a social practice sees that writing varies in accordance with its context and cannot be narrowed

down to a set of abstract cognitive or technical abilities. Therefore, writing is situated, an idea which will be addressed in detail in the next section.

Since the genre-based approach signals the necessity of teaching culturally specific features in writing, Hyland (2004) pointed out the advantages of genre-based writing instruction. Firstly, it explicitly shows how texts are structured and why they are written, in pedagogically visible ways. Also, it systematically addresses texts and contexts, incorporating discourses and contextual aspects of language use. Therefore, students should learn text structures and lexicogrammatical patterns, along with social purposes and situations, which ultimately indicates that teaching should be data-driven and need-based. For this genre-based teaching approach, collaborative interaction between teachers and learners, based on Vygotsky's scaffolding, is necessary. In particular, students in the early stage of learning a genre are more dependent on their teacher's instructions. Moreover, learners should be provided with access to patterns and possibilities of variation in texts and genres, and, at the same time, learners can critically understand and analyse the discourse resources provided. Lastly, genre-based instruction helps teacher development and enhances teacher awareness of texts, in order to provide learners with confident advice on their writing.

The genre-based approach emphasises that writers should select the best way of structuring essays for their specific purpose. Especially for second language or foreign language learners, who might not be culturally engaged with their target language, it can be more important to learn specific prototypes of writing according to a variety of genres used in the target language. In this sense, learners should have more direct instruction on examples of organising texts in a specific way. As the focus of this study is to learn argumentative writing, it is expected that students will learn its features, such as general structure or lexical and pragmatical patterns. In this sense, it would be necessary to find a good model of argumentative writing and arrange practical activities as a warm-up stage for learners to understand before they start their own essays.

In summary, social literacy, writing as a situated act, and genre-based approaches highlight the specific contexts where collaborative language practices are used. As learning to write is

more than just mastering linguistic skills, learning a specific genre in L2 writing means building up a sensitive understanding and knowledge of social conventions in the target language, not just a semantic and syntactic knowledge of the language. Therefore, learning English argumentative writing requires the student to be aware of the genre, which suggests the need for a representative framework that learners can follow easily as an exemplary writing norm.

2.3.3 Models of Argumentation

We have discussed more general features of writing pedagogies and approaches as theoretical underpinnings. However, as mentioned above, specific skills in the first language might not be automatically transferred to the second language. Moreover, genre-specific elements embedded in the target language culture and background cannot be naturally acquired. Both linguistic and social aspects should be taken into account for argumentative writing as a form of academic writing. Since this study aims to develop argumentation skills in student writers, it is necessary to review some different writing models, particularly those focused on argumentation. By doing so, ideas on how to develop learning and teaching materials, as well as teach logical development and revision work in writing, can be developed.

2.3.3.1 Toulmin Model

In the last 50 years, the most influential model of argumentation is the framework invented by Toulmin (1958; 2003), which is based on the field of law to logically organise ideas, rather than a pure composition model. As one of the first modern explanations of argumentation (Aberdein, 2006a; Aberdein, 2006b), it is the most prominent theoretical model of argumentation in the English language (Ellis, 2015). It has been applied to a variety of areas beyond English education, and its effective application has also been explored, investigating its potential for teaching writing.

Toulmin invented the schematic representation of the argumentative procedure, as shown below. The model broadly consists of three major aspects: claim, grounds and warrant. A *claim* is a statement asked to be accepted by the other person. The claim is supported by

grounds, which is the evidence or specific facts. Then, the *grounds* are backed up by *warrants*, legitimising the *claim* with relevant data. Other than these three elements, this model is additionally made up of *backing*, *rebuttal* and a *qualifier*, allowing for more detailed and powerful arguments. First, *backing* is an additional support to the *warrant*, linking the *grounds* to the *claim*. *Rebuttal* is a response to a counterexample that tries to establish what is wrong, invalid or unacceptable about the argument. Finally, a *qualifier* is the wording of a claim to present probabilities, not certainties. Also, Toulmin (1958; 2003) pointed out that warrants are culture-bounded, because values, beliefs and training vary from culture to culture. That is to say, the model should be interpreted based on specific contexts.

Figure 3: The Toulmin model (Toulmin, 2003)
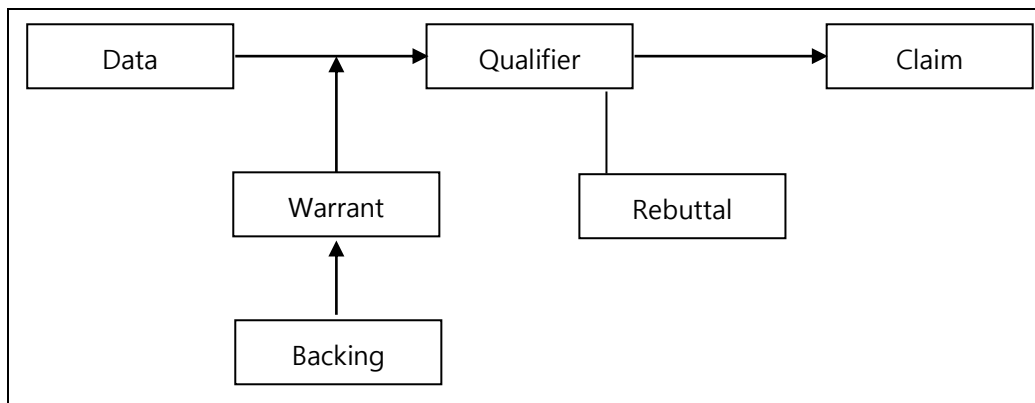
In the educational context, the Toulmin model offers a way to test the soundness of arguments (Andrews, 2010). This model can provide writers and readers of texts with a logical and judgemental tool to examine the relationships between argumentative elements. In more detail, the model-based explanation with simple terms for argumentative elements is visually accessible and explicable, which helps with instruction, providing an outline for diagnosis and treatment (Ellis, 2015). Therefore, this visual-oriented framework can facilitate a structural understanding of the composition and sequence of necessary elements for both teachers and learners.

However, despite the possibilities of wide use, the Toulmin model has been attacked in terms of heuristic consideration. Ellis (2015) pointed out that this model could not illustrate or help the process of developing claims through critical thinking when dealing with possible

stances on challenging issues (p. 203). In this sense, pragma-dialectics, which was invented by Frans van Eameren and Peter Houtlosser (2002), has become an alternative model for argumentative writing, because it focuses more on non-linear, holistic problem-solving discourses, rather than claims supported by data.

In addition, the Toulmin model is technically difficult to understand and apply because of the difficulty in differentiation between some elements of the model (Andrews, 2010; Ellis, 2015). Among then, warrant is considered the most difficult element to explain and learn (Fulkerson, 1996; Lunsford, 2002; McGee, 2000, Warren, 2010). In particular, students who are learning English as a foreign language might have more difficulty in understanding the logic of the Toulmin model, if the rhetorical features of writing in their mother tongue are not the same as those in English. Also, it is widely agreed that, among the four language skills, writing proficiency is generally the one achieved lastly and/or least well by ESL learners. Therefore, the framework of Toulmin can seem more perplexing when students try to apply it to their own writing.

Whereas the Toulmin model provides a detailed structure for logical development, it has also been criticised in other ways. For example, Fulkerson (1996) pointed out not only its limited representation of written arguments, but also the necessity of further careful research studies to investigate its effectiveness when we adapt and modify it, stressing the need to consider the specific context or situation of participants. In fact, the distinct features of the context where speakers or writers perform were not addressed in the Toulmin model, which means that teachers have to deal with them for their actual use in the classroom. In other words, this model overlooks classroom variables in how students and teachers actually access and apply it (Lunsford, 2002). In this regard, how to adapt and implement the model in each specific classroom has created the need for a range of studies targeting a variety of educational contexts – such as age, language level, language culture, and so on.

Although the Toulmin model has been used in writing on arguments for a long time, studies on this model in the context of writing classrooms – many of which have been stuck using it as a way of evaluating essays (Carlsen & Hall, 1997; Chinn & Anderson, 1998; Jimenez-

Aleixandre, Bugallo-Rodriguez & Duschl, 1997; Stapleton & Wu, 2015) – have rarely been conducted (Lunsford, 2002). Also, many studies on the Toulmin model have been done for English native writers (Crammond, 1998; Ferretti et al., 2000; Nussbaum & Kardash, 2005), rather than writers using English as a second or foreign language (Qin & Karabacak, 2010). This means that the Toulmin model has been limited to a kind of rubric to score argumentative essays. Moreover, studies on the Toulmin model have been based on qualitative analysis of written essays, focusing on basic measurements like the quantity or quality of Toulmin's argumentative components (Lunsford, 2002).

In a study on EFL writers, Qin and Karabacak (2010) analysed the argumentative structure of English essays written by 133 university students in China, using the modified Toulmin model. Students read two articles, each of which had the opposite opinion on the same topic, and then wrote their argumentative essay. Each article was assessed based on Toulmin's argumentative components and its own quality. The results of this study showed that a claim was commonly used at least at once, while the counterargument and rebuttal elements were rarely used. However, the use of Toulmin's elements generally helped to increase the quality of the students' essays. One of the pedagogical implications raised in this study was the fact that teachers have the responsibility to introduce and explain the Toulmin model and its components to students, in order to enhance their comprehension and use of all the elements in their essays.

Meanwhile, a study conducted by Stapleton and Wu (2015) used the Toulmin model as a writing rubric for students, as well as an evaluative measure for essay markers. Among the argumentative essays written by 125 high school students in Hong Kong, six were selected in order to analyse the quality of the logical structure according to a set of analytic scoring standards, which were the modified argumentation components of the Toulmin model, with more focus on counter-arguments and rebuttals for this case study. The results of the essay assessment indicated that some discrepancy existed between the surface structure and the quality of reasoning. Therefore, the study emphasised the need to go beyond just rigid and superficial assessment based on the argumentative elements of the Toulmin model. This study ultimately shed light on the importance of an integrated argumentation framework for essay assessment, which can incorporate the surface logical structure and the real

quality of reasoning at the same time. To develop this comprehensive rubric for argumentation, the study pointed out the need for further research on how to understand and teach critical thinking skills to students for both academic and non-academic purposes.

Among the research studies conducted for English native writers, Lunsford (2002) carried out a case study based on the modified Toulmin model with ten university students in the US. This study aimed to understand how teachers and students represent the Toulmin model, with their expectations for tasks and claims, and understand how students and teachers negotiated with each other about the interpretations of those tasks, contexts, and claims. During a six-week writing course, essay writing tasks and peer critique seminars were used, and adapted argumentative components of the Toulmin model were also used for peer reviews. More specifically, the *data* from the Toulmin model was departmentalised into the two elements of reasons and evidence, whereas the *backing* was removed. Also, *warrant* was absorbed into *claim*, and a new category of *acknowledgement and response* contained the concepts of *rebuttal* and *qualifier*. Moreover, a single utterance that belongs to one specific category of argumentation in an argument can fall into more than two categories of argumentation across the whole context of a long discussion. In this sense, Lunsford (2002) pointed out the Toulmin model did not support the feature of the multiple layers of argumentation in a larger discussion, which can be interpreted in line with Ellis' (2015) point that the Toulmin model is a macrocosmic structure for single argumentation.

Through qualitative analysis, the findings of this study show that the Toulmin model functioned not only as a catalyst for defining and applying argumentative terms along with writing criteria, but also as a reminder to readers and writers. Reviewing the pedagogical implications of Lunsford's (2002) study, critical responses can be summarised as follows. This confirms the practical importance of the Toulmin model, in the sense that the categorical elements of the model can help to refine the notions of constituent parts in argumentation, as well as verify logical structure in reading and writing, all of which encourage students to develop logically convincing essays and offer concrete and critical peer reviews. Moreover, the modified model acted as an effective writing instruction tool, encouraging complex interactions. More importantly, this study suggested that both teachers and students should participate in re-interpreting the Toulmin model to make it fit

their own goals in a specific context. Therefore, the need for adaptation of the original Toulmin model, in accordance with actual targets and goals of language learning and teaching, was emphasised in this study.

For the use of the Toulmin model of argumentation in the ESL context, teachers need to simplify the framework of argumentation to fit students' level of writing. According to Qin & Karabach (2010), instructors can first teach the three major elements such as *claim*, *grounds* and *warrant* to students, and once they have become familiar with the basic structure, the rest of the argumentative elements like *backing*, *rebuttal* and *qualifier* can be explained and identified. For beginning and intermediate English learners especially, the complicated steps from grounds to claim should be modified to contain the basic process of argumentation, focusing on the primary elements. After that, the whole structure of argumentation can be dealt with if necessary, or provided as a more detailed model and expanded along with the rest of the constituents. This delayed provision of the fully-fledged argumentative structure might lower the threshold level for inexperienced or less confident writers.

The Toulmin model has been used in subjects other than language learning and teaching, which necessitate the logical structure of spoken or written discourse. Simon (2008) conducted a study on the Toulmin Argument Pattern (TAP) in the evaluation of argumentation in science education. In this study, *rebuttals* were applied for analysing scientific discourse and enhancing the quality of argument in school science. In particular, this study explored the impact of TAP into a teacher's professional development programme, based on discussions between teachers and the written portfolios of teachers. Also, it addressed the effectiveness of TAP-based materials in students' collaborative argumentation, carried out with argumentation software in a science classroom. With a specific aim to use the Toulmin model as a means of analysing the argumentation process itself, this study only focused on constructing arguments using evidence, not on the quality of evidence or the other argumentative components such as *warrant*, *backing*, and *qualifier*. However, this study emphasised the fact that the Toulmin model could be used to assess the quality and the complexity of argumentation for teachers. Also, this study raised an issue that the analysis of which part of an argument fell into which component was often ambiguous, and therefore recommended the application of the Toulmin model if teachers

think the framework is necessary to evaluate argumentation on students' activities and for students to assess their own arguments.

In summary, the Toulmin model can offer illustrative and explicit guidance to show in detail the process of building up each necessary logical component toward a complete assertion (Aberdein, 2006a; Aberdein, 2006b; Andrews, 2010; Ellis, 2015). Despite this pedagogical benefit, the ambiguous boundaries between the different argumentation elements and one unified structure for logical development can result in confusion for learners, and require further consideration for teachers to adapt for their classrooms (Ellis, 2015; Fulkerson, 1996; McGee, 2000; Lunsford, 2002; Warren, 2010). While there is more room for this modification for teaching practices, studies on the Toulmin model have generally used it as a scoring rubric (Carlsen & Hall, 1997; Chinn & Anderson, 1998; Jimenez-Aleixandre, Bugallo-Rodriguez & Duschl, 1997; Stapleton & Wu, 2015). Remembering the need for learner awareness in genre-specific knowledge, and teacher intervention for learner readiness, and feedback interaction in process-based writing classrooms, argumentative writing as a genre is likely to need a clear and indicative framework for students to follow. This implies that teachers should adapt and apply the Toulmin model into their specific classrooms, based on the intellectual and linguistic level of students, which is a way to enhance the preparedness of students for the target genre of writing. In this sense, with the adaptive work of teachers, the Toulmin model can play a range of roles from the beginning to the end of the argumentative writing process: as a model for instruction, a practical and visual guide for students to understand and follow, a standard of review for the logical development of an argument, and, finally, as an examination criterion.

2.3.3.2 Kaufer and Geisler Model

Kaufer and Geisler (1991) suggested a writing model, which did not originally fall into the category of models of argumentation. Their composition model explains a writer's argumentative process of composition using the 'main path' and the 'faulty path'. The main path is a writer's main point of view, with a set of claims as a connected line of ideas. When writers produce arguments, they move on and off their main path, exploring the oppositional direction of ideas, namely the 'faulty path'. After covering multiple

perspectives, writers return to their main point. This sequential technique of moving on and off the track gives writers a way to develop their arguments clearly and persuasively.

Figure 4: Kaufer & **Geisler**'s (**1991**) m**ain path/faulty path model**
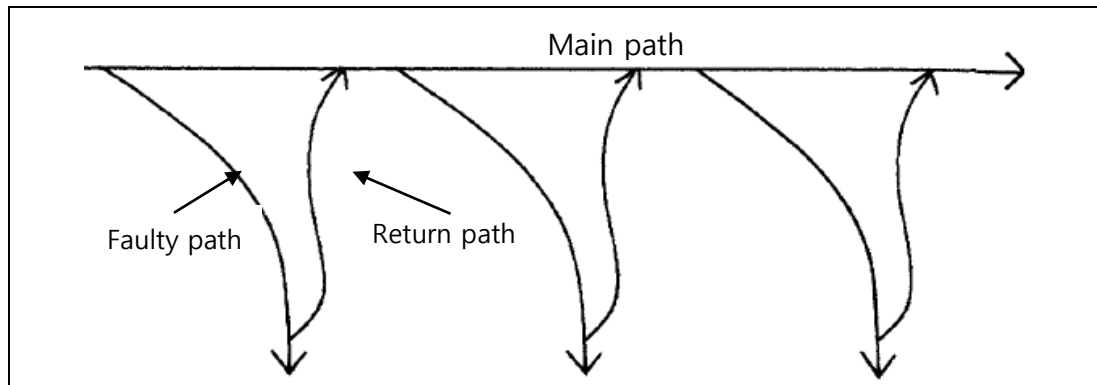
Compared with the Toulmin model, this model of writing is easy for students to understand and adopt to develop convincing arguments, although it only explicates the general picture of the process of using counter-arguments in writing. In other words, the paths framework does not show how to develop each line and organise the constitutional elements in argumentation. However, it can be useful to have a rough understanding of the stream of thoughts when coping with rebuttals, as they are called in the Toulmin model. Specifically, visual representations such as flowcharts can help students to understand the conceptual structure of temporary digressions, encouraging their metacognitive writing skills rather than specific writing strategies. The momentary changes in direction of this model can be specially incorporated into mind mapping as a possible activity in the pre-writing stage.

2.3.3.3 Yoshimi's Theory of the Structure of Debate

In contrast to the focus on the structure of each argument during a justification process, as evidenced in the Toulmin framework, Yoshimi (2004) concentrates on the structure of sets of arguments, seeing them as constituents in a high-level dialectical structure. This theory focuses on the deep structure of debate, which is the network of arguments and inner-argument relations. The inner-argument relations consist of two elements, such as dispute and support.

The basic structure of dispute is explained by a 'thread', which is a sequential chain of arguments supporting one another. The threads are represented as directed graphs or 'digraphs', using boxes containing claims and classifiers, arrows for dispute and t-bars for support. In the argument set of a thread, the first argument is called the 'root argument', and the last one called a 'leaf argument'. A whole picture of a map represents the natural stream of a debate, even including irrelevant arguments, so-called 'drifts'. The debates can be intensively and compactly explained in the rooted digraph trees, picturing the genuine nature of debates. The digraph trees can be zoomed in as occasion demands, in order to see branch points as sub-debates, providing an essential navigational tool.
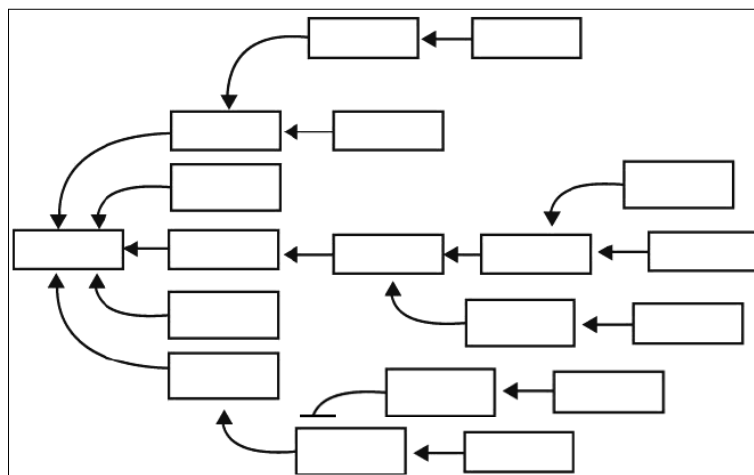
Figure 5: Yoshimi's (2004) mapping the structure of debate

Yoshimi's mapping technique has a heuristic and self-growing nature so that a debate can be infinitely expanded in the tree diagram, which enables the coverage of a large-scale debate. This resembles naturally occurring arguments in our lives. Another merit of this model is the convenience and ease of understanding, and the guidance it offers for developing ideas and opinions on a topic. In this sense, the mapping scheme can be applied to writers to freely generate their argumentative thoughts and develop their cognitive comprehension on a given topic. However, it is not evaluative, and cannot be used to judge the logicality or persuasive power of the writing.

For actual use in classroom settings, this digraph can be adapted to more simplified or small-scale versions, and then be used for organisational memory of an individual or a class. Moreover, the feature of mapping logical relationships can be incorporated with mind-mapping exercises for brainstorming in the pre-writing stage, which can be used to represent a clear and concise outline of idea development with claim and subordinate evidence. However, this model does not mention specific ways of incorporating and presenting opposing views, that is to say, counter-arguments, by using graphic factors. Judging from another perspective of technology-based writing, this mapping technique has great potential for applying to brainstorming tools, such as graphic organisers, for the pre-writing stage. Actually, a digital environment can fully realise the potential of this model in terms of networked argumentation in a wider communicative space.

2.3.4 Summary of Approaches in Writing Development and Models of Argumentation

For the general process of writing, the process-based approach, as a reiterative and collaborative writing cycle, can encourage students to polish their writing through feedback from others, as well as cultivate a critical sense of evaluation as readers, allowing them to participate in the whole process of developing each other's writing. However, when it comes to the fact that ESL or EFL learners usually have limited knowledge of the English language and its writing conventions, they need to be prepared for active writing and review work by the more direct intervention of teachers, including explicit instruction on English argumentation. As discussed above, writing is a socially situated act, as well as an individualised act, which means that writing is a social practice with social literacy embedded in a specific context. Therefore, it is necessary to consider the existing literacy of the participants and the gaps between their first and second language. In other words, social literacy, which cannot be automatically transferrable between different languages or situations, requires the explicit teaching of language conventions. This implies that the process-based writing approach should be more focused on a specific genre – in the case of this study, writing on arguments – requiring more targeted models on argumentation development to be incorporated. While the process-based approach is based on the minimal intervention of teachers, it still includes the possibilities of teacher intervention, such as instructional sessions for specific writing strategies and writing conferences. In this

way, teachers can arrange sessions to teach what argumentation elements are and how they are structured before students start their own writing.

For a logical and detailed understanding of the reasoning processes, the Toulmin model (1958; 2003) can be a good option to illustrate the critical and logical construction of ideas, based on the key components of argumentation. These logical elements can be applied to rubrics for the assessment of the soundness of argumentation, as well as clear guides in actual writing. In addition to the Toulmin model, the Kaufer and Geisler model for counter-arguments and the Yoshimi model for brainstorming techniques enable students to understand and recapitulate streams of thought, creating a rough frame in the pre-writing stage and building up logically compact relationships between sentences in the writing stage.

As for the Toulmin model, its logically detailed framework is difficult to understand. Thus, students need warm-up practice to grasp its components and the relationships between these components, in advance of giving feedback as a reader as well as a writer. Moreover, students should be guided to remember this model whenever they are writing or reading argumentative writing, which means that they can refer to its argumentative elements with ease. Since an understanding of the Toulmin model's logical structure should continue to guide them in their ability to assess the logicality of their own or others' arguments, assessment tasks for feedback, especially writing rubrics, should also be prepared based on the Toulmin model. The logical consistency between actual writing and responsive feedback can help students to make their writing more convincing, especially when expecting their writing to be read and evaluated by readers like their peers, and later their teachers. Unlike the Toulmin model, the basic concepts of the Kaufer and Geisler model (1991) and the Yoshimi model (2004) can be briefly introduced with visual aids, so that students can comprehend the general direction and development of ideas.

Based on the literature analysis above, the implications for my study can be deduced as follows:

- A writing course should guide student writers through a re-iterative and interactive process of writing, with some level of explicit instruction on genre-specific features

like organisational structure, examples of expression patterns and so on, before writing stages.

- A writing course can apply graphic features of idea development from the Yoshimi model into concept mapping as a pre-writing task.

- A writing course can apply and adapt the Toulmin model as a basic framework for argumentation development and can supplement the concepts of rebuttal suggested by the Kaufer and Geisler model to develop instructions in the orientation session for the course.

- A writing course can adapt the concepts suggested by Yoshimi into a brainstorming technique for organising or classifying ideas generated in the pre-writing stage, accompanied by a graphic organiser.

- A writing course should prepare students for actual writing via instructions and activities which are designed for understanding argumentation, based on the Toulmin model in the orientation session for the course.

- A writing course should create and present rubrics as a clear guide and assessment criteria, which students can always refer to throughout their writing development

- A writing course should inform students of how to use rubrics and apply their remarks into their draft development for each writing stage.

- A writing course should encourage students to share, read, evaluate and amend essays, and give feedback on work according to the rubrics in an inter-connected, sequential, incorporative way for completing an essay.

So far I have discussed writing theories and approaches, and models of argumentation, in order to deduce a general process of writing focused on argumentation. As mentioned before, teachers need to take specific features of the writing context and participants for task development and class management. Thinking of the possible ways of considering tasks in a specific context, effective rubrics can be one method of teaching intervention in the writing process, providing student writers with more detailed outlines of writing structure, components and styles that they can rely on. To consider what and how to design a specific rubric for a class, a range of rubric and evaluation techniques should be dealt with, going

towards an instructional model for argumentative writing. Thus, it is necessary and valuable to explore the types, functions and features of a variety of rubrics in the next section.

2.4 Assessment of Student Writing

As discussed, creating and providing writing rubrics can be valuable for effective writing sessions, which are largely based on the process-based writing approach and logically supported by Toulmin's argumentation framework. In the responsive and evaluative work of the writing process, namely feedback, it is necessary to consider how to develop these writing rubrics, assess writing pieces and provide assessment results. Thus, this section will explore various scoring techniques and the functions of rubrics in writing, and then narrow down the appropriate ways to develop rubric arrangements and scoring systems.

2.4.1 Approaches to Writing Assessment and Rubrics

In this section, literature on three scoring approaches is reviewed, since the scoring task is applied for comprehensive feedback that encourages students to have more valuable and enriched views. By analysing these different grading systems, this study will find an appropriate scoring method for a series of feedback designs.

While the number of categories for the different scoring approaches varies slightly between researchers, holistic scoring, analytic scoring, and primary/multiple trait scoring are commonly discussed in the scoring approaches (Davis, 2018; Ferris & Hedgcock, 2014; Hyland, 2003; Weigle, 2002). Firstly, holistic scoring rates writing proficiency according to each numeric scale of several levels or bands, allowing speed and efficiency in assessment (Davis, 2018; Ferris & Hedgcock, 2014; Hyland, 2003; Jonsson & Svingby, 2007; Weigle, 2002). This approach supports multi-drafting embedded in the process-based writing schema, because it includes elements of a student's performance skills (Ferris & Hedgcock, 2014).

However, the simple scores produced by holistic scoring rarely represent each characteristic component of a text (Crusan, 2010), and result in a lack of reliability between raters, as well as difficulties in interpretation (Crusan, 2010; Ferris & Hedgcock, 2014). Therefore, it is

necessary for teachers to develop clear rubrics with reliability and to apply consistent, explicit marking practices (Crusan, 2010).

Secondly, analytic scoring includes predetermined separate textual features, their weights and criteria prioritised in a specific component (Davis, 2018; Ferris & Hedgcock, 2014; Hyland, 2003; Jonsson & Svingby, 2007; Weigle, 2002). The ESL Composition Profile (Jacobs, Zingraf, Wormuth, Hartfiel & Hughey, 1981) is a famous example, which contains five different criteria (contents, organisation, vocabulary, language use, mechanics) with different weights and decreasing scales in each component. Analytic scoring is an effective way to train raters with explicit descriptions of components and weighting systems (Davis, 2018; Ferris & Hedgcock, 2014). In addition, the analytic guides with different weighting systems in each category enable students to understand which targeted skills to develop (Ferris & Hedgcock, 2014), and help teachers to provide consistent, explicit and text-based feedback for students (Ferris & Hedgcock, 2014; Hughes, 2003).

However, analytic scoring has also been criticised, since writing quality is more than just the sum of components, and summing up scores in each category can damage the interconnectedness of discourse (Hamp-Lyons, 1996). Also, teachers may have difficulties in judging a score based on each category, while familiar features in a rubric can draw more attention from students (Ferris & Hedgcock, 2014).

Thirdly, primary and multiple trait scoring is based on the assumption that writing quality can be accurately evaluated according to a specific context, and not a pre-determined criterion (Davis, 2018; Ferris & Hedgcock, 2014; Hyland, 2003; Weigle, 2002). Given that the scoring approach focuses on scoring guides with contextualised settings (Davis, 2018; Crusan, 2010), trait-based scoring aims to develop appropriate criteria on a specific topic and a genre, emphasising prominent criteria and features relevant to the task (Davis, 2018; Ferris & Hedgcock, 2014; Weigle, 2002). While primary trait scoring focuses on one aspect of assessment, multiple trait scoring has numerous aspects (Davis, 2018; Ferris & Hedgcock, 2014; Hyland, 2003). Considering this, a writing task focusing on arguments can be evaluated by primary trait scoring, which includes argumentation components such as claims, evidence, warrants, rebuttals, etc.

While trait-based scoring requires more time and effort from teachers to develop and assess a scoring guide on a specific task (Ferris & Hedgcock, 2014), raters are likely to use a general approach towards scoring (Cohen, 1994). In addition, primary trait scoring cannot provide a full picture of the strengths and weaknesses of a writer. In order to address these issues, the preparation of a rubric should be closely linked to and incorporated into the task design process (Ferris & Hedgcock, 2014).

Based on the approaches to writing assessment discussed above, specific rubrics are designed to evaluate students' performance or output. Although in education the notion of rubrics has not converged on one description, the commonly shared idea is of a set of criteria which explain each level of quality in a student's performance of a specific task (Andrade, 2000; Brookhart, 2013; Jonsson & Svingby, 2006; Stevens & Levi, 2005). It is understood that rubrics and rating scales are commonly used interchangeably, but rubrics are genuinely different from rating scales, in the sense that rating scales do not have any description of performance level (Brookhart & Chen, 2015).

As Reddy and Andrade (2010) argued, the essential components of rubrics can be divided into three characteristics: evaluation criteria, quality definitions and scoring strategies. Firstly, evaluation criteria represent processes and contents to be judged (Stevens & Levi, 2005; Reddy & Andrade, 2010). Secondly, quality definitions describe each level of achievement on skills, proficiency or criteria that students are required to show, allowing scoring and feedback provision (Reddy & Andrade, 2010). Lastly, scoring strategies inform students of each grading scale of judgement with specific numeric points (Stevens & Levi, 2005; Reddy & Andrade, 2010).

In terms of the significant purpose of rubrics, they can promote the self-assessment of students (Spandel, 2006), teacher and peer feedback, and serve as a concrete guide to the improvement of students' work, if they are offered with criteria and an explanation of performance levels (Saddler & Andrade, 2004; Jonsson & Svingby, 2007; Brookhart & Chen, 2015). In terms of the advantages of using rubrics for assessing writing, they can provide students with useful feedback, save teachers' time in grading, and help students to have more responsibility for and reflective thinking about their learning (Saddler & Andrade, 2004;

Stevens & Levi, 2005; Jonsson & Svingby, 2007). In particular, students' engagement in developing rubrics can allow them to be independent actors in the processes of learning to assess work (Stevens & Levi, 2005).

Considering the development of students' argumentation skills in writing, analytic rubrics seem to be more helpful and practical for student writers, as they have relatively detailed categories based on a logical process of constructing argumentative components. The systematically and specifically designed components of a rubric help students to refer to the rubric as a guide or an indicator of what to consider, before and during the writing of their argumentative essays. In addition, they encourage students to make critical and evaluative decisions on others' essays during their peer feedback process. In this regard, analytical rubrics will be more emphasised than holistic ones in this study, which will ultimately play a role in helping the self-regulation of students during the process of writing.

2.4.2 Rubrics as a Tool for Formative Assessment

As formative assessment specifically generates feedback on students' performance, rubrics are considered a tool for feedback in formal assessment (Nicol & Macfarlane-Dick, 2006). In fact, students' recognition of assessment has generally been negative, with a stigma that discourages their engagement in learning (Sambell, 2016). However, there has also been a move away from this predominantly negative perception, which focuses on its role of measuring students' learning, to its more positive potential for facilitating learning and engagement (Sambell, 2016). Among a series of efforts to change and improve recognition in assessment, Black & Wiliam's (1998) meta-analysis cannot be forgotten, which provides evidence that formative assessment has a positive effect on students' learning.

Since Scriven (1967) used the term formative evaluation to refer to the evaluation and ongoing improvement of the curriculum, a variety of definitions have been suggested. Black and Wiliam (2009) defined formative assessment based on their earlier work (Black & Wiliam, 1998b) and the definition of the Assessment Reform Group (ARG, 2002), as follows:

> Practice in a classroom is formative to the extent that evidence about student
> achievement is elicited, interpreted, and used by teachers, learners, or their

peers, to make decisions about the next steps in instruction that are likely to
be better, or better founded, than the decisions they would have taken in the
absence of the evidence that was elicited. (p. 7)

This definition described formative assessment as a process of teachers and students
collecting and using evidence of a student's progress to make follow-up instructional
decisions. This process can be illustrated as a cycle with three key domains in learning and
teaching: where the learners are in their learning, where they are going, and what needs to
be done to get them there (Wiliam & Thompson, 2007, p. 14). The three components of
formative assessment in instruction summarise the current stage of students, the goals of
instruction, and the strategies of instruction. In addition to the three pivotal elements for
formative assessment, Wiliam and Thompson (2007) suggested five key strategies (p. 15) as
below:

1. clarifying and sharing learning intentions and criteria for success;
2. engineering effective classroom discussions and other learning tasks that
    elicit evidence of student understanding;
3. providing feedback that moves learners forward;
4. activating students as instructional resources for one another; and,
5. activating students as the owners of their own learning.

With their key components and strategies, they finally created the formative assessment
framework (Wiliam & Thompson, 2007, pp. 15-16) below. The detailed and sequential
structure represents connections between three different agents (teacher, peer, learner) and
the three elements in the instructional process of formative assessment.

Table 1: Wiliam and Thompson's (2007) aspects of formative assessment (Black & Wiliam, 2009, p. 5)

	Where the learner is going	Where the learner is right now	How to get there
Teacher	1. Clarifying learning intentions and criteria for success	2. Engineering effective classroom discussions and other learning tasks that elicit evidence of student understanding	3. Providing feedback that moves learners forward
Peer	Understanding and sharing learning	4. Activating students as instructional resources for one another	

	intentions and criteria for success	
Learner	Understanding learning intentions and criteria for success	5. Activating students as the owners of their own learning

Given a series of phases for formative assessment, a teacher should set up specific targets for learning and assessment in advance, so that students can clearly understand and share them. Especially for clarifying their learning targets, including assessment targets, rubrics that explicitly present the necessary criteria for students to reach can enhance the transparency of their targets (Smit et al., 2019). Clear and detailed rubrics help students to grasp what to do for their individual and interactive work, consequently promoting their engagement in peer- and self-assessment (Smit et al., 2019). In fact, both peer- and self-assessment are possible activities in the fourth and fifth stages of the formative assessment framework and, more significantly, can encourage students to learn how to learn and so have enhanced autonomy (Black & Wiliam, 2009).

As Wiliam and Thompson's (2007) framework indicates, while teachers facilitate students' understanding through effective tasks and feedback, students play interactive roles as learning sources for their peers, as well as pursuing their own learning. In this process, rubrics can function as a practical guide for teachers to give criteria and target-related feedback to students and, also, gauge the need for further instruction for students to reach the next level of learning (Smit et al., 2019).

Understanding Wiliam and Thompson's (2007) formative assessment of the possible benefits of the rubrics, it is important to note that 'teaching is adaptive to the learning needs of students' (Wiliam & Thompson, 2007, p. 15). This reflection on students' needs, based on rubrics, fundamentally indicates the nature of the cyclic process for formative assessment, as depicted below (Smit et al., 2019, p. 3):

Given the expected benefits that rubrics can bring to the learning process, their use consequently comes down to students' self-regulated learning. In other words, the feedback through the formative assessment process can help students take control of their own

learning (Nicol & Macfarlane-Dick, 2006). In fact, in higher education, as feedback is still generally considered the teacher's responsibility, students often remain passive recipients of teacher feedback, rather than co-producers of mutual feedback (Nicol & Macfarlane-Dick, 2006; Sambell, 2016). Nevertheless, over the last two decades, there has been a shift to students playing more active and critical roles in formative assessment and feedback in higher education (Nicol & Macfarlane-Dick, 2006; Sambell, 2016).

Figure 6: Wiliam and Thompson's (2007) formative assessment process (Smit et al., 2019, p. 3)
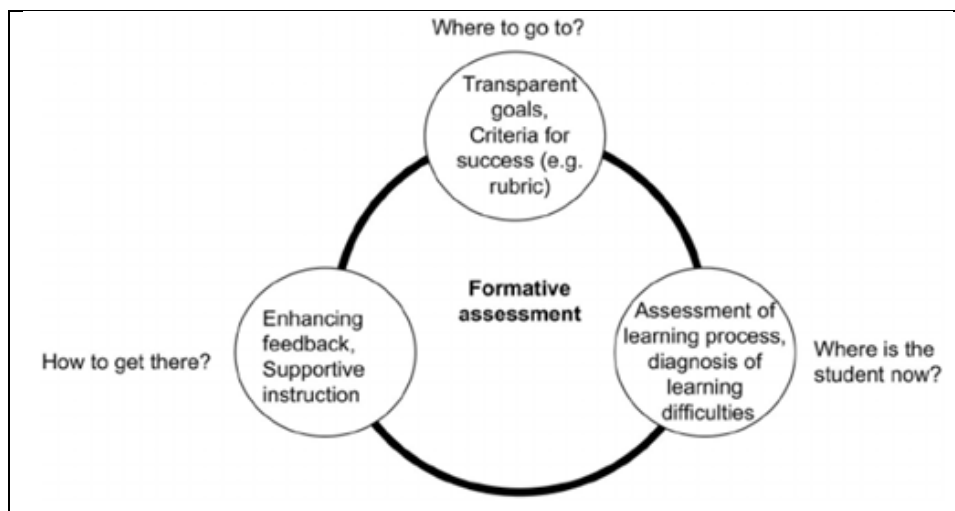
As self-regulation is a cognitive process, it is not an automatic consequence of students' task participation. It is important, therefore, that students as self-regulators are aware of which goals to achieve and which performance level they will be compared against (Nicol & Macfarlane-Dick, 2006). This enhanced recognition of their goals is likely to lead to better self-regulation, which can promote better quality feedback. To raise awareness, the goals should be supported by clear and detailed information on targets, criteria, standards and other examples (Nicol & Macfarlane-Dick, 2006). As feedback shows students' current positions in relation to their goals and standards, they will produce internal feedback in the process of monitoring their own performance and evaluating progress, actively interpreting external feedback from teachers and peers (Nicol & Macfarlane-Dick, 2006).

To describe the process of students' self-regulation and internal feedback, Nicol and Macfarlane-Dick (2006) suggest a conceptual model shown below. In addition to the internal

process of students, this model presents seven important principles that support and develop the self-regulation of students. Given this model, a teacher first sets a task (A), and then students undertake the task with their prior knowledge and motivation (B). During this task, students shape their own understanding of the goals for the task (C), and their own goals trigger tactics and strategies for producing outcomes (D and E). The outcomes are both internally and externally observable (F), and the external feedback is generated based on the outcomes observable to other (G). Importantly, students' internal feedback is involved in the overall process of their task performance, from receiving a task to producing an outcome, using their own self-regulatory process.

Figure 7: Nicol & Macfarlane-Dick's (2006) model of self-regulated learning and the feedback principles (p. 203)
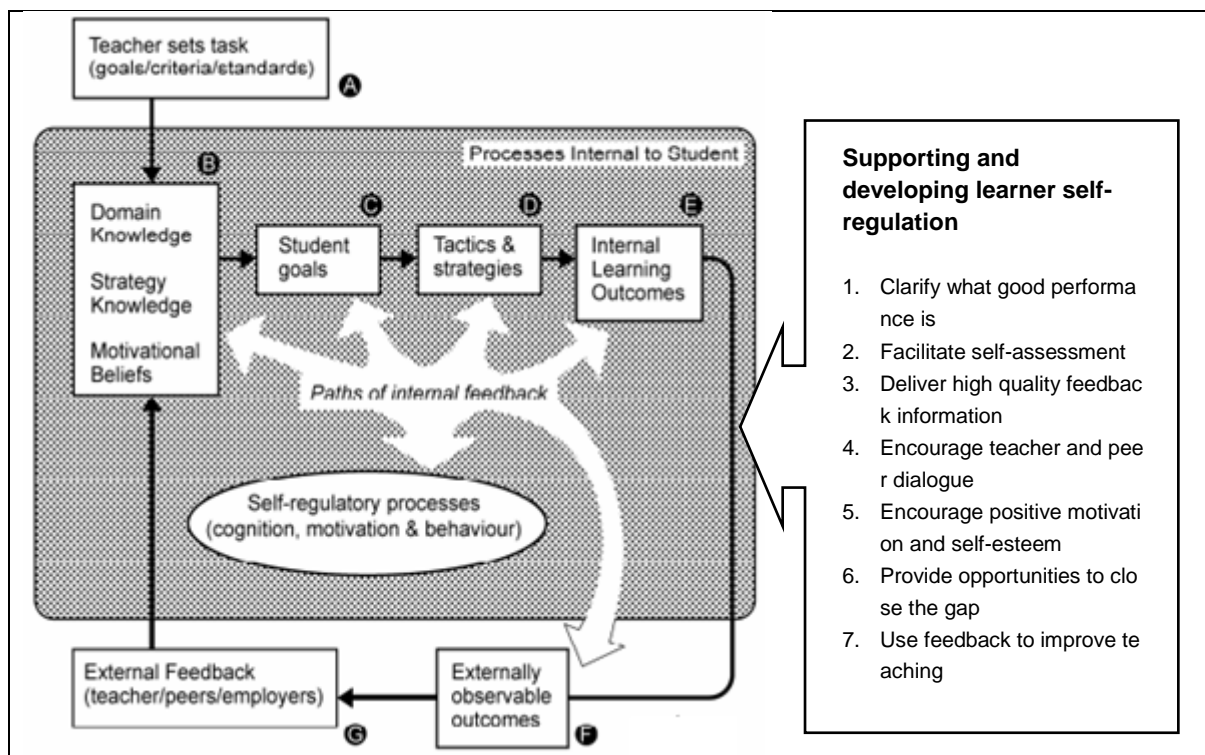
Also, this model was strengthened by the seven principles of good feedback, practices that were drawn from the literature review to facilitate students' self-regulatory process. The seven key points with practical and effective strategies can be highly regarded, because they suggest numerous pedagogical implications for designing and managing feedback tasks. The general and comprehensive point of these suggestions is to provide students with enriched opportunities to access, interpret, apply for, and reflect external feedback, whether from

teachers or peers, so that they can make the most of the external sources for learning and use them as a good stepping stone to their further improvement. Importantly, their recommendations are based on the belief that students can work as active agents with greater autonomy in their own learning process. To take a closer look at each point, some significant pedagogical implications for feedback and rubrics can be drawn as follows.

First, clarifying criteria, standards and goals with definitions of requirements in the rubric sheet helps students to understand how to do a specific task (Nicol & Macfarlane-Dick, 2006). The clarification can also be supported by assessment exercises and workshops, which encourage students to understand, discuss and negotiate the assessment criteria in the rubric prior to an assignment (Nicol & Macfarlane-Dick, 2006). These two points imply significant preconditions, such as the teacher's detailed rubric development and the students' understanding of the rubric. This is because it takes time for students to develop their understanding and knowledge of standards and criteria in a specific context until they exert their proficiency in monitoring and evaluating their own work (Price et al., 2011; Sambell, 2016).

Second, for students' structured reflection and self-assessment, they can have the chance to review their work against the rubric before submission and teacher feedback, which can lead to them making a portfolio or moving to the next stage of action (Nicol & Macfarlane-Dick, 2006). The important point here is that independent and reflective reviews of their own work precede external feedback, including teacher feedback. The self-assessment can be an opportunity to identify students' understanding of the rubrics, free from the possible influence of others' judgements.

Third, to increase the quality of teacher feedback, it should be made following the pre-defined criteria in the rubric and provided before submission (Nicol & Macfarlane-Dick, 2006). These two factors help students to interpret feedback clearly and reflect on it to improve their outcomes, as teacher feedback can be a valuable source for correction.

Fourth, students should understand and internalise external feedback before they generate

productive outcomes, which can be facilitated by dialogue between teacher and students (Nicol & Macfarlane-Dick, 2006). The dialogic feedback can occur when students review teacher feedback and satisfy their curiosity, asking their teacher questions about the given feedback as a follow-up stage (Nicol & Macfarlane-Dick, 2006). Or, students have extra tasks to discuss teacher feedback and even exchange peer feedback in a group, according to the target rubric before submission (Nicol & Macfarlane-Dick, 2006). The key point here is that feedback should not remain a one-way, one-time event, or reliant on occasional provision by others. Opportunities for students to handle external feedback can enhance the effect of that feedback, which can ultimately lead to its internalisation for the next step of the improvement. For effective feedback, their findings show that teachers can manage the post-feedback stage after teacher feedback, or the peer feedback stage before teacher feedback.

Fifth, Nicol and Macfarlane-Dick (2006) also consider affective factors, such as students' motivation and self-esteem. Their important recommendations on effective strategies for the emotional aspect of feedback are either allocating time for students to rewrite part of their work, or giving them an extra chance for resubmission, so that students can change their expectations and their learning goals (Nicol & Macfarlane-Dick, 2006). The post-stage of teacher feedback can encourage students to implement the teacher's points for the improvement of their work, which can help the teacher to check their understanding of the feedback, as well as facilitate the students' internalisation of that feedback.

Sixth, Nicol and Macfarlane-Dick's (2006) recommendation to close the gap between current and desired performance is inter-related to the previous points about extra chances for peer feedback and resubmission. For students to close the performance gap, teachers can provide feedback before submission, thereby managing two stages: one for feedback and the other for proofreading. The aim of minimising the gap is to give students time for interpreting and applying external feedback in the process of their task development.

Seventh, Nicol and Macfarlane-Dick (2006) suggest that teachers can use feedback as information for their own development, as teacher feedback includes their students'

progress, and student feedback to their teachers indicates further action points for improvement. For teachers to collect rich and valuable data, they can request feedback when students submit their completed task, with specific questions about effective and difficult factors in the process of completion or any further requirements for their work (Nicol & Macfarlane-Dick, 2006). Student feedback is an interactive process between teacher and students, not a one-way transmission from teacher to students during instruction, which has been often observed in traditional classrooms.

Nicol and Macfarlane-Dick's (2006) focus is to help students to have access to useful and timely feedback so that they can play a proactive role in their own learning, which is one of the most valuable things educational institutions can do (Sambell, 2016). In line with Nicol and Macfarlane-Dick's (2006) point of view on students as active agents, Sambell (2010) pointed out their capacity to produce valuable and improved feedback, which could be facilitated by discussion activities that enabled students to exchange their ideas and work as one of the members of the discipline community. This emphasises the value of an active, social and participatory learning environment, and this socially interactive learning context promotes authentic feedback through dialogue and involvement, consequently leading to students' improved self-evaluation (Sambell et al., 2013). Participation in collaborative feedback is more likely to help students develop their understanding of standards and criteria in the target context, and, therefore, generate enriched feedback (Sambell, 2016).

Other than models of formative assessment, some assessment techniques and practical principles for feedback have been created in relation to formative assessment. First, Sadler (1989) suggested a theory of formative assessment focused on qualitative assessment. His theory highlights: (a) multiple criteria as a whole; (b) a mix of sharp and fuzzy criteria; (c) the selection of relevant criteria from a large pool of applicable qualities; (d) the lack of a straightforward method for ensuring the validity of an assessment; and, (e) representations of summative assessments (grades, scores) after qualitative judgement. This theory characterises practical key points for rubric design and stresses the combination of two distinctive features of evaluation techniques.

From the EFL perspective, Barkaoui (2007) suggested six revision-focused principles for EFL instruction. They are: (a) practicing the comparison of texts to a perceived aim; (b) informing students about the purpose of revising; (c) modelling revision strategies, such as focusing on meaning initially, and proofreading at later stages; (d) highlighting the importance of addressing a reader, the intended audience of the text; and, (e) and developing students' self-assessment skills. This set of points focuses on self-regulation of students, based on formative assessment.

In terms of formative assessment, Wiliam (2011, p. 62) pointed out three considerations in the development of criteria for successful learners. The three contrasting considerations focus on criteria in feedback: (a) task-specific versus generic scoring rubrics; (b) product-focused versus process-focused criteria; (c) official versus student-friendly language. These thematic points are key concepts rather than practical principles, indicating the need for appropriate selections for the specific purpose of an instructional setting.

All in all, formative assessment emphasises the function of assessment in an ongoing process of instructional development. Also, feedback, rubric, and criteria for assessment are regarded as important by formative assessment, to achieve the clear goals and purposes of instructional practices. As all the points go towards a clarified direction for learning, a clear objective is necessary to improve students' self-regulation. Throughout the writing process, formative assessment stresses that students are independent and active beings who can pursue self-monitored writing. Therefore, the evaluative elements ultimately support students.

2.4.3 Rubric Use in Educational Settings

A variety of rubrics have been used in teaching English writing, which has shed light on what to use and how to use them while considering their effectiveness in each educational context. According to Jonsson and Svingby's (2007) literature review, based on 75 empirical research studies on rubrics, using rubrics can improve the reliable scoring of performance assessments, especially when they are analytic, topic-specific, and complemented with exemplars and/or rater training. Also, although rubrics in themselves do not enhance the

consistency of scoring students' performances, a more comprehensive framework of validity through evaluating rubrics can foster valid assessment. Furthermore, rubrics can facilitate learning and/or improve instruction, mainly because they make expectations and criteria explicit and promote feedback and self-assessment. In this sense, rubric development as a pre-process in a specific classroom setting can increase its validity and reliability, and therefore facilitate effective use in feedback tasks. However, evaluators of rubric criteria need to be well trained in the rubric they are going to use, which can be included in the pre-process, the so-called preparation stage.

Regarding the use of rubrics for evaluation, which is the most common form of application to teaching and learning, Osana and Seymour (2004) developed a rubric to enhance argumentation and critical thinking skills for educational issues in discussion and writing for their case study. They applied it to a class of preservice teachers, based on a cognitive apprenticeship model for development in statistical reasoning skills, through a series of phases to help the students, such as modelling, coaching, scaffolding and fading. The focus of this study is on the process of evidence evaluation as an argumentation process, which is theoretically grounded on Kuhn's (1991) quality of thinking in the process of hypothesis testing. The researchers' qualitative analysis demonstrated that the cognitive apprenticeship intervention helped recognise and evaluate evidence and to construct logical ideas. Also, their qualitative coding rubric facilitated instructors' critical evaluation of students' work and revealed its potential to function as a theoretical model of good thinking, not just as an evaluation tool. However, this study has not measured the reliability and validity of its rubric, and the designed coding rubric – the so-called outcome measures – was limited to grading between levels of quality in argumentation.

Instead of the well-known use of rubrics for grading, Reddy and Andrade (2010) highlighted another potential role: an instructional one. This can help students to understand the targets of learning and the standards of their performance quality, and to anticipate the need for revision and improvement. Rather than the relevant area of primary and secondary education, they focused on the use of rubrics at the post-secondary level, pointing out a paucity of empirical studies on rubrics. Based on 20 relevant empirical studies in a variety of research fields, not just rubric use for writing tasks, they reviewed how rubrics have been

applied, the amount of attention on the quality of rubrics, and the future implications of this area. They concluded that rubrics have been used for various purposes and that most of the students and instructors in the studies reviewed have positive perceptions about the use of rubrics. As Jonsson and Svingby (2007) summarised, the researchers in this study also suggested that instructors should use rubrics for a wide range of purposes, including formative assessments, to enhance students' engagement in feedback and revision, or use them at the stage of creating rubrics for a class, not just limiting the potential of rubrics to evaluation. Moreover, it was recommended that we need to address the validity of rubrics based on contents, construct and criteria, whereas usually only the reliability of rubrics has been explored. In addition, this study emphasised the need for rigorously designed empirical research studies and more learning-focused studies on rubric use. In fact, how students actually access and use a rubric, as well as how to develop rubrics in a specific learning context, is an important issue in the reiterative and modifying process of the rubric development cycle.

Based on the literature review of 63 studies of rubrics in higher education, to explore the quality of assessment information in rubrics and the effects of rubric use on student learning and motivation, Brookhart and Chen (2015) also pointed out that more active studies on how to use rubrics for learning were needed. They showed relatively few studies on the validity of the information that rubrics contain, compared to those on the reliability of rubrics, which reflects the fact that most of the previous studies have put more emphasis on faculty or programme use, rather than the pedagogical implications of how students use rubrics. More importantly, they claimed that rubrics should be appropriate for both formative and summative evaluation, including detailed explanations of work quality, as well as information on measurement scales. This study concluded that, by providing students with descriptive rubrics about their work, they can offer greater guidance to goals, which can be subsumed into the conclusion of Jonsson and Svingby's (2007) study.

In addition, Wang (2014) claimed the necessity of an instructional rubric as a guideline for peer feedback between students, including students' perceptions of the role of rubrics in the feedback process. Considering that an instructional rubric operates not only for assessing tasks but also providing detailed feedback on them, Wang (2014) pointed out that

few studies in L2 writing have been carried out to investigate the use of rubrics in peer feedback tasks. In this context, he studied a longitudinal inquiry to investigate the perceptions of peer feedback practices, which were conducted with the use of a rubric by 53 Chinese EFL students. The findings showed that students' perceptions of the usefulness of peer feedback for revising drafts decreased over time, although the students considered the rubric to be an explicit guide for evaluating peer's essays. Also, this study suggested five factors that influenced students' perceptions of the usefulness of peer feedback for draft revision: their knowledge of assigned essay topics, their limited English proficiency, their attitudes towards the peer feedback practice, time limitations on in-class peer feedback sessions and their concerns about their relationships between peers. The use of the rubric was thought to help topic awareness, whereas students' insufficient knowledge of the target language and the time constraints on the peer feedback process hindered the usefulness of this feedback. Moreover, the study showed that the cultural context of the students affected their attitude towards peer feedback, which means that students were trying to pursue harmonised relationships and were reluctant to hurt each other's feelings. As a result, this study highlighted that students would need some time to become familiarised with the practice of peer feedback, and some time to prepare peer feedback before the in-class sessions. Furthermore, this study pointed out that anonymous peer feedback sessions, assisted by web-based peer review systems, can help to decrease the level of concern with interpersonal relationships during the peer feedback process. In order to increase the effectiveness of peer feedback and decrease its negative effects, this study proposed that students should be provided with reading materials relevant to a specific writing topic in the pre-writing stage, specific training sessions on brainstorming and chances to co-create rubrics between teacher and students, including wider use of rubrics to facilitate peer feedback between students.

As an instructional study relevant to the use of rubrics, not for assessing students' tasks but for enhancing the quality of argumentation, which is more anchored on the Toulmin model, Varghese and Abraham (1998) pointed out the lack of studies on explicit instruction in argumentation, and therefore conducted a study to focus on the rhetorical features of each language culture. To this end, they trained 30 Singaporean undergraduate students, who were English bilinguals, in two aspects of English argumentation: structural and

interpersonal components. For the structural aspects, students had practice judging the soundness of arguments in their reading texts, and then moved onto their own argumentative writing with two drafting stages, applying Toulmin's components to evaluate their arguments on their own. The interpersonal aspects, which were less focused than the structural ones, were assessed according to the creation of a clear persona, the appropriate use of rational and emotional appeals, and the stance shown towards the discourse of argumentation, which possibly falls into the category of rebuttals in the Toulmin model. After eight weeks of instruction, the statistical analysis drawn by pre-post comparison proved that both the structural and the interpersonal abilities of the students had improved. This study shed light on the pedagogical implication for the rubrics, which were based on the needs of the target tasks and designed to fit their contents, as well as the explicit skill-focused instruction before the actual performance. However, the rubric for argumentation, claim, grounds and warrants, with three levels of performance quality and scoring scales from one to three, was only used for evaluating pre- and post-test, not for instruction. In addition, there was no control group to provide a comparison, because of the administrative policy of the university in which this study was conducted.

Regarding more focused attention on rubric development and its efficacy for assessing critique writing by EFL university students, Diab and Balaa (2011) developed their own analytical rubric for an EFL class including three main components – content, organisation and language – and then applied this rubric as a guide to article writing. Particularly, their rubric had detailed sub-categories of the content dimension from introduction to conclusion, with a different scale of points and descriptions on expected performances allocated to each of the sub-categories, the total having more weighted value than the rest of the two dimensions. According to this study, a t-test result comparing the first and the second draft of a writing topic conducted by 78 students was statistically significant, demonstrating the effectiveness of rubrics on students' revision, while online survey results suggested students' positive attitudes toward the effect of the rubric on their writing. In particular, the survey results showed that using rubrics was fair and helpful for peer review. Given these results, the study supports the claim that rubrics decrease teacher's subjectivity in grading and enhances the accountability of both teachers and students (Flynn & Flynn, 2004; Moskal &

Leydens, 2000), reconfirming the necessity of detailed and well-developed rubrics for students' development in English writing.

In addition, East (2009) explored the reliability of a detailed analytic rubric for foreign language writing with English natives in New Zealand who were studying German. Two sets of the timed writing test results – letter-writing and argumentative essay writing – were collected from 47 high school students at the intermediate level of German, and then analysed against a newly created scoring rubric. The rubric had five categories, with detailed descriptive sub-components: (i) cohesion, coherence and rhetorical organisation; (ii) lexical and pragmatic features; (iii) grammatical features; (iv) mechanics (spelling and punctuation); (v) rhetorical features. This analytic rubric was based on the 'ESL Composition Profile' (Jacobs et al., 1981) and combined a numerical score from 0 to 7 in each category. In fact, this study heavily focused on the reliability of rating in foreign language instruction, especially in the non-English writing context. However, the findings of this study also upheld the necessity of detailed rubrics for higher reliability and consistency in scoring for teaching writing in a foreign language, increasing discrimination between different levels of writing by students.

To summarise these studies, writing rubrics help both teachers and students to rely on fair, mutually agreed, explicit and reasonable evidence for the evaluation of their argumentation. In particular, detailed rubrics are more likely to act as practical measures for analytical judgement of the students' writing process and the teacher's assessment. Considering the generic features of the Toulmin model, which includes a concrete and visual representation of the logical development in writing, analytic rubrics – with the phased categorisation between the Toulmin's argumentation elements – can encourage students to understand, follow, remind, and review all the necessary components in establishing logical coherence. This can act as a commonly shared and critical guideline for interactive feedback, as well as individual writing itself. Moreover, in the sense that EFL students are less familiar with the target genre of English writing, they may need more time and support to become accustomed to genre-specific features in English, which means that more detailed and sub-divided rubrics might benefit them. Therefore, it would be necessary for teachers to create

specific rubrics with appropriate analytic components in accordance with the target genre of writing, students' English writing proficiency and their readiness for peer reviews.

2.4.3 Feedback

While there have been lots of changes in writing instruction so far, teacher feedback is still regarded as one of the most important factors, giving teachers the opportunity to adjust to the needs of each student and help students in various aspects (Black & Wiliam, 1998; Ferris & Hedgcock, 2014; Gan, An & Liu, 2021; Nicol & Macfarlane-Dick, 2006; Sadler, 1998). Especially as teachers have applied multiple drafting stages with feedback and revision, their interventions have been carried out earlier and their comments on students' drafts have been diversified (Ferris et al., 2011). While teacher feedback is considered necessary for a variety of issues and stages, how the teacher's comments are applied to a student's writing, and how effective those comments are to improve the writing – these questions have been rarely studied (Adams, Wilson, Palmer-Conn & Fearn, 2020; Ferris & Hedgcock, 2014; Gan et al., 2021). This is partially because it is difficult to trace the effects of teacher feedback and measure the level of improvement caused by the feedback. Also, it is hard to distinguish the effect of the feedback from other instructional effects. Some studies found that most of the changes in student texts triggered by teacher comments positively improved the writing of students (Conrad & Goldstein, 1999; Ferris, 1997; Ferris, 2001; Razali & Jupri, 2014).

Generally speaking, most language learners like teacher correction (Ellis, 2008). Some studies demonstrate that ESL learners liked to be corrected by their teachers (Catchcart & Olsen, 1976; Chenoweth et al, 1983; Lee, 2008). L2 students tend to take teacher feedback seriously (Ferris, Liu & Rabie, 2011; Montgomery & Baker, 2007; Razali & Jupri, 2014) and apply it to their revision processes (Ferris, Liu & Rabie, 2011; Razali & Jupri, 2014). In particular, most students prefer more explicit teacher feedback (Kim & Mathes, 2001; Lee, 2008; Nagata, 1993).

There have been more studies into student views on teacher feedback for L1 and L2 writing. For example, Hyland's (1998) study suggested that students tried to apply most of the teacher's feedback into their revision practices and that the feedback triggered other changes beyond those suggested by the teacher. This study stresses that teachers need to

consider feedback from the student's viewpoint and incorporate feedback as an integral part of teaching writing, not as a separate practice. This point can be understood in line with formative assessment, which concentrates on the function of assessment as a dynamic force in a cycle of improvement in instruction.

In addition, Ferris & Hedgcock (2014) summarised the general findings that students highly value teacher feedback, believing in its importance and helpfulness to their writing development. In addition, they acknowledged the value of feedback that blended encouragement and constructive criticism, and welcomed concrete suggestions for improvement. Also, effective teacher feedback should be provided at intermediate stages of the writing process, rather than just the final stage of the writing task, and on a range of features beyond just language or ideas, with careful consideration of the formal characteristics of their feedback for the better understanding and effective use of students.

In fact, students as non-native writers in English are more likely to be dependent on teacher feedback, putting greater value on teacher feedback than peer feedback (Leki, 1991; Lin et al., 2001; Saito, 1994; Zhang, 1995; Yang, Badger & Yu, 2006). Also, they are more likely to expect teacher feedback on language rather than content (Hedgcock & Lefkowitz, 1994; Leki, 1991; Saito, 1994). In particular, foreign language learners are more likely to anticipate that their teacher will correct every error, indicating their higher level of dependence on teacher feedback (Lee, 2005; Leki, 1991; Komura, 1999; Rennie, 2000). This tendency is because L2 learners lack confidence in their own linguistic competence, or that of their peers, whose level of proficiency is often the same as theirs (Nelson & Murphy, 1993), thereby increasing their reliance on the teacher's help in the revision process. For example, Lee's (2008) study on the reactions of secondary school students in Hong Kong to teacher feedback shows that teacher feedback lets students be passive and dependent on teachers, raising an issue that teachers should recognise, which is the influence of their feedback on the expectations and attitudes of their students. In this sense, teachers need to encourage students to take part in self-evaluation and peer feedback with well-developed writing rubrics (Schunn, 2016; Schunn et al., 2016; Yang & Carless, 2013), and delay their feedback until peer feedback practices are finished (Yang & Carless, 2013).

Different from teacher feedback, peer feedback has been actively studied, while its effectiveness is often underestimated. In terms of the practical benefits of peer feedback, students can take active roles in their own learning (Hirvela, 1999; Lin et al., 2001; Mendonça & Johnson, 1994; Nicol et al., 2014; Topping, 2009; Wu & Schunn, 2021) and receive interact with authentic readers (Topping, 2009; Wu & Schunn, 2021) and can reconceptualise their ideas in light of their peers' reactions' (Hansen & Liu, 2005, Lundstom & Baker, 2009; Topping, 2009; Wu & Schunn, 2021). Also, they can gain a clearer understanding of reader expectations by receiving feedback on what they have done successfully and what remains unclear (Nicol et al., 2014; Topping, 2009; Wu & Schunn, 2021). In addition, responding to peers' writing builds the critical skills needed to analyse and revise one's own writing (Leki, 1990; Lundstrom & Baker, 2009; Nicol et al., 2014; Sadler & Good, 2006; Wu & Schunn, 2021). In line with the advantages of peer feedback, Ferris and Hedgcock (2014) summarised three theoretical frameworks on peer response: peer reviews at multiple drafting stages dependent on process-based writing; collaborative writing as social interaction from a socio-constructivist point of view; and group work, including peer reviews, for L2 writing development. These points all highlight the role of students as active agents, not passive receivers or observers, in written discourse.

In particular, Lundstrom and Baker (2009) investigated peer feedback from the perspective of who will benefit from feedback between provider and receiver, based on a quantitative study with pre- and post-test comparisons over one semester. This study, in which 91 L2 university students in the U.S. participated, suggested that feedback providers gained more benefits in writing improvement than feedback receivers, and this tendency was more apparent in the lower proficiency group. This study also suggested the positive effect of actual feedback practices on students' writing skill development.

Lundstrom and Baker's (2009) findings can be understood in line with other studies which support peer feedback, increasing confidence and reducing apprehension by seeing peers' strengths and weaknesses in writing (Leki, 1990). This enhances students' engagement and builds a sense of classroom community (Evans, 2013; Ferris, 2003; Hirvela, 1999; Liu & Hansen, 2002; Wu & Schunn, 2021), while providing more opportunities for student writers to receive further feedback (Cho & Schunn, 2007, Topping, 2009). Moreover, feedback from

multiple peers can have a more positive effect on students' writing than feedback from a single teacher (Cho & Schunn, 2007), while the process of learning how to accept or decline peers' suggestions in itself improves social skills (Topping, 2009). Therefore, the amount of mutually exchanged peer feedback is directly proportional to the amount of revision undertaken, and this contributes to students' improvement (Patchan et al., 2018; Schunn et al., 2016; Wu & Schunn, 2020). The extant literature on the effect of peer feedback suggests that students, even at a lower level in terms of English proficiency, can participate in and gain from peer feedback when a teacher's clear instruction is incorporated into class systems for enriched peer feedback.

However, the level of activeness or passiveness differs from country to country and from culture to culture. Especially in the learning context in Asia, a reluctance to critique has been found. Nelson and Murphy (1993) observed that Chinese students tended to be hesitant to provide critical reviews on the essays of their peers, which was influenced by their own cultural traits. Also, Korean students were reluctant to give written comments on the essays of their peers at the beginning of a semester, whereas they felt more relaxed as time went by and, in particular, after their mutual relationships were developed (Lee, 2016). In addition, it was mentioned that South Korean students feel uncomfortable expressing or sharing their ideas in communicative tasks with teachers and peers, because of sociocultural influences in the classroom (Choi & Rhee, 2013; DeWaelsche, 2015). As Watling (2014) claimed that feedback providers, mostly teachers, have to take into account the cultural context of teaching and learning, and as Scott (2014) pointed out that students' perceptions of feedback should be considered a contributing factor in learning, therefore cultural perspectives and practices should be considered in advance when teachers try to apply peer feedback tasks into a specific language-learning context.

With regard to the quality of peer feedback, students' avoidance of critical comments from peers to avoid harm to their interpersonal relationships, is one of the critical issues (Topping, 2009). A classroom system of anonymous peer feedback can minimise this concern, thereby decreasing prejudice and fostering a more inclusive environment (Lin et al., 2001; Patchan et al., 2018). Online environments can be implemented to foster further anonymity within the student community (Patchan et al., 2018; Schunn et al., 2016), whilst facilitating well-

structured rubrics and incentives for accurate and constructive peer feedback can also serve to increase the reliability and validity of peer feedback (Hansen & Liu, 2005; Pearce et al., 2009; Sadler & Good, 2006; Wu & Schunn, 2020). Moreover, teachers should provide slower students with explicit and elaborated instruction instead of just giving feedback on poorly understood concepts, criticism that implies the necessity of direct and level-specific teacher intervention (Hattie & Timperley, 2007).

In terms of all the different kinds of feedback, Evans (2013) concluded 12 pragmatic actions to synthesise effective feedback and feed-forward design principles, which proposes the valuable points to be taken into account in the process of feedback design. From the action points, some integrated findings can be narrowed down. It is important to provide students with clear guidance for feedback (Hansen & Liu, 2005; Pearce et al., 2009; Sadler & Good, 2006; Schunn, 2016; Schunn et al., 2016; Patchan et al., 2018; Wu & Schunn, 2021), along with training opportunities from the beginning (Hansen & Liu, 2005; Kintsch et al., 2000; Schunn, 2016, Wichmann et al., 2018; Wu & Schunn, 2021) in order to help them become aware of their roles, values and responsibilities, procedures, and the focus of the feedback tasks. As feedback is an ongoing and integral part of assessment in the writing process, the design of feedback tasks should be connected to before and after the feedback (Gibbs 2006), not simply to isolated tasks in the writing process. Also, students can be engaged in the design process as well as in the feedback process, all of which can motivate them and increase their responsibilities and participatory performances.

2.4.4 Summary of Rubrics and Feedback to Student Writing

Based on the reviews of scoring techniques, rubrics and feedback from teachers and peers, teachers must take their instructional aims into account, and then develop rubrics related to a determined scoring framework and arrange for feedback provision. The aim of student writing in this study is argumentation development, based on the Toulmin model, and therefore a rubric with more detailed categorical elements of argumentation can be a better guide for students to anticipate what to asses and how to apply these principles to their writing. While analytic rubrics can provide them with a clear and descriptive standard for revision, trait-focused rubrics allow for more attentive and focused performances for

improving target skills in a specific writing genre, including argumentative writing. In the process-based writing approach, moving a focus from major errors to minor errors through review work is common, which suggests that teachers should develop a specific rubric for each peer/teacher feedback stage. Therefore, the first rubric focusing on the general structure and contents development, that is to say, macro-level features, would do better to include individual components of argumentative structure like claim, warrant, rebuttal and so on. Also, the second rubric, based on micro-level features like vocabulary and punctuation, should be made up of more linguistic-oriented categories. Then, the two kinds of rubrics for each feedback stage can be explained and understood before students start the writing tasks, so that each rubric reminds them of key points in each drafting and revision or editing stage.

As discussed above, detailed and systematically developed rubrics for argumentative writing are quite rare, particularly ones based on the Toulmin model, which implies the unique value of this study. Furthermore, as explained in the primary trait scoring approach, a higher focus on the quality of argumentation in the scoring system can be imposed by using weighted scores for argumentative components in the first rubric rather than the second rubric. Despite the possible advantages of the rubrics and scoring framework that will be used, actual learning contexts for students should not be ignored. Considering some research findings on the inactive participation of Korean students or other Asian students during the feedback process (Choi & Rhee, 2013; DeWaelsche, 2015; Lee, 2016; Wang, 2014), it would be better for teachers to consider ways to increase students' engagement. This means that students have to get clear guidance for how and what to review as a peer reviewer, and that teachers need to plan writing tasks that will allow students to exchange and apply the feedback given by others. For this elaborated participation, scoring and commenting in accordance with shared rubrics in each feedback stage can be used as ways to make students feel responsible for completing review tasks as part of the compulsory stages.

In this sense, the analysis of the relevant literature for this study implies the following:

- Teachers/course developers can develop rubrics and feedback strategies for argumentative writing instruction, incorporating analytic and trait-focused assessment approaches, which are broadly based on analytic rubric features, but mainly focused on the quality of argumentation components.

- Teachers/course developers need to develop and display each of the analytic rubrics for the first and the second feedback stages for detailed feedback from other students in each feedback stage: macro-level feedback for the first rubric and micro-level feedback for the second rubric.

- Teachers/course developers need to apply more weighted scoring scales in the argumentative elements of the first rubric.

- Teachers/course developers need to develop descriptive instructions written in rubrics, so that they can develop self-regulation across their writing process.

- Writing course design needs to allow student reviewers to feel free to work anonymously, considering the socio-linguistic context of the target classroom.

- Teachers/course developers need to plan pre-sessions for explicit instruction in target writing skills, such as understanding the components of argumentation and coherently establishing those components, as part of a writing course, so that students can be equipped with necessary writing skills prior to actual writing.

In fact, the implications above are closely relevant to or sometimes interdependent on the technical affordances in the digital learning environment. Therefore, it is necessary to address digital learning models, approaches and/or principles concerning the design for language learning and teaching in the next chapter, so that a specific model of the instructional design for this study can be generated.

2.5 Research Studies on Process-Based English Argumentative Writing in South Korea

In the preview sections, theories and studies relevant to writing, argumentation and rubrics as a way of teaching intervention were all addressed and critically reviewed, so that the pedagogical implications on how to design an effective argumentative writing course for a target class could be discussed and summarised. Along with the theories and studies, the

relevant literature on a target context, South Korea, where this study was conducted, needs to be addressed. In this section, Korean studies focusing on process-based English argumentative writing will be addressed, to look at significant and relevant findings for my study. By doing so, the gaps between and pedagogical implications of previous studies in South Korean English education environments will be narrowed down and applied to my own research.

In South Korea, studies in the area of English writing have not been very active, compared with studies of other English skills. This is because receptive skills such as listening and reading have received more focus in the school curriculum, causing these two areas to be mainly assessed in an English learning environment. This imbalanced instruction has given Korean students less time to learn speaking and writing English in class, which has decreased their competence. This trend has consequently influenced the studies of South Korean researchers on teaching and learning English and, therefore, there has been a lack of research into English writing in South Korea (Shin, 2018).

Despite this dearth of research, some studies on teaching English writing were conducted, using the process-based approach. Many of these studies explored how to adapt and apply process-oriented writing theory into school curricula for teaching English composition (Joo, 2010; Keum, 2007; Oh, 2012; Seo, 2011), finally suggesting good models of English writing instruction (Joo, 2010; Oh, 2012).

Firstly, Keum (2007) explored the effectiveness of the process-oriented approach and the product-oriented approach to find appropriate instructional methods to enhance middle school students' writing competence. Although the two writing approaches were positive, the process-based approach was more effective for improving the students' writing ability than the product-based one. In this study, Keum explains that teaching writing as a process can bring positive outcomes to writing proficiency improvement in English classrooms in Korea and, therefore, the process-based approach, as well as the product-centred approach, should be employed to teach English writing.

From the necessity of a variety of English writing activities and their evaluation criteria, Oh (2012) conducted a study targeting second-year high school students to suggest a writing model based on the process-writing approach, by modifying and restructuring writing sections of a high school English textbook. The writing activities in the English textbook used for this study were adopted from a wide range of resources and the genres of writing were diverse, depending on the topic of each chapter in the textbook. The findings of this research show that a series of writing processes invented by the researcher were effective in helping students to develop the quality of their essays and that evaluation rubrics should be offered to students for clear peer feedback. The characteristic of this study was that 15 minutes per session were allocated for students to engage in writing activities, because the writing model of this study was invented to be embedded in each of the ordinary English classes in school.

Joo (2010) also carried out a study, based on similar perspectives and objectives as Oh's (2012). In this study, 25 college-level students participated for one semester. An outstanding feature of this study was that other writing approaches – such as the product-oriented approach, genre-based approach and electronic writing learning – were partially included, in order to make up for the weakness of the process-oriented writing approach itself. The quantitative analysis of five assessment criteria shows that the design of this study was effective. In addition, the effectiveness of the writing design in this research was supported by qualitatively analysed data, based on students' journals on their learning experiences and a survey of writing activities. In terms of feedback, Joo pointed out the need for balanced feedback between the teacher and peers, because students' preferences for teacher feedback came from their absolute trust in that feedback, which may prevent their creativity and writing competence in the long run. Joo also emphasised that evaluation criteria and good examples of writing samples that students can refer to should be provided in advance, to help students give clearer feedback to their peers.

Song and Im (2011) also designed a model for teaching English writing skills, based on a process-genre approach for middle school students from the researchers' balanced perspective between a process-based and genre-based approach. This study pointed out the difficulty of free-writing and the need for genre-based learning for EFL students,

discouraging instructors from applying only process-based approaches to teach English writing. To investigate the effectiveness of the model in terms of English writing skills and changes in the affective domain, two classes in a middle school were taught English writing for six months. One was process-genre based and the other was product-based. The findings proved the process-genre approach to be more effective in improving learners' writing ability and enhancing positive affective domains such as attitude, self-confidence, interest, and motivation. Also, the teaching model was beneficial in the sense that it enabled teaching materials to be used for each genre. As Macken-Horarik (2002) mentioned, EFL learners tend to have limited access to information about their target language culture, compared with native speakers of the language. This may lead to a lack of knowledge in text variety and typical patterns, which leads to the criticism of process-based writing instruction. In this sense, the research suggests a blended model which focuses on both the writing process and genres, not only compensating for the drawbacks of process-based writing models, but also understanding the characteristics of the EFL learning context.

Focusing on how to teach English writing based on a process-oriented approach rather than a writing model development, Seo (2011) performed a small-scale qualitative research study with five third-year middle school students. Students were asked to select what they want to write and then develop their free-writing essays, going through three cycles of revision. One face-to-face meeting with the teacher for feedback was included to complete the essay. The result of this study generally showed writing development in five evaluation criteria: content, organisation, grammar, vocabulary and mechanics. The findings explain that pre-activities giving clear guidance before the writing process and a checklist for self-revision and peer revision are necessary. Moreover, students need to be prepared with information for their writing, so it would be better to have the classes in computer rooms.

Judging from the research studies above, it is noticeable that most of the findings indicate the evaluation criteria that guide learners to a clear understanding of important and necessary writing elements should be provided, so that students can fully participate in the feedback process, as well as develop and revise their own essays. Along with the assessment criteria, support such as good writing samples and exercises as pre-activities should be offered, to enable student writers to become accustomed to the basic features of their

writing genre or rhetorical structure, and be ready to deliver what they want to say in their writing. It is generally true that EFL writers lack English writing experiences, which makes them feel more stressed and increases the affective filter during writing. Thus, teachers should give students more enriched input into the writing process. For this enriched input, technology-based writing can provide a variety of supportive writing situations with great ease and convenience. Although it has been common for researchers to partially adopt online writing tools or a word processor, these were not strictly digital-based writing. Moreover, all the research studies discussed so far are small-scale, with a small number of students taking part. For writing model development, newly invented writing designs need to be exposed to a larger number of students, collecting more extensive and responsive data to model reviews.

Different from the process-based writing research studies above, Song (2004) invented and applied an evaluation checklist for each stage in process-centred English writing, so that he could suggest a test model. He tried to provide detailed evaluative criteria for every step, including inter-group, intra-group and teacher observation checklists. Four pieces of argumentative writing on dichotomous questions of current issues were used to diagnose the validity and objectivity of his evaluation model. As an extension of the studies reviewed above, this one has a pedagogical implication, because well-developed checklists encourage students to clearly understand what to do and actively participate as a reviewer in peer feedback stages, as well as provide clear and reliable standards of writing assessment.

In terms of the English argumentative writing of South Korean learners, studies focus on the comparison between Korean and English on a rhetorical basis, to decide which different rhetorical features of English to teach Korean learners (Choi, 1988; Kang & Oh, 2011; Kim, 2005; Park, 2014; Wang, 2000). First, Choi (1988) analysed the structure of argumentative texts in Korean speakers' argumentative writing in English, compared with native speakers' writing in Korean, as well as native speakers' writing in English. The structure of 11 argumentative essays given to American and Korean students was analysed with the interactive text analysis model. The results of this study show that the English essays of native speakers have a prevailing structural sequence – such as claim, justification and then conclusion – whereas not a single pattern appears in the writing of South Korean natives, in

either their mother tongue or in English. Besides, the structure of South Korean learners' writings in their mother tongue – numerically one out of the five – is non-linear compared with the English writings of native speakers. However, English and Korean essays have common features, such as the three basic components of text structure: claim, justification and conclusion. These common elements indicate that there may be a set of universal features characterising argumentative texts.

Wang (2000)'s study explained that no predominant text structure exists in South Korean students' argumentative essays in L1 and L2, except that only one essay follows a linear structure. While the main ideas of American subjects are often located at the beginning, those in the essays of South Koreans are occasionally positioned at the end in both L1 and L2 essays. Contrary to this study, Kim (2005) demonstrated somewhat different findings, because while half of the Korean essays written by South Korean learners had the main idea in the initial position, their English essays had a greater frequency of main ideas positioned at the beginning, in ten out of 12 essays to be precise. This discrepancy came from the participants' level of English, resulting from the length of their stay in the USA. While Kim's (2005) participants had been living in the USA for more than three years, Wang's (2000) participants had no experience of living there.

The study of Kang and Oh (2011) was carried out to find out the similarities and differences in rhetorical patterns in the argumentative writing of college students in Korea. Rhetorical features in 30 essays written by the same participants were examined according to two variables: language types and proficiency levels of English. The rhetorical elements investigated in this study were the placement of the main ideas and the macro-level rhetorical patterns. The results of this study indicated that the main idea in low-level students' writing was generally located in the same place in both L1 and L2 essays, but the placement and clarity of the main idea varied from student to student. On the other hand, high-level students tended to suggest a clearer main idea in the initial position in both L1 and L2 essays. With regard to the macro-level rhetorical patterns, the low-level student's L1 and L2 pair essay showed more diverse patterns than a high-level student's pair essay. The most common pattern identified by the high-level students was explanation with

enumeration. Qualitative analysis demonstrated more elaborate reasoning and active interaction with potential readers in the higher-level students' essays.

Park's (2014) study explored the effects of two types of English writing, specifically narrative and argumentative, on the level of linguistic accuracy of South Korean university students. Further, this study investigated the relationship arising between the level of students' writing proficiency and linguistic accuracy within each genre. The result of this study indicated that there was a clear statistical significance arising between students' level of English writing proficiency and their overall error frequency. The result also indicated a statistical significance between students' levels of English writing and their specific types of error within each genre. This study, therefore, implies the need for different instructional approaches according to different levels of students and the various genres of English writing, including the evaluation of students' proficiency in each.

More recent studies on argumentative writing are also concentrated on discourse analysis, analysing South Koreans' rhetorical features within English argumentative essays (Ahn, 2018; Choe, Rye & Jeon, 2020; Jeon & Choe, 2019; Kang, 2021; Yoon, 2018), with rather less focus on their level of argumentation or on how to hone their critique. However, most of the studies on English argumentative writing generally support the fact that South Korean students should learn more genre-specific features.

First, Yoon (2018) evaluated nominalisation in South Korean university students' argumentative essays and then compared this data with that of native English university students. The findings of this study suggested that, while South Korean students' frequency of nominalisation was almost the same as that of native English student authors, their nominalisation examples were syntactically simpler and rather more underdeveloped in terms of cohesion and eloquence than their counterparts. This study indicates that university students in South Korea need to acquire more enriched learning experiences in order to glean the specific conventional features of English argumentation.

In addition, Jeon and Choe (2019) analysed South Korean university students' summary writings of English argumentative and expository texts using the computational assessment

tool Coh-Metrix. This study shows that, while students used many and more varied words, composed longer sentences, and employed more concrete terms and adjectives within their argumentative summaries, they tended to use more nouns and verbs in their expository summaries. Moreover, argumentative summaries contained relatively more conjunctions, higher syntactic complexity and increased co-referential cohesion. Therefore, this study suggested pedagogical implications for teaching text-specific linguistic features and summary skills to South Korean students.

Moreover, Choe et al. (2020) extended Jeon and Choe's (2019) study, additionally including cause and effect texts. They also used Coh-Metrix to analyse the three genres of English writing, namely cause and effect, comparison and contrast, and expository and argumentative texts. The findings of this study indicate that students' summaries were statistically different according to the genres, in terms of their lexical, sentential and discourse levels. Therefore, this study reaffirms the need to provide students with direct experience of various genres of English writing.

Ahn's (2018) study also used Coh-Metrix to analyse comparative differences arising in terms of English expository and argumentative writing between South Korean and British university students. The results of this study suggest that Korean EFL university students lacked the necessary understanding of linguistic features of the two writing genres and displayed difficulties in writing in these genres effectively. This study additionally implies that South Korean students need more genre-focused instruction in terms of their English writing.

Based on the research discussed above, the studies on the argumentative writing of South Korean students as EFL learners converge on the point that explicit instruction on the different rhetorical characteristics of Korean and English is necessary, because speaking Korean as a mother tongue influences the learning of English writing, and this tendency is greater when the English proficiency of the learners is lower. Therefore, teachers need to present good samples of native writers, highlighting rhetorical structure in English argumentative writing. In addition, teachers should give students enough time to clearly understand and apply them to their own writing, and not be forced to write something

before they are ready. Although contrastive rhetoric research studies and L2 writing pedagogy are mainly focused on the area of argumentative writing, the importance of teaching English writing structure cannot be ignored. It is generally true that EFL writers lack knowledge of rhetorical patterns in English writing, as well as linguistic knowledge of English itself, suffering from a double disadvantage in writing English essays.

However, teaching pedagogy and practical teaching strategies for English argumentative writing cannot only be derived from rhetoric-based research studies, which provide a partial picture of that area. It is hard to disregard the influence of L1 on English writing, but a variety of studies on writing development, including argumentative writing, are required to elicit effective teaching methods for English writing from studies in this field. Considering the growing need to learn English writing in Korea, with the current writing test policy of the South Korean ministry of education, a variety of studies applying different types of writing theories and instructional tools into classroom situations are of timely importance for English education in Korea.

As reviewed in the literature so far, using rubrics can be an effective way of teaching argumentation explicitly and systematically. However, the use of rubrics in the process of writing development, including the Toulmin model, has rarely been studied in the writing context in South Korea, although some of the studies dealt with relatively simple checklists rather than detailed and structured ones. So far as systematic rubrics can encourage students to understand essential elements of English writing and argumentation during their peer reviews, as well as in their own writing, the use and the quality of rubrics can increase the value of peer-review sessions. Considering the small number of studies on writing rubrics, the peer-review practices in English writing are underactive in South Korea.

2.6 Summary of Literature Review II: Writing Development

Although the process-writing approach usually presupposes student-led writing, giving considerable responsibility to the students themselves, students who are learning English as a second or foreign language, who commonly have a lower level of English writing proficiency and different genre-specific knowledge, might have difficulties in active and effective writing. Moreover, argumentative writing necessitates logical development based

on the writing conventions of the target language, which implies that students need more help from teachers for their writing. In this sense, English writing courses which are more focused on argumentation development are necessary for EFL students, including South Korean students, to undertake effective argumentative writing in English. For target instructions or systematic/practical guides for argumentation, the Toulmin model gives a fundamental framework for sound and detailed logical structure and coherence as a well-established tool to investigate the soundness of argumentation. However, research studies on academic writing instruction design and teaching based on the Toulmin model have been rare in the field of teaching and learning English as a second or foreign language. Furthermore, the effective use of rubrics as an instructional and evaluative guide before, during and after writing for writers and reviewers, especially based on the Toulmin model, may help students to prepare, develop and assess their own writing as more independent writers, and, at the same time, to read and evaluate critically others' writing in a more constructive fashion.

Therefore, applying the Toulmin model to a series of writing tasks, and then applying it from actual writing to reviews, based on the process-writing approach, is likely to compensate for the flaws of general process-based writing classes and, at the same time, enhance logical development in argumentative writing in English. Along with the process-based writing approach as a general procedure for a writing course, and the Toulmin model as an argumentation-focused instruction, to develop a framework of the instructional design for this study, a variety of possible affordances of digital environments need to be seriously considered to facilitate a more effective and communicative learning environment. Considering South Korean higher education students as participants in this study, higher education settings are more likely to make use of the benefits of digital learning environments for language instruction. Given that process-based writing is reliant on active and rich interaction between students and a teacher, the advent of learning technologies is expected to enhance a communicative, interactive and participatory learning environment, overcoming the constraints of traditional classroom learning environments. Thus, the next chapter addresses the literature on technology-related learning and teaching for writing development

Chapter 3 Literature Review II: Digital-based Learning and Teaching for Writing Development

Chapters 1 and 2 discussed the approaches to and theories of English language learning, especially focusing on writing development. Based on some of the theoretical underpinnings, writing development is highly likely to be facilitated and enhanced by more mutual, collaborative and interactive situations in learning, which can be effectively generated by digital facilities and devices. Therefore, this chapter aims to explore learning and teaching approaches and/or models based on digital language learning environments, in order to design a specific instructional environment for this study.

3.1 Design Considerations of Technology-based Instructional Models

For instructional model development using technology-based learning, it is possible to account for a variety of design models applied to a technology-based learning environment and then examine how to modify and apply them for each context of model development. Among the numerous instructional design models, the ADDIE model (analyse-design-develop-implement-evaluate) (Andrews & Goodson, 1980) has been the most widely used and influential in this area. However, in the strict sense, ADDIE is not a model, but acts as a kind of umbrella term, providing the basic structure for designing instructional systems.

As a more recent model, Colpaert (2006) suggested a pedagogy-driven design for online language learning and teaching, based on the traditional ADDIE model. He gave more shape to the design phase with three sub-stages: conceptualisation, specification and prototyping. Firstly, conceptualisation means 'the iterative creation of a concept as an answer or solution to the earlier defined requirements' (p. 481), by synthesising various interrelated actors and factors. Secondly, specification is 'the system structure in terms of components and their interaction and the user interface with screen design, menu systems and navigation' (p. 481). Lastly, prototyping is the stage where developers diagnose risks and feasibility before the actual development.

Figure 8: Colpaert's (2006) language courseware engineering loop (p. 481)
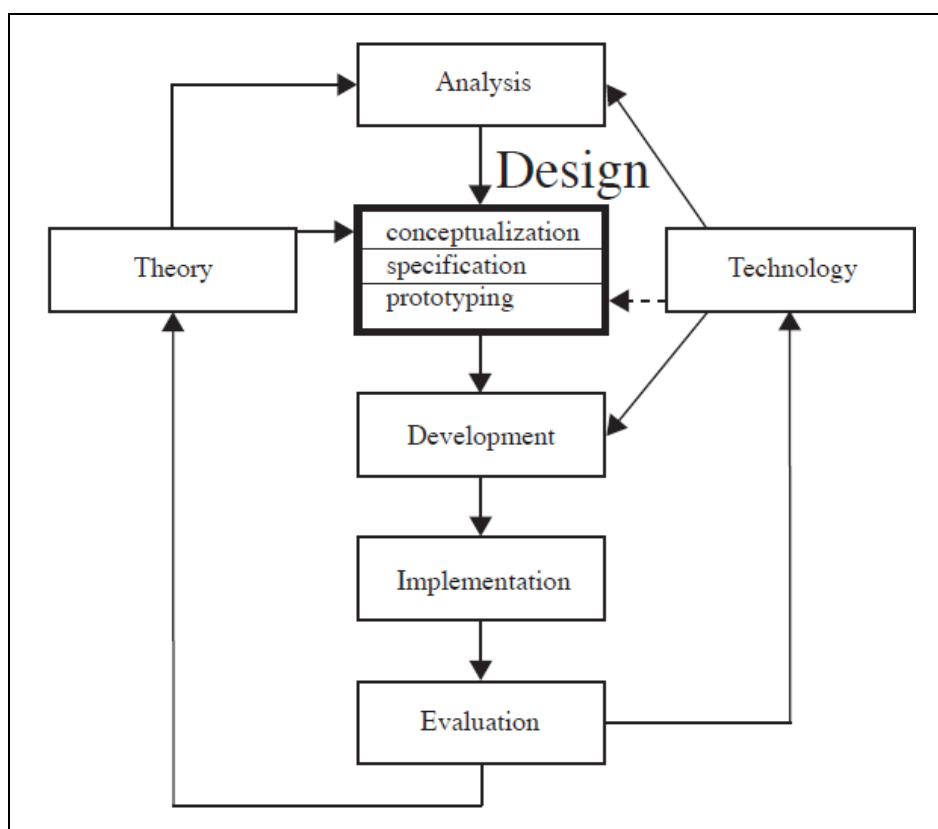
Colpaert narrowed down pedagogical implications based on a research project, which can be applied to a pedagogy-driven approach, based on an ontological specification. Focusing on the concept rather than the technology itself, he emphasised the links between software engineers and language pedagogues, which means communication between the two parties is necessary. Moreover, in teacher training, it is required to focus more on specification and conceptualisation than on evaluation criteria checklists. With these considerations, he suggested ten steps in pedagogy-driven design for online language teaching (p. 483):

1. *the learning environment*
2. *the system requirements*
3. *the learning architecture*
4. *the activity framework*
5. *linguistic/didactic functionalities*
6. *personas and goals*
7. *conceptualisation*
8. *specification*
9. *pre-use evaluation*
10. *post-use evaluation*

The steps above emphasise that we should primarily consider the language learning environment and goals before considering or assessing technology features, which implies the pedagogy-driven approach in online language learning and teaching. Besides his own focus, Colpaert also classified and summarised three other approaches: the technology-driven approach, the attributes-based approach, and the affordances-based approach. The technology-driven approach is intended to create a pedagogy based on the new features of a medium, meaning the pedagogy is not completely novel. The attributes-based approach evaluates the capabilities of a medium in terms of its potential effect on learning. The affordances-based approach relies on the potential or capacity of new technologies to improve the process of language learning and teaching. He claimed the importance of implementing technological potential or capacity by giving a detailed specification of what is necessary for a specific context, what the most appropriate method might be, and then what the technological requirements are. These findings show that, in online learning and teaching design, we should concentrate on a specific learning and teaching situation first, as well as the pedagogic goals, and not be driven by the affordances of attractive or innovative new technologies. Therefore, Colpaert's conclusions emphasise a pedagogy-driven and context-focused design for online instruction.

Focusing on software design methods, Ward (2006) evaluated Colpaert's (2004) language engineering loop. In particular, she positively reviewed the concept design stage, which asks designers to consider evaluation before the actual development of online software. Also, she positively evaluated the user or teacher involvement in the design process of Colpaert's model. She considered this model logical, although she pointed out that it might be complex for non-technical CALL personnel. In this review, Ward emphasised that non-technical CALL researchers and practitioners should take part in CALL design, especially in the design phase.

In the sense of the interaction between teachers and learners during the design process of the learning environment, Laurillard (1993; 2002) suggested the Conversational Model, including four major components: teacher's concepts, teacher's constructed learning environment, student's concepts and student's specific actions. Among the four main elements, all kinds of communicative activities appear through the eight different kinds of responsive flows as shown below. Discussions between the teacher and the learner take

place, where the teacher's and learner's conceptions are mutually responsive and, therefore, they agree learning objectives. Then, the teacher sets goals in accordance with the learner's conceptions and the learner provides feedback on them, which means adaption between the learner's actions and the teacher's constructed environment. Moreover, based on the interaction between the learner and the teacher, the teacher should create a learning environment adapted to the learning tasks and provide target support for those tasks, as well as proper feedback with the learner. Finally, the teacher and the learner go through a reflection process, in which the teacher modifies his or her conceptions and adapts tasks to the learner's needs and reflections on the learning process.

Figure 9: Laurillard's (2002) conversational framework
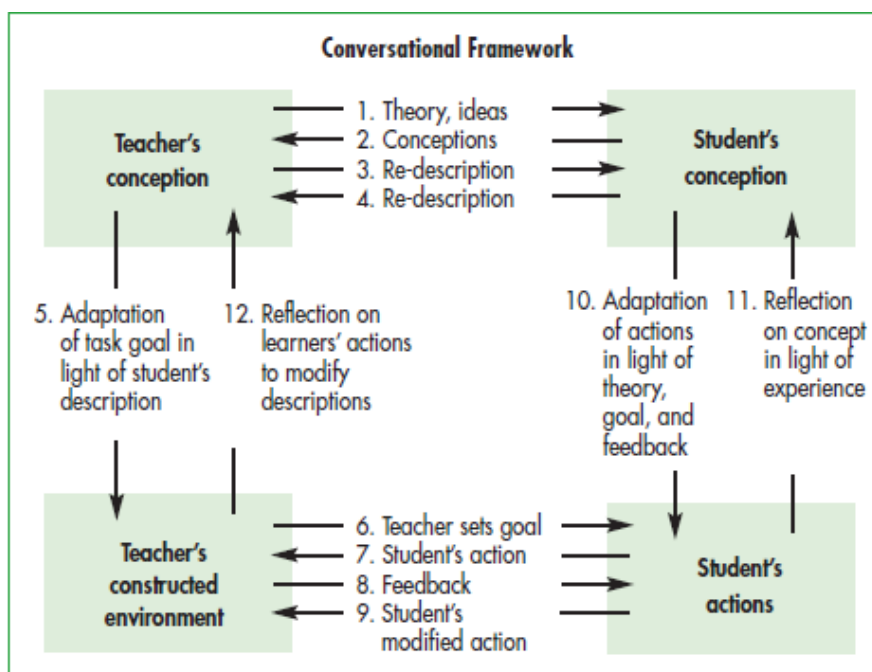
In the interactive learning and teaching process above, Laurillard (1993, 2002) argued that different types of media can be used. This framework can be seen as a framework for educational environment design, as well as a kind of learning theory. The four significant components of discussion, adaption, interpretation and reflection represent mutually communicative engagement in creating a specific learning environment between a teacher and learners. In this sense, each learning environment with different teachers and learners can produce a different learning scenario, constructing a unique learning design.

Consequently, an educational design should be firmly based on the learners' needs, indicating that learners are co-designers of the educational environment.

Along with interaction between humans, including teachers and learners, the interaction between humans and e-learning environments also occurs in technology-based instruction. As this situation generated a cognitive load theory, the concept of human-computer interaction has been taken into account for constructing a learning interface. Hollender, Hofmann, Deneke and Schmitz (2010) summarised instructional design guidelines or principles derived from cognitive load theory. Firstly, they pointed out the principles for reducing extraneous cognitive load, which require learners to use higher cognitive loads by presenting inappropriate materials or asking for activities irrelevant to learning. Secondly, they mentioned principles to foster a germane cognitive load, which helps learning through schema-building processes. In order to enhance this germane load, worked examples of a variety of tasks were suggested, to make links between concrete examples and abstract concepts along the way of schema construction. Also, using self-explanation strategies and providing users with control over tasks was proposed for a germane load. Thirdly, principles to adjust intrinsic load, which facilitates understanding by presenting information separately first and then all at once, were explained. Lastly, they reviewed the role of learner characteristics as an essential part of cognitive load theory. The usefulness of specific instructional designs can be affected by learner traits such as the level of proficiency, strategic memory skills, motivation and so forth, which should therefore be considered for specific instructional design.

Also, Hollender et al. (2010) stressed usability as one of the crucial elements in human-computer interaction, because its level can be determined in a specific context, which includes specific users and tasks. As Nielsen (1993) pointed out, learnability, efficiency, memorability, low error rate and satisfaction are the five goals of usability, and therefore a range of elements should be considered for system development. According to the five usability components, users, even new ones, should be able to make progress in a system in a short period and easily use that system again (learnability); complete tasks with the minimum number of errors that the system allows (efficiency); and be happy when using the system (satisfaction). Moreover, Hollender et al. (2010) suggested that memory load

should be reduced for users, focusing on recognition rather than recall, within the externalised and intrinsically easy operational environment. Therefore, in order to minimise unnecessary cognitive load and maximise the usability of an educational system, to ultimately increase interaction between users and the technology interface, designers should take both the cognitive features of general users and the characteristics of particular users into account. Considering the user's reduced cognitive load in the context of digital-based writing instruction, a designed setting for writing should help students to concentrate on their performance, not placing a heavy burden on learning and operating technical features across their writing process.

Numerous research studies on the effectiveness of technology-based writing and its application to actual writing tasks have been conducted. However, the studies on how to develop and design technology-based writing tasks and, by extension, create practical models of writing have not been undertaken in sufficient numbers, only showing glimpses of the potential in each educational tools or programmes. That is to say, it is still necessary to investigate the advantages and disadvantages of each technology and then identify how to apply it to the specific stages of the actual learning environment (Chapelle & Hegelheimer, 2003). The current trend of writing on different devices such as word processors, blogs and any other social networking service (SNS) is introducing learners to new writing environments with different affordances for each device, further increasing the need for researchers to explore their applicability to specific instructional design for writing in a second language. The lack of research studies on technology-assisted writing signals a need to examine the conditions and characteristics of effective writing in the technology-enhanced context, in order to develop a model specific to second language learning and teaching writing.

All in all, a successful learning environment would be an authentic communicative environment for learning with realistic materials and tasks, enhancing the affordances and usability of the learning interface with options for learner support. Considering those necessary elements in a technology-assisted learning environment, some overlapping features can be narrowed down: sufficient input, interactive and collaborative opportunities, cognitive development and independent learning possibilities. These common elements

should be highly regarded and seriously applied in relation to each technical device or methodological tool when course or material designers create and structure instructional settings, which also shows the fundamental grounds for the online writing course design of this study. Especially, those features are clearly relevant to the fact that student participants should share online feedback as a form of input. Also, teachers should create and suggest an online writing rubric for each writing stage, so that students can rely on it as a feedback guide as well as a writing guide. Moreover, these key points also imply that teachers/developers should design some possible options, such as rubric arrangements and page layouts embedded in accordance with the intuition of online users throughout the writing platform of this study. Therefore, an incorporative writing platform should be based on a good combination of or smooth transition between students writing on their own and exchanging feedback among peers.

In summary, it is necessary to consider a variety of instructional features closely related to digital environments to develop a specific digital course design. Colpaert's (2006) language courseware engineering loop concentrates on the need to develop a pedagogy-driven design for online language learning and teaching, which is a reiterative and reflective process. This means that specific learning and teaching situations should be taken into account in the design process, which is more tailored to meet the unique features of the actual students in a class. To do so, course developers should follow a reflective process from analysis to evaluation, and then modify the current learning design through real implementation, as the ADDIE model illustrates (Andrews & Goodson, 1980).

In addition to a recursive process of course design development, it is also essential to consider the diverse opportunities for interaction that digital environments can generate. The interactive communication between learners and teachers is a point of consideration in the e-learning course design process (Laurillard, 1993; 2002). This process of interactive feedback and its application to modification is anchored in the learners' needs in a specific learning situation. That is, teachers should take into account what and how to teach the course contents, which also implies that teachers should analyse how to make the best use of technology options when designing a course. Since technical options have a large influence over the activities and contents of a course, designers should seriously consider

the inter-relationships between learning contents and technical tools for specific learning purposes.

In addition to the interaction between a teacher and learners, digital learning designers should also consider the interaction between humans and digital environments (Hollender et al., 2010). The cognitive load concerns both learners as users and tasks as learning contents in the design process. For better e-learning design, users' memory load should be reduced as much as possible with user-friendly, intuitive operational environments. Cognitive-focused perspectives pointed out that learners should be able to focus on a task with a reduced burden of human-computer interaction in the process of design. Other than generally structuring a specific instructional design, to offer more practical methods of minimising the psychological burden, students can be provided with risk-taking activities, feedback, communicatively enhanced learning environments, and so on. Hence, specific learning and teaching situations should be taken into account in the design process, which is tailored to meet many of the unique features of the actual students and tasks in class.

3.2 Digital Writing

English learning has already been moving into the digital era, which enables learners and teachers to use multimodal and multimedia resources. In particular, ubiquitous writing platforms and digital writing spaces enable us to write, post and share, and revise and submit written content through online environments. In addition, targeted programmes for writing such as automated evaluation and automated feedback provide writers with some level of instructional support. As diverse technical affordances have been explored in the field of language education, more recent discussions and studies aim to deduce effective principles for digital writing instruction, including EFL writing and argumentative writing. Therefore, this section will explore the relevant studies on digital writing tools, and then its focus will shift from the general trend to specific digital assessment tools as follows: the general development in writing instruction in digital environments, digital-based written feedback in general, and, finally, tools for digital writing assessment.

3.2.1 Writing in the Digital Era

As the ways in which we make meaning change, how we write also changes (Dahlström, 2019). Since the last decade, digital tools have been used to make students more engaged in their literacy practices (Dressman, McCarthy & Prior, 2009), and, therefore, digitalisation in education, including writing instruction, has increased the level of exposure to a variety of digital tools (Nobles & Paganucci, 2015). Tools can be defined as a device or implement, including 'platforms, programs and apps, or specific functional units within platforms or program' (Stroble et al., 2019, p. 35). Therefore, a learning tool can be understood as a set of resource components available to students for learning (Szafrajzen & Ferreira-Meyers, 2021, p. 8).

Digitalisation has resulted in an increasing range of options for digital writing resources (Dahlström, 2019). At the same time, there has been a somewhat sceptical view of multimodal digital-based choices for writing classrooms, because simple exposure to the specific digital options or digital-based environments does not necessarily lead to enhanced learning (Nobles & Paganucci, 2015). This point suggests that we should consider their pedagogical perspectives as well, questioning the effects of the use of online tools on writing quality and skills (Agee & Altarriba, 2009).

In line with the advent of information technology, research on the incorporation of a variety of contemporary technical devices into writing classrooms has been conducted to seek good pedagogical practices and improved learning outcomes. One of the studies on the use of technology for teaching writing, conducted by the National Writing Project and the Pew Research Center (Purcell, Buchanan & Friedrich, 2013), showed writing teachers acknowledge that the use of digital tools in a writing classroom encouraged collaboration between writers and readers. This study suggests that digital technologies encourage sharing work with a wider range of audiences, as well as encouraging collaboration between students, while digital tools should be used based on effective pedagogy.

Hawisher and Selfe (2008) also suggested both the advantages and disadvantages of computer use for writing instruction practices. The use of computers for secondary school writing classes increased interaction and collaboration between a teacher and students, as

well as time spent on writing work. Nevertheless, this study indicated a lack of time for actual instruction by the teacher, few meaningful mutual interactions between teacher and students, and a limited level of collaboration in writing classrooms. In addition, Nobles and Paganucci's (2015) study suggested three kinds of benefits that online devices bring into the writing process for secondary school students: increased feedback, connection to authentic audiences, and opportunities for multimodal writing.

In addition to these three benefits, their study showed that writing with digital tools enhanced student perceptions of their writing quality and writing skills. Also, Williams and Beam's (2019) meta-analysis suggested that technology-mediated instruction and digital tools enhanced students' motivation to participate in writing instruction and facilitated social interaction and peer collaboration. In particular, the use of technology in writing motivated writers who were reluctant and struggled with writing.

However, the studies of Hawisher and Selfe (2008) suggested mixed results on technology-enhanced writing instruction, raising further questions about how to implement, integrate, and manage instructional technology in more effective and efficient ways. In particular, the conflict between time for students' actual writing and the teacher's instruction means that teachers should think carefully about what to prioritise between the two practices and how to distribute time in writing classrooms (Hawisher & Selfe, 2008), as well as how to make best use of digital writing tools and online feedback opportunities (Hawisher & Selfe, 2008).

As a range of new software has implied new possibilities for teachers' instructional practices and students' proficiency development, word processing programs have often been studied, as one of the more established forms of writing technology. Compared with traditional paper-based writing classrooms, the use of word processing increases both the quantity and the quality of student writing, including revision, while also enhancing students' motivation (Goldberg et al., 2003; MacArthur, 2009). These benefits were attributed to online settings that encourage students to write throughout the writing process and create more realistic writing experiences with authentic readers (MacArthur, 2009). However, it is important to provide proper instruction in the process of introducing technology to writing classrooms,

because only applying web-based tools may not necessarily result in students' engagement with the technology (Agee & Altarriba, 2009; MacArthur, 2009).

In the early stages of using the Internet for teaching writing to ESL and EFL learners, email systems started to support student writing. Studies on email systems for writing classes show that using emails helps to reduce writing teachers' workload (Belisle, 1998) and to increase pupils' confidence, awareness and understanding of different cultures (Ho, 2000). At the same time, it is necessary to consider how to use information technology, including email systems, as a tool for writing development and creating membership in a global community (Ho, 2000).

Moreover, as a variety of digital writing platforms have been developed, the use of multimodal technologies for writing instruction has been explored, widening possible options for teaching practices. Nowadays, people often interact with each other through social media – such as Facebook, Twitter, Instagram, Telegram, WhatsApp and so on – creating new forms and genres of writing (Iskandar, 2020). Consequently, this situation encourages education experts to consider 'how to make a compromise between two enterprises: social media and learning' (Iskandar, 2020, p. 47).

Among various writing platforms, Dymoke and Hughes (2009) investigated Wiki's affordances, and its effect on the learning process and poetry writing. This study, which looked at a group of pre-service English teachers, showed that Wiki provided a visible collaborative space with peer feedback and different viewpoints, which resulted in students' enhanced confidence in writing. Also, collaborative work through peer feedback and review encouraged greater creativity, criticality, or metacognition, and its multimodal options allowed students to manage materials in more creative and motivating ways.

From pedagogical perspectives, new technological tools such as social media have shifted teaching approaches, including teaching writing. Wil, Yunus & Suliman's (2019) survey of 40 secondary school students in Malaysia showed positive perceptions on the use of social media in ESL writing. This study found that social media helped students to develop English

writing skills, pointing out that social media was the best platform for writing development, despite little time spent in writing itself.

As a study on writing applications, Sun and Chang (2012) examined how blogs help EFL graduate students to process academic writing knowledge and create their scholarly identity. The results of this study suggested that blogging enhances active and reflective engagement in knowledge sharing, knowledge generation, and the development of various strategies to address difficulties in their learning process. Blogs as a forum for L2 writers provide students with a sense of authorship, while also offering a space for them to work out what being an author entails, their purposes for writing, and the authority of their writing.

Instagram has also contributed to the literature of teaching L2 writing. Akhiar, Mydin and Kasuma (2017) argued that Instagram could promote community centeredness and create meaningful communication between EFL students in Malaysia, improving students' writing skills and confidence to publish their writing. This study stressed that the use of Instagram was a time-saving and practical way to be administered and monitored, with no barriers of time and space. Also, Rinda, Novawan and Miqawati's (2018) study suggested EFL students in Indonesian higher education perceived peers' feedback and postings on Instagram helped with grammar/spelling correction, new vocabulary learning and better idea generation. While negative or over-corrected comments on Instagram were regarded as making students feel more pressure, they also increased their motivation in writing. The study of Rinda et al. (2018) likewise pointed out the need for students' interaction, students' knowledge of technology, the teacher's role as a facilitator, and accessible Internet to maximise the benefit of using Instagram in writing. In addition, Handayani, Cahyono and Widiati's (2018) study upheld the positive effects of the use of Instagram on EFL students' writing ability. Handayani et al. (2018) implemented Instagram as a medium for teaching opinion essays to 34 university students in an Indonesian university. Their pre-post comparison analysis suggested that students with higher score in pre-test also achieved higher scores in post-test, while the ones with lower scores in pre-test earned lower scores in post-test. Their survey results also indicated that worries about peers' negative responses resulted in their preference for Instagram feedback to offline feedback, which is a point for teachers to consider when planning feedback tasks in class.

Facebook, as another tool for writing activities, was investigated for teaching writing. Ismail, Zaim and Gistituanti (2018) suggested that Facebook as a medium of discussion enhanced the writing ability of the senior high school students in Indonesia, eliminating psychological burdens in writing. Also, Ramadhani (2018) explored comments in Facebook groups as the medium to teach writing skills and suggested several steps for the use of Facebook comments: pre-writing, drafting, revising, and editing. This writing sequence was considered based on the process-based writing approach. The study indicates that using a collaborative writing platform can facilitate students' feedback interaction and revision with its functional convenience.

Along with the usability of digital tools, it is also critical to consider the quality of teachers' instruction in the field of digital-based writing. While Williams and Beam's (2019) study suggested the benefits of writing tools for students' writing development, this study pointed out some difficulties for teachers in the process of integrating technology into their writing curriculum, which sheds light on the need to reflect on teaching practices. Therefore, they drew up some recommendations for education experts who can influence pedagogy, practice, and research in writing. They emphasised the need for writing educators' preparedness and awareness of the use of technology and, therefore, called for appropriate teacher development on the pedagogical uses of technology. In the process, they suggested that teachers and researchers should be '(a) well-informed about how digital technology has been used in the writing program, (b) knowledgeable about whether and how its use has supported the development of students' writing skills, and (c) aware of the barriers teachers face in implementing technology-mediated writing instruction'.

In line with relevant teacher training using technology in writing classrooms, Robinson et al. (2019) highlighted the need for pedagogy-based training for digital resources and development of a crowd-sourced repository for tools and resources. Their claim was based on their survey of 328 college-level writing and communication teachers in the US. This study indicated that teachers tended to be self-reliant and used to familiar digital tools and learning management systems, which were the dominant digital resource for teaching and learning. Therefore, this study pointed out the need for increased teacher involvement in

developing tools and resources, and more targeted training for writing teachers about the use of digital resources.

All in all, the studies indicated a variety of benefits from digital tools for writing instruction: increased feedback between peers and/or teachers (Dymoke & Hughes, 2009; Goldberg et al., 2003; Hawisher & Selfe, 2008; Purcell et al., 2013), engagement with authentic audiences (MacArthur, 2009; Purcell et al., 2013; Williams & Beam, 2019), opportunities for multimodal writing (Dymoke & Hughes, 2009), increased writing quality (Goldberg et al., 2003; MacArthur, 2009; Nobles & Paganucci, 2015), and improved writing skills (Dymoke & Hughes, 2009; Nobles & Paganucci, 2015; Williams & Beam, 2019). Whereas digital-based writing environments can lead to potential positive effects on writing classrooms, some of the studies also cautioned that the use of technology should be combined with appropriate instruction and pedagogy, because the simple introduction of technical devices into writing would not lead to expected productive outcomes (Agee & Altarriba, 2009; Goldberg et al., 2003; Hawisher & Selfe, 2008; Nobles & Paganucci, 2015). Consequently, this pedagogical point raised the need for relevant teacher professional development on pedagogical uses of technology (Robinson et al., 2019; Williams & Beam, 2019).

3.2.2 Digital Written Feedback

While studies have been conducted to investigate the impact of traditional written feedback on writing development, studies on online written feedback have a shorter history. With the advent of digital technology, different online learning spaces have been developed, including writing websites with tutorials and examples, writing-specific applications such as grammar checking software, automated essay scoring programmes, and synchronised auto-saving writing spaces. These tools for writing enable learners and teachers to have unique and various interactive experiences for digitalised engagement, allowing users to work in increasingly ubiquitous environments.

As Williams, Brown and Benson (2013) mentioned, today's technological advances in learning enormously increase the ways that students receive and provide feedback comments for each other, facilitating interaction between users and extending the boundaries of synchronous and asynchronous feedback. That said, the development in

learning technologies does not transform the fundamental nature of feedback in learning and assessment. According to their illustration of 'the progressive convergence of media and technologies into digital forms' (p. 139), feedback in the Web 2.0 era becomes more communal/networked across people and resources, integrated as part of authentic, timely, immersive group tasks, compared with feedback in the Web 1.0 era. Also, Web 2.0 settings allow flexible and audiovisual feedback, as well as open up access to a wider range of people providing other options.

As summarised by Tuzi (2004) in [Table 2], online responses are different from traditional responses in many ways. Basically, electronic feedback tends to be more independent on time and space, with a higher level of anonymity between participants, while there is a lack of allowance for non-verbal elements. Whereas e-feedback is likely to allow less negotiation of meaning due to time delays or the need to encode and decipher written messages, e-feedback's affordance of real-time mutual communication has been expanded as more advanced communication technology develops. In addition, while e-feedback can provide a greater sense of anonymity, it can reduce a sense of community for some students. However, students who are less active or confident when critiquing others' work in their presence might prefer this anonymity to give honest and critical responses.

Table 2: Tuzi's (2004) general differences between oral, written and e-feedback (p. 199)

Oral feedback	Written feedback	E-feedback
Face-to-face	Face-to-face/distant	More distant
Oral	Written	Written
Time-dependent	Depends	Time independent
Pressure to respond quickly	Pressure to respond by next class	No pressure to respond quickly
Place dependent	Depends	Place independent
Nonverbal components	No nonverbal components	No nonverbal components
More personally intrusive	Depends	More personally distant
Oral/cultural barriers	Written/cultural barriers	Written/cultural barriers
Greater sense of involvement	Greater sense of involvement	Greater sense of anonymity
Negotiation of meaning	Negotiation of meaning	Less negotiation of meaning
Less delivery effort	Greater delivery effort	Less delivery effort
N/A	No cut & paste	Cut & paste

As the emerging new technology tools allow greater potential for diverse feedback, a variety of synchronous and asynchronous options for digital feedback from electronic annotations to digital recordings are being introduced and discussed for writing instruction. Since electronic environments have become more relevant to L2 writing pedagogy, especially in higher education (Elola & Oskoz, 2017; Ene & Upton, 2018), digital feedback and its effectiveness has been understudied (Ene & Upton, 2014).

Electronic feedback, such as Microsoft Word 'track changes' or Google Drive's document editing function, allow users to mark papers in a digital format (Carless, 2016; Johnson, Stellmack & Barthel, 2019). Some studies suggest that students and teachers tend to prefer electronic modes to traditional paper-based modes for task submissions and feedback exchanges (Bridge & Appleyard, 2008; Hast & Healy, 2016; McGrath & Atkinson-Leadbeater, 2016; McCabe, Doerflinger & Fox, 2011). As well as the greater convenience that digitalised feedback provides over handwritten feedback (McGrath & Atkinson-Leadbeater, 2016; McCabe et al., 2011; Johnson et al., 2019), teachers were more likely to provide substantive comments through e-feedback than handwritten feedback (McCabe et al., 2011). Consequently, e-feedback contributed to greater improvement in student writing than paper-based feedback (McCabe et al., 2011).

Whereas digital feedback was considered more convenient by students and teachers, McCabe et al.'s (2011) survey results suggested that instructors rarely considered e-feedback simpler and more time-saving than traditional handwritten feedback. Nevertheless, instructors perceived the positive value of e-feedback in terms of better clarity, detail, quality and speed. Moreover, e-feedback was recognised as a more convenient way to keep a formal record of editing practices. In addition, Johnson, Stellmack and Barthel's (2019) study on student attitudes toward instructors' e-feedback in an introductory research methods course showed that instructors' e-feedback tended to be longer and have less repetition of students' passages. In addition, students with e-feedback were likely to show greater improvement on their subsequent drafts.

In terms of feedback modes, Ene and Upton (2018) investigated the effectiveness of two types of teacher feedback, synchronous and asynchronous electronic feedback, in ESL writing classes. In this study, a teacher's e-feedback was given asynchronously, in the form of Word comments and track changes in electronic drafts, along with synchronous text chats between teachers and students. The findings, based on the analysis of students' writing drafts and teacher-student chats, indicated that most teachers' electronic feedback was successfully implemented and focused on content. Moreover, the teacher's e-feedback was positively perceived by students and teachers, and synchronous e-feedback effectively reinforces asynchronous e-feedback.

Ryan and Henderson (2019) performed an online survey of 4514 Australian university students to explore whether providing multiple feedback modes is better than a single mode, in terms of the level of detail, personalisation and usability of feedback comments. Among three types of digital feedback – a single feedback mode only, electronic annotations and digital recordings – multiple modes were found to be most beneficial to all three indicators. In addition, students perceived that feedback was detailed and usable when one of those modes was a digital recording. Thus, the study indicated that the method of delivering feedback comments can impact on the detail, personalisation and usability of the information, while instructors should consider the merits and demerits of particular feedback modes and the value of offering multiple feedback modes.

To find out the impact of the new type of responsive environment, there has been a range of studies conducted regarding digital written feedback for writing instruction. First of all, digital feedback can reduce workload and wasted time, which usually occurs while working on paper, as learners and teachers do not carry or pile up their work documents or lose them (Neighbours et al., 2010; Sullivan, Brown & Nielson, 1998). Moreover, web-based feedback can provide a better way of monitoring communications between participants and a form of hybrid communication (DiGiovanni & Nagaswami, 2001; Williams et al., 2013). Especially for hybrid communication, computer-based feedback allows spontaneous responses, enabling students to have opportunities to reflect on their ideas, rehearse their responses and respond at their own pace (DiGiovanni & Nagaswami, 2001). As Williams et al. (2013) pointed out, Web 2.0 settings enable users to manage the timing of feedback with

both immediate feedback and delayed feedback. Moreover, e-feedback environments tend to help students to engage in reflective and self-regulated learning (Quinton & Smallbone, 2010; Whipp & Chiarelli, 2004). In addition, as already mentioned, e-feedback can encourage students to provide more honest critical responses, because they do not have to meet face-to-face with their peers (MacLeod, 1999). This benefit can be closely related to the fact that e-feedback provides anonymity for participants (Neighbours et al., 2010). Furthermore, online feedback has more influence on revision, especially for L2 writers to engage in macro-revision work, leading students to focus on larger writing blocks than oral feedback (Tuzi, 2004).

At the same time, with e-feedback systems, teachers can monitor conversations and offer guidance to students, so that monitoring can encourage their participation and enthusiasm (Tuzi, 2004). Moreover, based on a qualitative study on the use of Web 2.0 for college teachers by Archambault, Wetzel, Foulger and Williams (2010), teachers thought that the web-based setting encouraged them to provide more effective feedback to students with better peer-to-peer feedback. What's more, due to its greater access and flexibility, they felt able to offer much faster and more sustained feedback, which is essential to continuous learning. However, among a number of studies on the impact of e-feedback (Evans, 2013), there are few empirical studies with a large number of participants on the impact of online feedback directly relevant to student performance. As Gilbert et al. (2011) argued, the effectiveness of online assessment feedback depends on whether to introduce improved teaching methods along with technology, not on the technology itself. In addition, the issue of how to apply a specific e-feedback tool into a whole instructional design to enhance learning and teaching might require more enriched evidence, to narrow down the principles for beneficial digital-based feedback intervention.

Whereas there are a variety of advantages to written feedback conducted in digital learning situations, students still need to be aware of relevant strategies to work as reviewers, as well as have necessary instruction in how to use operational features equipped in a specific digital learning platform. Whether feedback is given online or offline, students must clearly understand their learning process and progress, and be able to transfer the writing skills they have learned into subsequent writing situations (Strobl, 2014). As this is the case,

teachers should help students prepare to work in digital learning environments by providing opportunities for the students to learn how to receive, provide and apply feedback in the process of their task completion. This is not just an issue of planning and preparation for teaching, but also an issue of designing digital learning environments that can integrate feedback as part of a task.

This point has already been discussed in the areas of feedback, which Evans (2013) narrowed down to 12 pragmatic actions. As Williams et al. (2013) highlighted, it is teachers who implement an effective instructional design in learning environment construction, where advice and support are available to students across task performance. In this sense, they suggested the concept of 'designed-in and contingent scaffolding' created by Hammond and Gibbons (2005). Feedback can work as scaffolding when it is part of the design, or it can be provided in moment-to-moment interactions between a teacher and students (Hammond & Gibbons, 2005). Thereby, digital environments allow both designed-in feedback for facilitating student's learning, and contingent feedback for the overall management of learning.

3.2.3 Digital Writing Instruction and Assessment

Among various instructional tools for digital-based writing, this section will concentrate on writing assessment, including feedback. In fact, the majority of studies on digital-based writing have focused on writing assessment with a technical system support. According to the primary purposes of the computer-based writing instruction, Allen, Jacovina and McNamara (2016) categorise the computer-based systems for writing assessment and instruction into three aspects: Automated Essay Scoring (AES), Automated Writing Evaluation (AWE) and Intelligent Tutoring Systems (ITS).

Firstly, AES systems, for example, W-Pal, provide students with automatic evaluation on content, structure and quality of writing (Allen et al., 2016; Allen & Perret, 2016). As AES is the most famous writing tool, its auto-assessment feature helps teachers to decrease their workload on scoring essays (Allen et al., 2016; Allen & Perret, 2016; Dikli, 2006; Page, 2003; Shermis & Burstein, 2013), and provide large-scale testing with a high level of validity and reliability (Allen et al., 2016; Allen & Perret, 2016; Dikli, 2006). However, as dedicated

electronic evaluators, AES systems exclude formative feedback and instructional materials (Bereiter, 2003; Myers, 2003; Page, 2003). Despite the benefit of its high efficiency in scoring a large number of essays in a short period, the most important issues that AES has faced are to do with reliability and accuracy in specific types of essays (Allen et al., 2016; Allen & Perret, 2016; Condon, 2013; Deane, 2013; Ericsson & Haswell, 2006; McNamara et al., 2014). Specifically, AES cannot measure the level of ideas and arguments of student writers (Allen et al., 2016), which shows a lack of potential for providing enriched evaluative feedback on argumentative essays.

Secondly, AWE encompasses instructional purposes beyond essay scoring, providing extended services for student writers. AWE systems such as an e-rater engine, *Criterion*, include summative or formative feedback, as well as automated scoring on the written work (Allen et al., 2016; Ramineri & Deane, 2016; Snow et al., 2015). The major benefit of AWE is that it allows students to have more chances to practice writing, which can lead to their writing skill development (Allen et al., 2016; Kellogg & Raulerson, 2007). The important point here is that students should be given repeated opportunities to write and timely and relevant feedback to develop executive control, which is called deliberate practice (Kellogg & Raulerson, 2007). Moreover, given the fact that AWE systems provide both feedback and scoring, AWE can play a supporting role in traditional classroom writing (Roscoe et al., 2014; Ramineri & Deane, 2016), encouraging students to use immediate feedback in the revision cycle of an essay (Gikandi, Morrow & Davis, 2011; Roscoe et al., 2011; Roscoe et al., 2013; Snow et al., 2015). In particular, students' access to instant feedback can facilitate their engagement in the iterative revision work and, therefore, help them to produce an improved written output (Gikandi et al., 2011). For the possible benefits of AWE to be fulfilled, it needs to provide proper types of feedback and responsive methods, so that students can understand their weak points (Allen et al., 2016), which will subsequently lead to improvement in their writing skills and their teachers' teaching skills (Chen & Cheng, 2008). Specifically, it is important to provide higher-level feedback, focusing on writing strategies and techniques, for students' writing proficiency development (Allen et al., 2016). While feedback is highly regarded in computer-based writing systems, the most effective types of automated feedback have been under-researched (Roscoe et al., 2011; Roscoe et al., 2014), which suggests a strong need for further studies. In terms of feedback on argumentative

essays, AWE has more possibilities than AES, in the sense that it has some room for providing feedback on the weakness of an essay. For example, an AWE engine, *W-Pal*, can evaluate students' argumentative essays according to the level of structure, and provide feedback on strategies for improving organisation using structure-focused flow charts or outlines (Allen et al., 2016; Snow et al., 2015).

Lastly, ITS systems, as currently the most developed version of computer-based writing instruction systems, allows individualised instruction and feedback based on a student's current level and learning process (Allen et al., 2016; Wijekumar et al., 2016). For example, *We-Write* incorporates teacher-led instruction and a web-based intelligent tutor for developing argumentative writing skills and self-sufficiency for upper primary school students, providing modelling, practice, assessment, scaffolding, feedback and reflection (Wijekumar et al., 2016). While ITS algorithms can embed differentiated models, ranging from a student model to an expert model (Neuwirth, 1989), it is difficult to provide tailored feedback and instruction in writing, especially in argumentative writing for expert writers (Allen et al., 2016). Therefore, ITS scoring ultimately needs to include the strengths and weaknesses of an essay (Allen et al., 2016). However, considering ITS's algorithmic features, it is considered more appropriate for argumentative essays, providing students with greater opportunities to develop argumentation strategies through detailed, responsive and relevant feedback and personalised exercises. To enhance its usability, ITS, as an extended version of AWE, should provide strategy instruction with students through fully developed tutorials (Roscoe & McNamara, 2013). The strategy instruction with ITS can help students close the gap between current and desired understanding through identifying and rectifying misconceptions and weaknesses in writing strategies and skills (Sadler, 1989), ultimately enhancing their self-regulation (Sadler, 2010).

The studies relevant to digital-based writing instruction and assessment tend to concentrate on automated essay assessment systems and their usability and validity, mainly providing scoring/grading of the submitted written essays (Dikli, 2006; Page, 2003; Shermis & Burstein, 2013; Strobl et al., 2019). As computer-based instruction and assessment systems have developed, more possibilities for incorporating instructional and adaptive features have been considered, in terms of developing students' writing proficiency. Along with the

traditional benefit of reducing the burden on writing teachers (Allen et al., 2016; Allen & Perret, 2016; Dikli, 2006; Page, 2003; Shermis & Burstein, 2013; Snow et al., 2015), digital writing systems have been implemented and studied to provide students with relevant and meaningful feedback on their process (Kellogg & Raulerson, 2007). In addition, more recent tools allow teachers to monitor students' performance and adjust their instruction in writing strategies and goals accordingly.

All these advantages aim to provide students with individualised and timely support during their writing process, ultimately increasing their self-regulation and writing skills (Chen & Cheng, 2008; Gikandi et al., 2011; Kellogg & Raulerson, 2007; Roscoe et al., 2011; Roscoe et al., 2013; Roscoe & McNamara, 2013; Wijekumar et al., 2016). The gradual shift of digital writing instruction and assessment, from sole scoring measures to increased instructional capabilities, helps students to improve their in-process writing performances, which is suitable for multiple drafting stages based on the process-based writing approach. In addition, the digital writing tools incorporated with tutorial support can allow more tailored feedback on the strategies and techniques of a target genre of writing, including argumentative writing, so that the completion of a specific task becomes another step towards the target-strategy development.

3.2.4 Summary of Digital Writing

The use of digital-based writing development tools is also predominant in English argumentative writing, where language learners develop their essays by going through revision stages on their own or with others, and then submitting them to their teachers. The advent of recent digital, interactive, simultaneous communication technology has helped and encouraged foreign language learners to interact with readers, including teachers, across writing processes. As social constructivism emphasises the value of enhanced communicative interaction for language learning, the writing environments empowered by relevant digital writing tools can be significantly supported by social constructivism.

In fact, online learning spaces for English writing, including argumentative writing, usually embrace some basic features of the process-based writing approach (Stroble et al., 2019), including uploading and sharing drafts and exchanging feedback. Traditionally, specific

digital tools have been used to facilitate sharing ideas and writing pieces, providing feedback or submitting essays. One of their shortcomings is that it is difficult for learners to perform all the writing stages in one physical space, including peer or teacher feedback and revision/editing, which are the essence of the process writing theoretical framework.

As Allen et al. (2016) summarised, strategy instruction, extended practice and individualised feedback are the three elements for the successful acquisition of writing skills. These key points can be considered the teacher's instructional intervention in the student's writing process. Therefore, the three points indicate that the potential of digital writing tools, in terms of pedagogical perspectives, should be seriously considered and implemented for students' writing proficiency development. Considering EFL students' relatively lower level of English writing proficiency, EFL student writers, including South Korean learners, may need more enhanced intervention until they produce a completed written outcome.

However, it is extremely difficult to implement these important points into the writing curricula, due to the huge workload on teachers and the limited class hours for feedback and revision (Allen et al., 2016; Crossley & McNamara, 2016). The practical barriers let students pursue writing as an individual task outside classrooms until the last moment of submission, with a lack of support in the process of developing an essay (Yang & Carless, 2013). During the period of isolation, students often struggle to coordinate various cognitive skills and knowledge sources (Flower & Hayes, 1980; 1981), or transfer them into the target language. In terms of students' development in writing skills, timely support such as feedback on the writing process can be more significant and effective than evaluative feedback or assessment on the written outcome (Nicol & Macfarlane-Dick, 2006; Wiliam & Thompson, 2007; Yang & Carless, 2013).

As a possible way of addressing these issues, computer-based systems for writing assessment and instruction have been developed (Allen et al., 2016; Crossley & McNamara, 2016; Yang & Carless, 2013), which can be used beyond the physical boundary of classroom sessions. As writing strategy instruction and feedback have recently gained more attention in the field of online assessment and instruction (Allen et al., 2016; Crossley & McNamara, 2016), there have been some efforts to encompass enhanced instruction, such as feedback

and explicit instruction (Roscoe et al., 2011). This shift represents an increased focus on students' writing process, not only on their written output.

Moreover, attempts to implement digital wring tools into classrooms have been broadened to support active dialogues between students as participants in a forum of conversation, not just delivering teacher feedback to each student. Considering the need for debate embedded in argumentative writing as a genre, exposure to enriched external reviews during one's writing process can promote critical and reflective thinking to develop a logically convincing point of view. Especially given the fact that a process-oriented and thinking-intensive approach to writing instruction is significantly supported by providing feedback (Stroble et al., 2019), the digitalised tools for writing are expected to contribute to enriched feedback within a writing community (Yang & Carless, 2013).

Along with social constructivists' emphasis on the dialogic process for learning, the enhanced dialogue between a teacher and students is essential for effective feedback and students' self-regulation (Nicol & Macfarlane-Dick, 2006; Sambell et al., 2013; Yang & Carless, 2013). These points indicate that the development of incorporated digital tools for writing instruction should be considered with regard to collaborative and communicative writing environments, as well as personalised and individualised writing environments (Yang & Carless, 2013). The affordances of current digital technologies can provide more flexibility, incorporating both aspects to facilitate students' writing process with fewer time and space constraints.

As current digital tools to support writing commonly use the process-based approach for writing and social constructivism for language learning (Stroble et al., 2019), one of the beneficial affordances of contemporary digital technologies, interactivity, can play a critical role in narrowing the transactional distance between members of a writing community, as well as supporting the leaner's autonomy in writing (Nicol & Macfarlane-Dick, 2006; Sambell et al., 2013; Stroble et al., 2019; Yang & Carless, 2013). However, the advantages of modern technologies have rarely been applied to developing new writing tools for facilitating dialogic processes and enhancing the self-monitoring of student writers (Crossley & McNamara, 2016; Stroble et al., 2019; Yang & Carless, 2013). This is because many digital-

based writing tools tend to concentrate on developing basic academic writing skills, rather than implementing a pedagogical approach for learning writing – so-called 'writing-to-learn' (Crossley & McNamara, 2016; Stroble et al., 2019). The narrow focus on web-based writing tools is attributed to the fact that most tools were created to help the individualised learning of a student writer, not to support teaching practices. Writing tools often support writing skill development outside the classroom – compensating for the lack of class time or differentiated learning for each student to learn specific skills (Allen et al., 2016; Crossley & McNamara, 2016; Stroble et al., 2019) – and, thereby, allow very little space for teachers to adapt (Stroble et al., 2019).

Specifically, many of the commercial or non-commercial web-based learning tools for English writing, such as *Grammarly.com* for a grammar checker, and Google Docs for a ubiquitous writing platform, which most South Korean writers are familiar with, have been frequently weighted in favour of practicability for user writers. Commonly, online writing tools aim to increase linguistic accuracy and asynchronous collaboration for revision, rather than writing development underpinned by the relevant writing pedagogy. Or writing assessment programmes like ETS's *Criterion*, which is well known to South Korean student writers, are mainly focused on automated scoring of English argumentative essays, rather than a systematic understanding of English argumentation. This tendency is represented by the fact that online writing tools generally focus on providing evaluation and feedback on written outcomes at the revising and editing phases of the writing process, mostly limited to mico-level feedback (e.g., grammar, spelling, punctuation, stylistic conventions) (Crossley & McNamara, 2016; Stroble et al., 2019). In other words, most digital writing tools rarely provide tailored support for the writing process and writing strategy development because they lack macro-level feedback (e.g., structure, coherence, cohesion, genre-specific features) (Crossley & McNamara, 2016; Stroble et al., 2019). In terms of Allen et al.'s (2016) three points for successful writing proficiency development, the language-focused and output-focused feedback may serve as individualised feedback, but rarely includes strategy instruction and extended practice.

Even though a variety of digital tools for argumentative writing and its assessment have already been created, effective and useful tools for writing instruction itself, including

English argumentative writing, are under-represented. The predominant features of the current digital writing tools strongly imply that the new technologies, especially for connectivity and interactivity, should play an improved role in encouraging students to learn more in-depth knowledge of and skills for the argumentation process through macro-level feedback, promoting student involvement in feedback exchanges within a specific writing community. The dialogic environment to enhance individual monitoring and interactive engagement for learning argumentation in writing should also encompass more possibilities for the teacher's deliberate adaption in accordance with target goals and genres, allowing interventions such as argumentation-focused instruction and feedback arrangements.

3.3 Tools for Writing Development in this Study

The aim of this section is to review and analyse writing tools or instructional environments which are relevant to mind mapping, process-based writing and/or writing on arguments. By exploring the current technology-based environment for teaching and learning, the potential and direction of digital instructional designs will be discussed and criticised, in order to create a new learning and teaching environment for process-based English argumentative writing. To select the best feasible and effective options for English writing instruction, a range of online applications or platforms for writing, which can be used for pre-, while- and post-writing tasks, will be succinctly reviewed in this section.

3.3.1 Tools for Mind Mapping

As a pre-writing task, a mind mapping technique for generating and organising ideas was applied to the instructional design of this study. Therefore, three types of free online mind mapping interfaces – *Xmind*, *Inspiration* and *Almind* – were reviewed, exploring how to apply mind mapping into the writing design of this study. Here, we will focus mainly on the selected option, *Almind*, while the detailed reviews for the rest of the mind-mapping tools are given in Appendix 2.1. Before addressing *Almind in depth*, a brief summary of the three mind mapping options is suggested first as below:

Table 3: A brief review of the mind-mapping tools

Types of Tools	Merits	Demerits

Xmind	・enable users to create a variety of elaborated mind maps ・easy for users to decorate or align necessary key words or contents with existing templates of maps ・allow changes in visual representation between a range of thematic charts even after the first creation ・allow users to manage detailed presentation features and insert various kinds of text files ・can retrieve and modify saved maps later	・only allow limited options for diagrams in the free version ・only operates on desktop computers, not on tablet PCs.
Inspiration	・as a kind of graphic organisers, provide a variety of applicable thematic templates ・provide a variety of thematic picture icons for visual components ・offer inter-changeable, visual and logical organisation of thoughts and ideas to all age groups ・enable to transfer, modify, save and print out different presentation modes of a created map ・operate on a variety of digital devices	・not allow automatic transformation into relevant texts in an outline ・charge after one-month free trial
Almind	・a free compact online application ・easy to download and install on various digital devices ・easy to use all kinds of drawing techniques with clicking a mouse or touching the screen ・offer an intuitive interface with easy-to add options ・easy to edit pre-set options ・allow to add different file formats in a map ・can save a map as a default file format for later modification	・provide specific types of outlines for drawing mind maps ・not allow to move a topic box at the centre

3.3.1.1 *Almind*

Almind is a free compact online application for making mind maps, which was created by *ESTsoft* in South Korea. It is easy to download and install on computers and Tablet PCs, and users can click with a mouse or touch the screen to use all kinds of drawing techniques. The pre-set interface locates a theme box in the middle of a screen, with boxes or bubbles for texts added with relation nodes. This has an intuitive interface, in the sense that users can select each necessary element in the menu bar with big presentative icons for each function. Also, users can click or touch a small '+' button at one end of each box for contents or node for relations, to add another element right next to or below it. Alternatively, users can easily click or touch a small '−' button at the end of an already added item to erase. Moreover, items can be edited in size, location and so on with a click of a mouse or a touch of the screen. All these pre-set options reduce the time and effort that users spend when learning how to use the technology for actual writing.

In addition, this application allows a variety of documents or online links for an expanded, enriched, detailed map. After creating a map, users can save their work in different types of file – such as MS Word, PDF, HTML, or images – or even save it as a default file that they can modify later. Although this application provides sophisticated options to develop a map, it does not offer a variation of outlining as a further option, working only as a graphic organiser for drawing maps. Also, the topic at the centre is pre-located and cannot be moved elsewhere, which reduces the diversity of the maps.

Figure 10: Screenshot of a mind map and an outline created with *Almind*

3.3.2 Writing Platform

When a specific digital writing tool is selected for students' writing practices, it is important to compare major factors, such as theoretical basis, usability, effectiveness, convenience and so on. In this section, three free digital-based writing interfaces – Virtual Learning Environments (VLEs) for online discussion, AGORA-net as a computer-aided argument mapping tool and *Scholar* as a collaborative writing interface – are to be explored and evaluated. Therefore, what and how to implement it into the digital writing design for this study will be addressed. Here, the chosen option for this study, *Scholar*, will be fully addressed while the detailed reviews on the rest of the digital writing tools are suggested in Appendix 2.2. Before starting to explore *Scholar*, the possible options of the digital writing tools will be briefly identified below first. Instead

Table 4: A brief review of the writing interfaces

Types of Tools	Merits	Demerits
Virtual Learning Environments (VLEs)	· provide boards or forums for online discussions · increase time for students to engage in and contribute to classroom discussions · facilitate higher-level thinking	· difficult to ask for clarification or research evidence · difficult to develop meaningful learning through synchronous online discussions · need to encourage students'

	skills ・promote social interactions or task-oriented communications	participation with prompt input and feedback ・need stable online learning system and technical support
AGORA-net	・a free computer-aided mapping tool for creating an argument with virtual collaboration ・develop the structure of an argument with adding each argumentation component in a box ・easy to create logical sequences with pre-set options ・provide a chat window for synchronous communications ・allow easy-to-save options	・difficult to develop in-depth arguments with pre-set structural options ・better for beginner writers rather than advanced ones ・better for pre-writing tasks as a graphic organiser rather than while- or post-writing tasks for developing essays
Scholar	・a free online social knowledge workspace for teaching and learning writing ・based on e-learning theories and research findings, especially on social constructivism ・based on writing instruction pedagogies, especially on a process-writing approach ・provide synchronous and asynchronous access to multi-users in a class ・provide embedded options for drafting, editing and feedback exchanges ・enable instructors to manage and monitor user performances in writing classes ・allow various benefits for learning and teaching, such as ubiquitous learning, active production of knowledge, multimodal representations of knowledge, recursive feedback, collaborative intelligence establishment, metacognitive reflection and differentiated learning	・need some amount of time to get used to various functional options ・need faster web browsers to operate on a computer ・no room for pre-writing tasks such as mind-mapping, outlining and so on

3.3.2.1. *Scholar*

Cope and Kalantzis designed *Scholar*, the online social knowledge workspace for teaching and learning writing, based on their accumulated research studies on e-learning theories and trials. The online workspace for writing fundamentally depends on social constructivism, emphasising the community of practice for collaboratively building knowledge, as well as the capacities and affordances of information and communication technologies. Some of the mechanical and operational functions of the digital environment are similar to Google Docs, in the sense that the interface gives access to authorised multi-users synchronously and asynchronously, saving multiple versions of writing work simultaneously. However, *Scholar* is more acutely tuned in writing instruction pedagogies and based on a process-writing approach for drafting, enabling users to exchange and incorporate feedback for their improvement, and also enabling instructors to manage and monitor student writers as a course administrator.

Cope and Kalantzis (2013) claimed that *Scholar* was based on even pedagogical affordances: ubiquitous learning, active knowledge production, multimodal knowledge representations, recursive feedback, collaborative intelligence, metacognitive reflection and differentiated learning. Firstly, ubiquitous learning, which means that students can learn without restrictions on time and space, is supported by 'web-browser based software', giving users free access to *Scholar* from diverse web browsers without installation of any additional programmes or applications. This core feature guarantees intensive simultaneous interactions in every user in the learning community and facilitates increased mutual responsive and evaluative practices for writing tasks, breaking down the boundaries of learning space (Kalantzis & Cope, 2012; Cope & Kalantzis, 2013). Secondly, learners, as both readers and writers at the same time, can be active participants in collaborative knowledge production, assigned with more responsibilities for engaging in productive learning activities. Thirdly, *Scholar* appropriates a variety of modes such as texts, images and sounds to help users incorporate them in the complementary way of meaning-making, namely multimodal knowledge representations.

Figure 11: Screenshot of *Scholar*
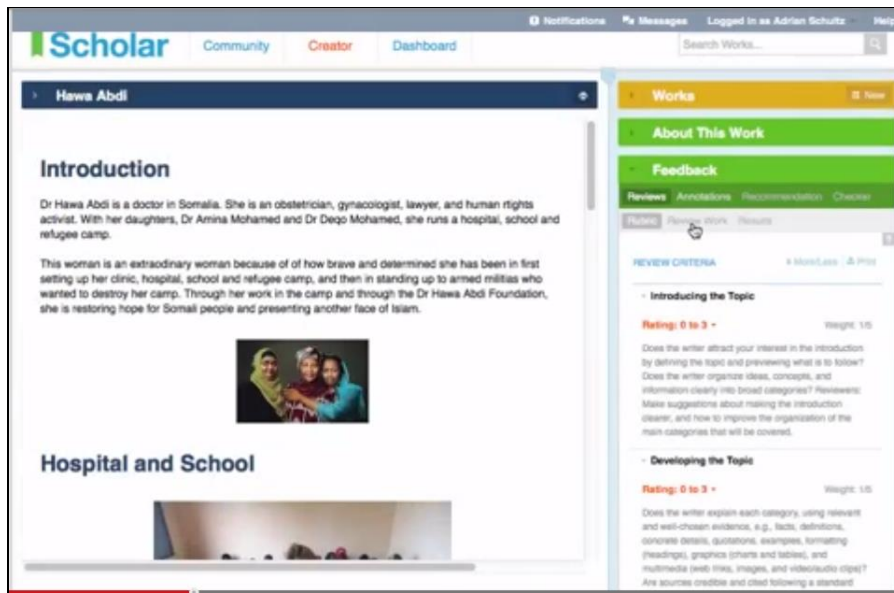
Fourthly, *Scholar* emphasises formative feedback rather than summative feedback, providing all users with functions of formative assessment for their teacher, their peers, and for the user themselves, which can result in the individual's direct contribution to writing improvement (Kalantzis & Cope, 2012; Cope & Kalantzis, 2013). *Scholar* uses four types of assessment: reviews, annotations, checker and survey for recursive feedback. For review practices in particular, student users in a learning community can evaluate their peers' essays based on a specific rubric created by the teacher, where teacher and students grade and leave commentaries on each criterion. The *Scholar* interface automatically shows both separate assessment results and a summative result. Fifthly, interactive communication between students can take place, without interfering in classroom instructional management, while the teacher scaffolds feedback between student writers, which finally leads to collaborative intelligence (Kalantzis & Cope, 2012; Cope & Kalantzis, 2013).

Sixthly, the two separate dimensional panels in *Scholar* support metacognitive reflection of students in a writing community, promoting higher-order thinking skills. The functional tools on the right side let students organise their writing structure, develop their essays through consulting with a specific rubric, and then leave comments or questions and add annotations on a specific part of a text when reviewing their peers' essays on the left side (see Appendix 3). At the same time, students can revise their essays on the left side while reading and referring to the feedback of others on the right side. Lastly, *Scholar* helps students to work on their writing tasks at their own pace and provides a teacher with

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options to monitor and manage each stage of that progress, allowing for differentiated learning (Kalantzis & Cope, 2012; Cope & Kalantzis, 2013).

3.4 Summary of Literature Review III: Technology-Based Learning and Teaching for Writing Development

While students perform writing tasks as both writers and readers, collaborative, communicative, interactive work has been regarded as an effective way to produce better outcomes. Particularly, the process-writing approach which has been discussed in 2.3.1, relying on a writing environment of repetitive revision and feedback, presupposes active reciprocal work between readers and writers. To facilitate this interactive and cyclical writing process, digital environments can overcome time and space constraints and promote effective and efficient task completion and interaction. Nevertheless, digitally integral platforms for collaborative writing in the ESL or EFL have been created with a dearth of theoretically and empirically strong evidence. When it comes to research studies on English writing, particularly focusing on academic writing which was explored in 2.3.2.2 and 2.3.2.3, writing on arguments has not been actively discussed and studied in South Korea, while a variety of digital-based learning platforms and contents have been created.

It would be an ideal situation for a researcher to directly create, apply and test a specific e-learning platform for argumentative writing for specific learners, firmly based on theoretical grounds. However, it generally takes time and money to design, construct and run such a platform. For practical reasons, in this study, the *Almind* application for concept mapping as a pre-writing task, and the *Scholar* application for an interactive digital platform of writing, were both selected to apply the Toulmin model and its rubrics for argumentative writing. *Almind* is one of the free, easy-to-install, easy-to-handle Korean application for mind maps, which runs on both desktops and tablet PCs and needs only a short period of instruction for use. Although this mind-mapping tool is not attached to *Scholar*'s interface, a variety of mind map files can be saved, revised or attached to web pages on *Scholar*'s writing panel, so that pre-writing work can be shared between peers.

Besides, *Scholar* offers a collaborative and evaluative space through feedback panels and sub-tools, where users do not need to move between software like MS Word and online

communication systems like emails, blogs and so on to share their drafts and feedback. Moreover, detailed rubrics can be posted and shared, so that users can read them whenever they want. As discussed in 2.4.2 and 2.4.3, rubrics are expected to have an instructional role through clear guidelines for writing and categorical standards for assessment, which means that student writers can use rubrics throughout their writing process. This is one of the most useful benefits *Scholar* gives: a unified systematic environment for submission, sharing, scoring and revision of written work, which was invented based on the evidence of socio-cultural studies. Although there are a few effective factors or limitations that may apply to South Korean writers, *Scholar* is one of the most useful instructional designs for digital collaborative writing.

Using *Almind* and *Scholar*, this study aims to investigate the effectiveness of the rubrics based on the Toulmin model, and to draw out effective elements for digital instructional design for writing. Ultimately, the pedagogical elements for argumentative rubrics and the relevant instructional tasks and design features of the online writing platform can be generated from the reflective suggestions of the next trials.

The literature review has helped produce the following implications for this study:

- Teachers/developers should develop a comprehensive learning space for learning and teaching English writing, which allows an expansive but targeted communicative environment from pre-writing to post-writing tasks.

- Teachers/developers should use a user-friendly application or digital tool for task completion.

- Teachers/developers should design genuinely interactive settings for writing, including feedback, within a learning community, so that students can work as co-writers to improve each other's writing.

- Teachers/developers should help users to apply updates with ease and convenience, revising their drafts based on the feedback given for the next stage of improving an outcome, as an ongoing process for developing their writing proficiency.

- Teachers/developers should provide a variety of possible synchronous and asynchronous discourses, especially for giving and receiving feedback, ultimately enhancing engagement and self-regulation for writing improvement.

3.5 Rationale for Research Questions

This section is to clarify the rationale for this study, identifying the gaps in literature reviewed in Chapter 2 and Chapter 3. Even though many of the English writing courses in South Korean Higher education institutions, especially courses for developing argumentation skills, have gained more attention than before (Kim, 2018; Ma, 2018; Shim, 2016; Shin, 2018; Yu, 2019), a small portion of writing or test-focused instruction in their English curriculum have often failed to satisfy practical and academic demand of university students (Kim, 2018; Kwak, 2017; Kwon, 2012; Shim, 2016; Shin, 2018; Shin & Hyun, 2020; Tak, 2012; Yu, 2019). While English writing instruction in South Korean universities has been broadly based on the process-based writing approach, the full potential of this approach has often been restricted by lack of time for developing drafts and interchanging feedback (Kim, 2018; Ma, 2018; Shim, 2018; Tak, 2012).

In fact, the process-writing approach, which is based on cognitivism, requires students' responsibility and autonomy for their own writing (Bereiter & Scardamalia, 1987; Flower & Hayes, 1980; Flower & Hayes, 1981; Zamel, 1976). This writing approach allows students to have freedom for generating, developing and refining their ideas through critical thinking (Zamel, 1982), interacting with the real audiences in the socio-culturally situated context (Zen, 2005). However, along with time constraints in essay development, relatively lower level of ESL or EFL students' English writing proficiency has been raised as one of the major barriers to being an independent and interactive writer (Horowitz, 1986; Zen, 2005). Moreover, it has been pointed out that lack of genre-specific knowledge of ESL or EFL student writers is likely to be another hurdle on the way to student-led process-based writing (Ferris & Hedgcock, 2014; Horowitz, 1986; Zen, 2005). All these points strongly imply that non-native writers of English might need more direct, explicit, intensive and/or targeted instruction on a specific genre, which is English argumentative writing in this study.

Since most of the English argumentation instructions have remained at the level of creating claim — reason pair sentences (Choi, 2008; Shim, 2016), students can rarely have practical chances to learn how to minimise logical gaps between claims and reasons, the two major elements for argumentation. For ESL or EFL writers who are likely to have lower level of English writing proficiency than English native writers, visually clear, logically condensed and systematically structured models for argumentation can be an efficient and effective way of easier introduction to the target genre of writing. As one of the argumentation models, the Toulmin model (1958; 2003) represents the concisely schematised and logically enhanced structure of an argument, which explains critical coherence in developing evidence for a claim. In addition, concerning a practical tool for English argumentative writing instruction, especially based on formative assessment (Nicol & Macfarlane-Dick, 2006; Sambell, 2016; Wiliam, 2009), the Toulmin model itself can be adjusted to a writing rubric targeted at development in English argumentation, which inherently has trait-based scoring characteristics (Davis, 2018; Ferris & Hedgcock, 2014; Hyland, 2003; Weigle, 2002). The argumentation-focused writing rubric based on the Toulmin model is expected to function as a clear and specific guideline that encourages students to work as independent and collaborative writers within a writing community of practice, offering further support and guides to students in the process-based writing classrooms (Ferris & Hedgcock, 2014; Horowitz, 1986; Zen, 2005).

Moreover, as writing itself among English 4 skills has relatively been understudied in South Korea (Shin, 2018), studies on English writing have had narrow academic focuses: how to apply the process-based writing approache into school curricula for English writing (Joo, 2010; Keum, 2007; Oh, 2012; Seo, 2011; Shin, 2019; Yang, 2018), implications of its approach for English writing instruction (Joo, 2010; Jwa, 2020; Kim, 2020a; Kim, 2020b; Park, 2020; Shin, 2019; Oh, 2012; Yang, 2018), rhetorical differences between Korean and English argumentative writing (Choi, 1988; Jwa, 2020; Kang & Oh, 2011; Kim, 2005; Yoon, 2018; Wang, 2000), and, more recently, argument-relevant characteristics of South Korean students' written English corpus (Ahn, 2018; Choi & Park, 2020; Park, 2014; Jeon & Choe, 2019; Jeong & Kim, 2014).

Meanwhile, as students' need to develop English argumentative writing skills has grown, digital-based writing courses have emerged in order to manage time and space constraints, which traditional classroom-based writing courses have often encountered (Allen et al., 2016; Crossley & McNamara, 2016; Kim, 2018; Shim, 2018; Yang & Carless, 2013). As the digital instructional platforms for English writing support the process-based writing approach as well as social constructivism for language learning (Stroble et al., 2019), the technologically enhanced learning environments can support dialogic collaboration between a teacher and students (Nicol & Macfarlane-Dick, 2006; Sambell et al., 2013; Yang & Carless, 2013), and more personalised and self-regulated learning for students (Crossley & McNamara, 2016; Stroble et al., 2019; Yang & Carless, 2013). However, many of the digital-based writing tools have still lack of theoretical underpinnings of writing instruction (Crossley & McNamara, 2016; Stroble et al., 2019), which suggests that more rigorous studies on development and adaption of a specific digital instructional design for English argumentative writing. Considering collaborative writing based on social constructivism (Vygotsky, 1987; Lantolf, 2000a; Lantolf & Torne, 2006), the ubiquitous and interactive digital writing platform created by education researchers, *Scholar*, can be a practical and effective option for a comprehensive environment for writing instruction.

Therefore, this study aims to explore and derive instructional and design-relevant insights for digital-based English argumentative writing courses in South Korean higher education learning environments, which is based on the writing process approach and Toulmin's logical framework. The main research question is: 'What are the reported effects of digital course development for instruction in English argumentative writing for university students in South Korea?' To answer this question, four subsidiary questions were generated as follows:

- What are the effects of e-learning intervention on argumentation for learners?
- What are the effects of e-learning intervention on learners' retention for argumentation?
- What are learners' attitudes toward and opinions of the used instructional design and e-learning environments for argumentation?
- What are the views of specialists in English education on argumentation on the instructional design of existing issues and of further modification?

To answer each question above, appropriate methodological approaches for this study will be explored and discussed in the next chapter. Based on the selected methodology, the general process and any possible restraints of this study will be discussed and explained in detail.

Chapter 4 Methodology

This chapter illustrates, describes and discusses general procedures and the specific methods that were applied in this research study, as well as the ethical issues that were considered. To address research methods, quantitative methodology is followed by qualitative methodology as this study used a sequential mixed-methods design for integrating all the results in the interpretation phase that the collection of quantitative data preceded the collection of quantitative data. In addition, limitations, range of validity and/or any possible assumptions are discussed.

4.1 Methodological Approaches: Mixed-Methods Design

Education researchers use mixed methods for a multidimensional approach (Clark, Porath, Thiele & Jobe, 2020). A mixed-methods approach is the use of both qualitative and quantitative methods, increasing flexibility in data collection (Clark et al., 2020). Mixed methods studies often lead to a combination of precise measurements like test scores, along with qualitative data embedding meaningful details to add depth to those measurements, and qualitative data is supported by quantitative details (Creswell, 2009; Creswell & Clark, 2011; Clark et al., 2020). In particular, mixed methods in education research provide an opportunity to clarify findings, fill gaps in understanding, and cross-check data, even if quantitative methods play a small role in data analysis (Clark et al., 2020). Therefore, the mixed-methods research design results in a more in-depth analysis of research questions and allows us to overcome challenges with regard to mono-dimensional approaches to the study of complex phenomena (Angouri, 2010; Creswell, 2009; Creswell & Clark, 2011; Tashakkori & Teddlie, 1998). Developed based on the advantages of the mixed methods research design, this study can be largely divided into two phases of data collection – a quantitative and a qualitative phase.

Based on mixed-method designs, specific decisions should be made according to the implementation sequence of data collection, priority during data collection and analysis between methods, the integration stage of findings, and the necessity of a theoretical perspective (Creswell, 2009, p. 206-208). Considering four major aspects and six strategies

of mixed-methods design (Creswell, 2009, pp. 211-216), a specific method was finally selected among the six design options for mixed-methods.

First, concerning the order of collecting each form of data, collection of quantitative data should be conducted prior to collection of qualitative data. This is because students' writing samples should be necessarily collected while they attend writing sessions throughout a writing course of this study, including one pre-test and two post-test sessions. On the contrary, student interview sessions to collect their detailed reviews should be conducted after their full experiences of the writing course. This condition especially requires sequential collection of data, not concurrent collection of data. After collecting two data sets, the phase of data analysis was also carried out in a sequential process, transferring from quantitative data analysis to qualitative data analysis. Although the analysis of quantitative data was not conducted prior to qualitative data collection. Due to the strictly limited period of weeks per semester, it was almost impossible to procure enough time to complete quantitative data analysis prior to qualitative data analysis. Instead of moving from one whole strand of a research method to the other, the sequential timing of data analysis after collecting two data sets, which means quantitative data analysis followed by qualitative data analysis, was chosen.

Secondly, regardless of the sequence of and the relative priority during collection and analysis of each form of data, it is important that the results should be integrated in the interpretation phase in order to corroborate findings within a study. In fact, before the writing course of this study carried out, qualitative results were expected to assist in explaining and interpreting the findings of quantitative results. However, data analysis and conclusion inducement finally depended more on qualitative data since the findings from quantitative data did not show statistical significance. Thirdly, each finding from each form of data should finally be integrated to confirm, cross-validate, or reinforce in the interpretation phase, supporting explanation and interpretation the findings from either quantitative or qualitative data. Lastly, the research design of this study needs to consider the methods that best serve a theoretical perspective, overcoming a weakness in using one method with the strengths of another.

Taking all the four aspects into consideration, the sequential timing of collection and analysis of data sets was selected as a timing factor for this study. Along with the sequential implementation of data collection and analysis, it was significantly considered that the interrelating of findings during the final step of the study process in order to compare or synthesise the results in discussion and conclusion chapters. Based on the chosen sequential mixed-methods design, a quantitative method will be addressed first, then followed by a qualitative method.

4.1.1 Quantitative Research Setting

This sub-section is to critically review relevant literature on research design principles and discuss important elements in order to design and implement a quantitative setting of this study. As this study uses the pre-test and post-test comparison to investigate students' level of development in English argumentation, the key features related to experimental and quasi-experimental designs will be explored to identify the most appropriate research study design.

In a traditional experimental design, randomised controlled trials in which participants are randomly assigned to a treatment or a control group have been considered the most plausible way to secure rigorous casual inference (Aussems, Boomsma & Snijders, 2011; Gopalan, Rosinger & Ahn, 2020; Luellen, Shadish & Clark, 2005; Shadish, Cook & Campbell, 2002). However, it is often not feasible to conduct a randomised controlled trial in education settings due to practical and ethical concerns (Aussems et al., 2011; Chingos & Whitehurst, 2011; Lane, To, Shelley & Henson. 2012; Luellen et al., 2005; Gopalan et al., 2020). In particular, in the educational sciences, it may not be realistic to assign classrooms randomly to different treatments (Aussems et al., 2011). So, one of the alternative ways to imitate the critical conditions of the traditional experimental designs, quasi-experimental research designs, are increasingly used in education research (Aussems et al., 2011; Lane et al., 2012; Luellen et al., 2005; Gopalan et al., 2020; Price et al., 2015).

While traditional experimental designs and quasi-experimental research designs share similarities, the quasi-experimental research designs allow the intervention of researchers in the assignment of participants to groups; they are thus subject to several major concerns,

one being the threat of selection bias to their internal validity (Aussems et al., 2011; Gopalan et al., 2020; Lane et al., 2012; Price et al., 2015; Schweizer et al., 2016; Shadish et al., 2002; White & Sabarwal, 2014). Non-random assignment of participants does not address the problem of confounding variables (Chiang et al., 2015; Thomas, 2020; Shadish et al., 2002). Since this problem may ultimately weaken the causal relationship between the treatment and the observed outcomes, a researcher using a quasi-experimental design needs to seriously consider the assignment framework of his/her study (Aussems et al., 2011; Shadish et al., 2002; White & Sabarwal, 2014). While quasi-experimental designs have disadvantages, they can bring higher external validity than most true experiments since they often embed real-world intervention in contrast to laboratory experiments (Aussems et al., 2011; Thomas, 2020; Schweizer et al., 2016). In addition, non-randomised research designs help to secure higher internal validity than other non-experimental research designs, because they allow better control over confounding variables than other types of research designs do (Price et al., 2015; Thomas, 2020).

To enhance causal inference, Shadish et al. (2002) suggested several recommendations for research design, mainly focusing on a pre-post design with a control group. Among the recommendations, the most critical point is that a control group should be as similar as possible to the treatment group in the planning stage of a study in order to reduce selection bias (Shadish et al., 2002; White & Sabarwal, 2014). In this respect, the use of control groups can offset possible external effects on the assumption that such effects may influence both the treatment and the control groups in similar ways (Panko, 2015; Shadish et al., 2002). Also, the use of control groups with different unobserved traits can inform a researcher as to how underlying bias may affect causation (Panko, 2015; Shadish et al., 2002). Moreover, using pre-tests and post-tests can help to decrease selection bias, because a researcher can use the pre-test results for composing groups with enhanced similarities (Panko, 2015; Shadish et al., 2002). In addition, the use of the same variables in both pre- and post-tests may be more effective (Shadish et al., 2002), and more than one set of pre- and post-tests helps to provide information on how variables change over time (Shadish et al., 2002). Lastly, a large sample size is significant to control potential confounding variables and thus secure a more powerful treatment effect in the statistical analysis (Shadish et al., 2002). However,

studies in social science are often based on a small sample size (Aussems et al., 2011), because securing a large number of participants can be difficult for researchers in this field.

Along with the use of pre- and post-tests, propensity score matching is one of the techniques used to reduce selection bias (Lane et al., 2012; Luellen et al., 2005; Panko, 2015; White & Sabarwal, 2014). Since Rosenbaum and Rubin (1983) presented one way of using propensity scores, a variety of matching techniques have been used to create a control group that is as similar as possible to the intervention group (Luellen et al., 2005; White & Sabarwal, 2014). Among these methods, propensity score matching compares individuals' characteristics and selects similar individuals for the control and the intervention groups in order to obtain an unbiased impact estimate (Luellen et al., 2005; Panko, 2015; White & Sabarwal, 2014). The process of propensity score matching includes ensuring representativeness, estimating propensity scores, selecting a matching mechanism, checking for balance, estimating programme effects and interpreting results (Lane et al., 2012; Luellen et al., 2005; Panko, 2015; White & Sabarwal, 2014). The key element of this process is that relying on baseline data on participants' characteristics, each participant of the treatment group is matched to one or more participants of the control group so that each participant in a group has a 'nearest neighbour' counterpart in the other group. The data used in the matching process can be regarded as judgement criteria, including age, gender, test scores, and so on (Luellen et al., 2005; Panko, 2015). The matching phase is followed by statistical testing to look at where there are no significant differences in average observable characteristics.

While participant matching is feasible if data are available, it can also cause biased selection of individuals, and any unobserved traits (hidden variables) will affect the outcomes (Luellen et al., 2005; White & Sabarwal, 2014). Of course, propensity score matching often relies on a large sample size (Holmes & Olsen, 2010) and statistical analysis such as regression analysis for calculating the propensity score to classify participants according to these scores (Lane et al., 2012; Luellen et al., 2005; White & Sabarwal, 2014). However, as matching strategies vary widely, there is still no consensus in the literature about the most desirable approach to propensity score matching, which indicates that the choice of a specific matching technique should be critically explored in advance (Lane et al., 2012).

As quasi-experimental research designs are feasible alternatives to traditional experimental designs, low internal validity, which is a limitation of quasi-experimental research designs, can be remedied by pre-post studies, with an increased similarity between the control and the intervention groups based on pre-test results. In the process of using pre-test results for group assignment, propensity score matching techniques can help to provide concrete, systematic and/or supplementary methods for distribution of the most similar individuals into each group, using participants' personal characteristics and baseline measurement results.

Based on these considerations, to address the first and the second research questions ('What are the effects for learners of e-learning intervention on argumentation?' and 'What are the effects on learners' retention of e-learning intervention for argumentation?'), a quantitative analysis was employed to measure changes in participants' argumentative proficiency before and after this study. For this measurement, pre- and post-tests were conducted with all the participants. A pre-test was given to students at the beginning of a course to determine their initial level in English writing and their understanding of English argumentation, for group allocation, and a post-test was conducted just after completion of the course to determine what the students had learned. A comparison was made between students' pre-existing knowledge in argumentation and what they finally achieved, in order to investigate the effect of the intervention studied here. An enriched feedback environment was given by *Scholar* for one semester.

As for the quantitative study design, at the stage of assignment of the participants to one of the two groups (control and intervention), a technique of matching the closest neighbours was used to improve between-group similarity, to have better control over other variables. This selection technique for balance in groups can help to measure the effect of the intervention itself, increasing internal validity (Creswell, 2009; Creswell & Plano Clark, 2011; Robson, 2011). To match one participant to another and allocate them to groups, their pre-test score was used as a basic criterion. In addition to this, one-to-one exchange of participants between groups was also used if they belonged to the same band of the pre-test score. This extra technique was for each group to include the same number of participants of each gender, thereby controlling any possible effect due to imbalance in

gender, which may be a variable that affects outcomes. Further details on group assignment will be addressed in 4.6.1 Scoring Framework.

It was expected that about 100 participants would be recruited for a quantitative study; this sample size was not reached due to the high rate of students dropping out of the study. Non-response occurred whenever students were not willing to participate in the study or could not be contacted for whatever reason (Aussems et al., 2011). In the end, there were 44 student participants, of whom one in the intervention group left during the study, so 43 participants remained and participated until the end of the study. With the small sample size, it may be difficult to ensure strong statistical significance confirming that the results of this study can be attributed to the intervention (Creswell, 2009; Creswell & Plano Clark, 2011). In order to compensate for this, and to enhance the depth of this study, qualitative data was provided by interviews and narrative reflection statements by all of the 21 student participants in the intervention group.

Concerning the time gap between pre- and post-tests, to minimise the possible effects of other variables, it is better for the timing of the pre-test to be as close to the start of the quantitative study as possible, and for the timing of the post-test to be as close to the end of it as possible. However, while an immediate post-test can miss the long-term effect of intervention, a delayed post-test can measure this, although it is then possible that the effect can be contaminated or caused by other variables during the delay. Delayed testing has been conducted specifically for retention learning, and administered two or more weeks after the intervention ends and the initial post-test is carried out (Haynie, 1997). This is because the effect of the instructional intervention investigated in the immediate post-test can disappear quite quickly, and cannot be identified just a few weeks later (Norris & Ortega, 2000; De Vaus, 2001; Doughty, 2003; Truscott, 2015). Thus, the delayed post-test has been considered necessary in order to compensate for the lack of validity of the immediate post-test; follow-up testing to measure language acquisition and the outcome of the intervention. If the results of the two post-tests do not show any significant difference, this may be another way to support the soundness of the development in argumentation by the student participants. Therefore, a delayed post-test was administered to explore the long-term effects of e-learning intervention on argumentation for learners in this study. It was done

3.5 weeks after completion of the quantitative study due to the participants' academic schedule, particularly their summer vacation, which would have made it difficult for them to take part in this study.

4.1.2 Qualitative Research Setting

As a final stage of collecting data, this study conducted interview sessions for qualitative data collection, which followed a course for English argumentative writing for quantitative data collection. Prior to explore relevant approaches to interviews, it is necessary to point out that this study cannot be defined as action research although I, as a researcher, conducted a study on my own classroom, performing two roles of a teacher and a researcher at the same time. However, it might be significantly important to consider some key aspects of being a dual role in the situation of classroom-based research since the design of this study shares some of its fundamental characteristics.

Most education researchers who are involved in classroom-based research projects use qualitative methodologies for their data collection (Clark et al., 2020). Considering the fact that students are key stakeholders in the teaching of English, understanding their current use of and attitude towards English should be pivotal to all curriculum evaluation and design as an important part of needs analysis (Galloway, 2017; Clark et al., 2020). However, it has been extremely rare that researchers themselves conduct studies at the classroom level with their students. 'Teacher research, classroom inquiry, classroom research, and action research are important, interrelated fields of inquiry for both teachers and researchers' (Galloway, 2017, p. 146). Classroom-based research can be regarded as a cyclical approach to research design, starting from identification/observation of a problem and possibly leading to the identification of another problem as an ongoing process (Galloway, 2017; Clar k et al., 2020). The observation stage involves attempting to implement a different approach, reflecting on what is happening, identifying new understanding through reflection, and evaluating changes to try out a new way (Galloway, 2017; Clark et al., 2020).

As an instructor, I taught my own writing curriculum in class and undertook a quasi-experimental design, followed by student interviews and teacher/e-learning developer interviews as a qualitative study. Further personal background closely relevant to this study

is described in detail in Appendix 4, illustrating my experience of teaching English writing, especially argumentative writing in English. Conducting studies within a familiar context can offer a lot of advantages while taking on the dual role of teacher and researcher also caused some challenges. My familiarity with both the students and their context may have contributed to my being more readily accepted than an unknown researcher; however, a dual role as a researcher and teacher can influence the nature of the data collection, leading to biased results and a lack of objectivity (Galloway, 2017; Clark et al., 2020). To address this issue, I explained that they did not need at all to change their attitude or produce any socially desirable, acceptable, expected answers during this study (Galloway, 2017). Especially in interview sessions and narrative essays, I regularly mentioned that, whether their comments were positive or negative in relation to anything about this study, they would be welcomed and respected, and of significance and value.

Considering the sensitive issues that can be caused by acting a dual role, the qualitative research setting of this study was developed and managed. Therefore, the next sub-section will show specific procedures and key points of consideration of each phase, which were carefully considered and managed prior to a range of interview sessions.

4.1.2.1 Student Interviews

In the stage of qualitative data collection, student participants and English education practitioners took part in interview sessions after the phase of the quantitative data collection. As interviews are frequently conducted by researchers to help them to gain honest verbal perspectives through structured or semi-structured questioning (Clark et al., 2020), the interview sessions were conducted to collect direct, specific, rich and/or innovative views on the digital-based writing course design of this study. To collect valuable data from participants, the interview setting was developed, prepared and managed based on the following aspects.

After the main quantitative phases were over, qualitative research was structured in two interview phases: student interviews I and II, and an expert interview. Firstly, two sets of focus group interviews of the intervention group were conducted to explore the attitudes to,

and perceptions of the instructional design to answer the second research question, '*What are the learners' attitudes toward and opinions of the instructional design used and e-learning environments for developing skill in argumentation?*'. The focus group interviews were to obtain new information and different perspectives on the same topic in participants' own words, on what they thought or felt about the instructional design used, such as its learning content, procedures and the e-learning environment, and to gain insight into how individuals are influenced by others in a group situation in terms of group dynamics (Litosseliti, 2003). In other words, the focus group interview enables researchers to gain a deeper understanding of the perceptions, opinions, beliefs and attitudes of participants toward an issue through their in-depth, enriched and free verbal responses on the reasons why they think as they do (Arksey & Knight, 1999; Carey & Asbury, 2012; Kamberelis & Dimitriadis, 2013; Vaughn, Schumm & Sinabub, 199;). This interview is carried out in more natural conversation than the traditional one-to-one interview and helps participants to develop their perspectives in interaction with other participants, so-called group dynamics, which can give researchers richer data (Carey & Asbury, 2012; Litosseliti, 2003). To facilitate their active participation and interaction, and help them to be more relaxed, all the interview sessions were operated in Korean, so that interviewees were able to give their opinions freely without any pressure on listening or speaking in English. It is important to encourage interviewees to speak more actively and freely in qualitative interviews, which means that researchers should not control the interviews through language (Arksey & Knight, 1999). So, interviewees had the freedom of using their own, everyday language.

In terms of the size of the interview group, while focus group interviews are generally structured with five to ten participants in a group (Carey & Asbury, 2012), a mini focus group of four to five interviewees was selected to provide all participants with more opportunities to take part in conversations in each interview session. In fact, the small group size helps researchers to enhance the depth of data and manage group dynamics, process information, and listen to each participant (Carey & Asbury, 2012; Litosseliti, 2003). More importantly, the mini focus group was arranged to reduce the possibility of little or inactive participation, or even the silence of some participants, which has been criticised as one of the disadvantages of focus group interviews (Harding, 2013). To discourage their passive participation, each interview group was generally made up of about three to five

participants, except for a few cases of difficulty in organising a group interview. For a few interviewees who were not available to attend any of these sessions, smaller focus group interviews with two interviewees were carried out. Moreover, arranging and managing small groups might be a more efficient way for researchers to conduct sessions than one-to-one interview sessions.

However, one of the criticisms of focus group interviews is limited data quality, especially when one or two people dominate a session, which can hinder the elicitation of rich data (Arksey & Knight, 1999; Carey & Asbury, 2012). Also, in the case of perplexing topics, a multiple-session arrangement (more than one session per group) should be allowed, to give the interviewees more time and a better understanding of their roles (Arksey & Knight, 1999; Carey & Asbury, 2012). In the light of these two aspects, re-organising groups can be a way to reduce the effect of dominant individuals in an interview session. In addition, with multiple-session interviews, it is likely that their thoughts will change as time goes on and as they have more time to discuss and focus more on the issues frequently generated in the previous interview sessions. Therefore, the second interview session was held three weeks after the first, with different group members. This timing, organising the interview right after a delayed post-test, post-test II, was for interviewees' convenience and to increase their level of attendance.

For in-depth discussions, semi-structured interviews were carried out in two sets of interview sessions. The interview questions were broadly divided into two parts – learning content and e-learning environment – to explore learners' attitudes toward and opinions of the instructional design used and the e-learning environment for argumentation. Under these two themes, sub-questions were developed for sequential elements, tasks, materials, etc., on each stage of the quantitative study and specific e-learning design and operational factors. In the second semi-structured interview, most frequently or importantly generated issues across the first interview sessions were summarised and shared for an in-depth discussion.

The intervention group was also asked to submit reflective statements as a kind of narrative essay on their feelings and thoughts when they were experiencing the writing stages of each

topic. The written narratives were to enhance the depth and breadth of the study on their attitudes and perceptions, retrieve missing ideas or compensate for losing opportunities to express their opinions in the two series of interview sessions. The collection of the narrative data was also carried out to reduce the subjective understanding of the researcher in the interview data. The narrative essay as qualitative data was used by Luckin (2010) for a more profound understanding of each online user's views on the design of the learning contexts, and was adapted for this study. The participants were asked to carry out this written reflection in Korean, so that they could focus only on their candid opinions on their experiences, following a stream of consciousness without any linguistic inconvenience.

4.1.2.2 Instructor and e-Developer Interviews

To address the third research question, 'What are the views of specialists in English education on argumentation and/or on the instructional design of existing issues and further modification?' interviews with English writing lecturers in Korean universities and e-learning content and/or programme planners/developers in Korea were conducted to explore the applicability of the digital instructional design developed for a Korean e-learning environment for English argumentative writing. The experts were selected by snowball sampling; one lecturer interviewee and one e-developer interviewee suggested and invited the rest of the participants who were working in the field. The interview questions for professionals were determined and structured in advance based on a semi-structured interview method in order to closely follow a set of questions and draw more feedback from them on a variety of relevant issues. Also, a semi-structured interview allowed them to generate more opinions on a specific question or relatively new ideas to be further discussed (Bryman, 2012; Brinkmann, 2013; Edwards & Holland, 2013; Flick, 2014), or to skip questions when they had no idea or opinion on them. The semi-structured interview sought to consider the interests of each expert who had different expertise and experiences, which might stimulate their responses on the areas of questions in which they were more interested.

4.2 Participants

To select participants for this study, I contacted acquaintances who were teaching in higher education in Korea between the end of 2013 and the beginning of 2014, and received a positive answer from one of them, in the Department of Foreign Languages at Seoul National University of Science and Technology. According to the University Evaluation Report by Korea JoongAng Daily (2014), the university was ranked 20th in 2014 in Korea. The university focuses on science and technology, but also has humanities and social science departments.

Four students (three female and one male), second and third graders in the university, participated in the pilot study. During the two weeks of recruitment for the main study, 96 students signed up for the course, which was close to the original target figure of 100 participants for the quantitative study with pre- and post-test comparison. However, only 60 applicants actually came to the orientation and formally signed up for the consent form, and then 16 participants decided not to continue participating in the study during the first topic period. Additionally, one participant in the intervention group did not participate after the first topic. These participants withdrew mostly because they were busy with their course work; many who decided to stop participating told me that they had been preoccupied with their tests and assignments, so lack of time made them discontinue my course. Some said that they felt there was a high workload because they had to spend a lot of time developing their drafts and providing peer feedback. This study was operated as a non-credit voluntary course, so it was easily pushed down their priority list when they felt busy with their academic schedule. All information about this study and their guaranteed rights during the study were explained in the orientation stage, so I, as a researcher, could not oblige them to continue participating in my study.

44 students from the university (22 women and 22 men), ranging from first to fourth graders, volunteered to participate in the main study. After conducting the pre-test and scoring its result, they were randomly allocated into two groups, a control group and an intervention group (*Scholar* Group). At this point, the two groups were made to be as identical as possible in average group score and the number of each gender. One male

participant in the intervention group left after participating in the first writing topic. At the post-tests I and II, all the remaining 43 participants participated. Then, all 21 participants in the intervention group participated in interviews I and II, and the self-narrative statements for each topic.

4.3 General Procedure

The whole study was carried out in the first semester from March to July 2014. The course for the main study was a little later, after the first semester started, and then closed when the summer vacation started. This was because at the beginning of the semester a pilot study was conducted first, and then the delayed post-test and interview had to be carried out after a specific time interval. The general procedures are as shown in Table 5.

Table 5: The general procedures in this study

Pilot	Orientation	(No test)	
	Topic 1	- Brainstorming with *Almind*	
		- First Draft	
		- Peer-feedback on the first draft	
		- Teacher-feedback on the first draft	
		- Second Draft	
		- Peer-feedback on the second draft	
		- Teacher-feedback on the second draft	
		- Final Draft	
		- Teacher-feedback on the final draft	
	Interview	Focus Group Interview	
Main Study:		**Control Group** (Offline Class)	**Intervention Group** (Online Class with *Scholar*)
Quantitative	Pre-Test	(In a laboratory)	(In a laboratory)
	Orientation	(In a laboratory)	(In a laboratory)
	Topic 1	- Brainstorming	- Brainstorming with *Almind*
		- First Draft	- First Draft
		- Peer-feedback on the first draft	- Peer-feedback on the first draft
		- Teacher-feedback on the first draft	- Teacher-feedback on the first draft
		- Second Draft	- Second Draft
		- Peer-feedback on the	- Peer-feedback on

		second draft	the second draft
		- Teacher-feedback on the second draft	- Teacher-feedback on the second draft
		- Final Draft	- Final Draft
		- Teacher-feedback on the final draft	- Teacher-feedback on the final draft
		X	- Publication (Optional)
	Topic 2	- Brainstorming	- Brainstorming with *Almind*
		- First Draft	- First Draft
		- Peer-feedback on the first draft	- Peer-feedback on the first draft
		- Teacher-feedback on the first draft	- Teacher-feedback on the first draft
		- Second Draft	- Second Draft
		- Peer-feedback on the second draft	- Peer-feedback on the second draft
		- Teacher-feedback on the second draft	- Teacher-feedback on the second draft
		- Final Draft	- Final Draft
		- Teacher-feedback on the final draft	- Teacher-feedback on the final draft
		X	- Publication (Optional)
	Topic 3	- Brainstorming	- Brainstorming with *Almind*
		- First Draft	- First Draft
		- Peer-feedback on the first draft	- Peer-feedback on the first draft
		- Teacher-feedback on the first draft	- Teacher-feedback on the first draft
		- Second Draft	- Second Draft
		- Peer-feedback on the second draft	- Peer-feedback on the second draft
		- Teacher-feedback on the second draft	- Teacher-feedback on the second draft
		- Final Draft	- Final Draft
		- Teacher-feedback on the final draft	- Teacher-feedback on the final draft
		X	- Publication (Optional)
	Post-Test I	(In a laboratory)	(In a laboratory)
	Post-Test II (delayed)	(In a laboratory)	(In a laboratory)
Main Study:	Intervention	Narrative Reflective Statements	

Qualitative	Group	Student Interviews	Focus Group Interview I
			Focus Group Interview II (delayed)
	Instructor/e-learning designer Interviews		

4.3.1 Pilot

Before the main study, a two-week pilot study was conducted, with a brief (1-1.5 hours) orientation, three drafting stages with *Scholar*, including the use of *Almind* in brainstorming, and one two-hour group interview session. In the orientation in a laboratory, an explanation was given of the general procedures for this short series of writing sessions to develop one topic, the related specific task for each stage and how to use *Almind* and *Scholar*, and then the progress schedule was discussed and determined. Participants were also guided in creating their own account in *Scholar* at the end of the session. This pilot was carried out to check the operational conditions of *Scholar*, to consider the appropriateness of the designed rubrics, and to glean information on the level of written English of the Seoul National University of Science and Technology students and to establish the necessary guidelines for participants in the orientation stage and amend interview questions.

4.3.2 Quantitative Study Process

Two weeks after the pilot study, a main quantitative study was conducted. As shown in Table 5, an instructional design developed for this study follows a general flow of drafting stages based on a process-based approach. Prior to the pre-writing stage, a two-hour orientation was given to provide all the participants with background knowledge of argument-writing models, their features and possible ways to apply them in the argumentation process. This necessary stage is included based on previous research studies discussed in the literature review section, which emphasise the importance of teacher's instruction in English writing structure and argument development that enhances student writers' readiness for the actual writing stages. In this stage, a simplified main model for argumentation, the Toulmin model (1958; 2003), and subordinate models, Kaufer and Geisler's model (1991) for rebuttals and Yoshimi's model (2004) for organising ideas, were explained to teach participants how to develop their argumentative structure, and then brief exercises were offered to check student's basic understanding of argumentation. For

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this comprehension check, matching and categorising activities were provided, so that participants would recognise Toulmin's elements of argumentation within paragraphs. For the intervention group, a brief introduction to *Almind* and *Scholar,* with some examples of YouTube online tutorials, was given during the orientation stage, and detailed user guide files and links for creating a user account and participating in *Scholar* were also provided by email.

After the orientation stage, a 30-minute pre-test was conducted on all the participants in a laboratory. Their essay was evaluated according to the modified 'ESL Composition Profile' created by Jacobs et al. (1981), in order to judge their linguistic proficiency in general as shown in Appendix 5, and then divide them into two identical groups – the control group and the intervention group. A bilingual Korean/English speaker, an English lecturer in a university in Korea, participated in scoring the pre-test results as a co-evaluator. If there was a large discrepancy between her marks and mine, we re-evaluated the pre-test essays in question and then negotiated to reach an agreement if a discrepancy still existed.

Based on the pre-test results, group allocation into the control and intervention groups was carried out and then their participation method was announced – classroom attendance or online participation. Participants in the intervention group were additionally informed that anonymity was guaranteed for group members in the online class. The anonymous participation in peer feedback was implemented based on the relevant literature that anonymity can facilitated less biased and more straightforward critical reviews (Lin et al., 2001; Patchan et al., 2018; Topping, 2009; Schunn et al., 2016), especially in the harmony-oriented cultural context (Choi & Rhee, 2013; DeWaelsche, 2015; MacLeod, 1999; Nelson and Murphy, 1993; Tuzi; 2004, Wang, 2014). Each group consisted of three to four participants, and group members exchanged peer feedback for each writing topic. It was decided to have small groups of three to four members because this can allow students to feel more comfortable and bring a broad variety of perspectives and writing styles (Ferris & Hedgcock, 2014). In addition, small groups can help reduce participants' workload in reading group members' drafts for peer reviews and encourage them to read the drafts of all members of their group. Especially for the control group, it was easier to arrange face-to-face peer feedback sessions in small groups. When allocating group members, pre-test

scores were considered to distribute participants from low, middle and high mark groups and keep a balance in the level of English language proficiency of each group, as, in general, it is easier to manage similar-level groups. Group re-organisation minimised the possibility of staying in a group which did not function well. Whether groups work well or not, it is good to reconfigure peer feedback groups after one or two review sessions to give variety (Ferris & Hedgcock, 2014). Moreover, re-arranging groups provided more opportunities to read the diverse styles and levels of writing of other students and review them. The weekly schedules of each group were announced by email in advance. In the case of the intervention group, messages about what to do next were sent to members at each stage through the *Scholar* scheduling system, which was already set up at the opening of each topic.

The key difference between the two groups is two contrasting learning environments, offline and online; the curriculum for argumentative writing was basically the same in both groups. To explain the different characteristics of the two groups in more detail, the face-to-face writing sessions for the control group were held in a classroom, where each group was seated together to provide peer feedback to their own group members. To minimise unnecessary time for circulating and processing each essay in a group, all the participants of the control group were asked to upload their draft by each deadline to the digital classroom, which was a designated digital space at Seoul National University of Science and Technology Cyber Campus. Each essay was printed out in advance and distributed by group at the beginning of a session, so that each group member was ready to give feedback on a draft essay by his or her group members. Along with a printed copy of each group member's draft essay, hard copies of the first or second rubric for each feedback stage were given to students, so that they used one sheet of a specific rubric for each draft, following each category of the rubric and writing down their evaluation scores and comments. After students read and provided feedback on rubric sheets, which generally took 30 to 40 minutes, the draft essays and rubric sheets were collected by group and then returned to the writer of the essay. While students participated in feedback tasks, the teacher arranged and oversaw their group work and prepared to give teacher feedback to each participant at the end of the session. So each student left each session with peer and teacher feedback on

his or her first and second draft, before the final draft was submitted to the online classroom on the cyber campus.

In contrast, the intervention group conducted each task in an online-based remote learning environment, using a collaborative digital writing platform, *Scholar*. The participants in this group were informed by email about schedules, notices on pre- and post-writing course events, suggestions for and precautions against participatory work by email, but, especially for writing tasks, most of the communication which generally occurred in class was made through scheduled notifications and feedback comments that *Scholar* offered to users. As the course schedule of this study was set up in *Scholar*, participants were given specific notice of each task by *Scholar*'s notification system, allowing them to enter a designated writing space, and post, submit and share their drafts for collaborative revision work. When each draft was submitted by its deadline, each individual student received messages on the *Scholar* platform which led him or her to the draft page of each of their group members, so that they would be able to provide peer feedback on it via *Scholar*. Then, the completed feedback was saved and shared with the writer and the teacher. For the writing process in *Scholar*, the teacher as course leader set up a learning environment for this targeted writing course, and group participants have access to and monitor each stage of their submitted draft and feedback, provide feedback on submitted essays and publish the completed essays.

Three essay topics for writing an argument were proposed and each topic was developed for about two to three weeks. The three topics are listed below.

1. Do you agree or disagree with the following statement? *Working alone at home with a computer or a telephone is better than working with co-workers in a company*. Use specific reasons and examples to support your answer.
2. Do you agree or disagree with the following statement? *People today are not happier than those who lived about 50 years ago*. Use reasons and specific examples to support your answer.

3. Do you agree or disagree with the following statement? *The privacy of famous entertainers and athletes should be protected.* Use reasons and specific examples to support your answer.

In the brainstorming stage, the control group was asked to brainstorm on paper with circular boundaries and lines to generate ideas, and then bring them to the next class and share them with others. For the intervention group, the web-based graphic organiser, *Almind*, was used for participants to draw and save a mind map for each topic in this stage. Participants in this group were required to post a mind map above the first draft on *Scholar*, so that the teacher and group members could read and/or refer to it before reading their first draft of each topic.

Going on to the next stage, participants developed their first draft with a macro-level writing rubric as shown in Appendix 6.1. The rubric contains what participants should consider in developing their essay, based on a list of evaluation criteria with organisation and content. In particular, Toulmin's argumentation components such as claim, ground, warrant and rebuttal were applied to the sub-category of content. In the rubric, each sub-category with a full description of its features or qualities contains a six-level grading scale from 0 to 5, and one blank box for comments. Because the evaluation criteria would be applied for teachers and peers to assess their first draft again later, participants could start their essay at this stage with an awareness of grading components. For the control group, hard copies of this rubric were provided when they attended the class for feedback sessions. For the intervention group, this rubric was shown in the right-hand panel when developing the first draft on *Scholar*, so that they could refer to it on the same web page to self-check during writing.

The next stage is macro-level peer revision in the first peer feedback stage. Participants were asked to read their group members' first drafts and evaluate them based on the first draft rubric with general structure and argumentation category elements (see Appendix 6.1). They were asked to check each grading scale and leave comments in each category, focusing only on general organisation and logical streams of thought. Since students generally generate and organise ideas in early drafting stages, reviewers should help them to revise

content and answer a given task (Ferris & Hedgcock, 2014). Also, if they reconstruct major parts of their essay, it is likely that small-scale error corrections on grammar or vocabulary, which were already given on the early draft, will be useless. Therefore, participants were guided to focus more on macroscopic components at this stage. For the control group, participants attended a first draft class and gathered in groups to review their peers' drafts on a hard copy of the first draft rubric, and then gave each revision sheet to the right person. In the intervention group, participants entered *Scholar* and worked on their peer revision when they had time before the deadline. The revision work was designed to be automatically sent to the right person when they clicked on the SUBMIT button at the bottom of the right panel. Teacher feedback was given to each participant at the end of the peer feedback session, so as not to discourage active participation among group members. Of course, teacher revision was done in two ways for the two groups: feedback on the first draft rubric sheet to the control group and feedback on its online rubric on *Scholar* to the intervention group.

Participants were guided to write their second draft in the second draft stage, referring to the peer and teacher feedback on their first draft. They could refer to the framework of the Toulmin model to test the soundness of their argument. With Toulmin's structure of arguments, students were advised to do a more in-depth review on the logicality of their argument in this stage and revise their first draft, focusing on content development and structural organisation. Participants in the control group uploaded their second draft file onto Moodle and submitted it to their teacher while those in the intervention group imported and revised their first draft and clicked on the SUBMIT button on *Scholar* by a given deadline.

Further peer feedback went on in the micro-level peer editing in the second peer feedback stage. The rubric of this stage was designed with three categories – vocabulary, language use and mechanics. This rubric also had each sub-category with descriptions of its quality on a 0 to 5 point grading scale, with one blank box for comments (see Appendix 6.2). Participants in the control group attended the second peer feedback class and gave feedback on hard copies of this rubric, or on a hard copy of their peer's second draft, if necessary, focusing on grammatical or mechanical errors and expressions. At the end of this

session, they gave each feedback sheet and edited draft to the relevant person in their group, and teacher feedback was also given in class. In the case of the intervention group, participants were asked to use the *Annotation* tool to highlight a specific area and leave a comment on errors, or make suggestions in the comments space under a newly created annotation list on the right panel. They could select a specific type or category of errors in a given list of error categories by using the tool's detailed options. When they had finished, they clicked on the SUBMIT button, so that the writer of each edited draft could read their feedback. The teacher also used this tool to give feedback on the second draft before students developed the final draft.

In the final draft stage, students were asked to edit their writing, consulting micro-level peer feedback. After editing, they submitted their final draft, uploading it onto Moodle for the control group and pressing the SUBMIT button for the intervention group to hand it in to their teacher.

Finally, the publication stage could take place in the intervention group; this was provided as an option. This stage is included for students to have another chance to revise their essay using their teacher's feedback and publish their own writing as a record. It is of no use to set aside their essay after only checking their scores and not reflecting on the feedback given by their teacher. This publication activity was suggested to encourage their writing by increasing their sense of responsibility in the writing process. The function to save all the materials created by each writer as a PDF file, from the first to the final essay along with feedback from peers and their teacher, was explained to participants; they can see at a glance their improvement during a series of writing activities, with every relevant online document in one electronic file, and increase their confidence as a writer.

After the essays were completed, post-test I was carried out in a laboratory in order to investigate the effect of the digitally-based instructional design on argumentation in English. The scoring scheme for this comparison is different from the modified 'EFL Composition Profile' by Jacobs et al. (1981) used for group allocation before the intervention started. To address the effect of the intervention on argumentative proficiency, a newly created writing rubric focusing on argumentative components was applied to assess students' essays. Three

weeks later, post-test II was also performed by the two groups. Every process for the two post-tests was exactly the same, but the essay topic for each post-test was slightly different in order to minimise the effect of repetition, but asking them to use almost the same vocabulary and a high proportion of overlapping content in the two post-tests.

4.3.3 Qualitative Processes: Interviews and Self-narrative Statements

In order to investigate participants' attitudes toward and opinions of the developed instructional design, two sets of interview sessions were held for the participants of the intervention group. Then, self-narrative statements on each writing topic, which were saved as document files, were collected by email. This written reflection was an extra resource for individual review, because some of the participants may not have had their own voice during the focus group interview sessions. The written review enabled them to have an extra opportunity to provide their ideas and opinions with more freedom and authority, without any guidelines to follow. So no specific formats or styles were designated for the participants' free reviews, which resulted in a variety of writing styles, from private diaries to somewhat formal reports, and all written in Korean. Writing of the narrative essays started right after this writing course began and lasted until the interview sessions were completed.

Some of the respondents completed their submission before the group interview sessions started, and others continued during or after the group interview sessions. Some of the respondents who submitted late seemed to feel free to develop their own feelings and thoughts without considering interview questions, and some of them specifically developed their ideas further than what they had reported in the interview sessions or made rebuttals of others' opinions or viewpoints generated in the interview sessions. In fact, they were allowed to express anything in their mind regardless of the level of repetition of content between topics or overlaps between their narrative writings and oral interviews. Finally, 15 narrative writings covering all of the three writing topics were submitted by 15 participants, with one narrative essay per participant for topic 1 and two narrative essays per participant for each of the topics 1 and 2 were collected.

Additionally, instructor and e-developer interviews with five English writing lecturers in Korean universities, and four e-learning content and/or programme planners/developers in Korea were conducted. Before proceeding to an interview session, explanation of purposes, procedures and materials of this study with handouts, and brief demonstrations of the *Almind* and *Scholar* interfaces were provided.

4.3.3.1 Student Interviews I & II

The first interview session took an overview of the writing course in this study and then narrowed down major issues among the responses. After these first interview sessions were finished, the initial process of identifying key points continued, reflecting the analytic notes which had been taken during and after the interview sessions. The second interview session was carried out three weeks after the first interview session, in order to put more focus on the major issues elicited in the first interview.

Firstly, the interview questions were put to 21 interview participants, in three major categories – learning content, e-learning environment and general questions covering the stages. In particular, the learning content questions were asked according to each stage in order to help interviewees to generate their ideas and suggest possible ideas in response. During each interview session, participants were allowed to read through a hard copy of the interview questions in Korean whenever they wanted to. However, prior to each interview session, they were informed that the suggested questions were a general outline and, therefore, they would not have to process and produce answers to each question. When they had no ideas, they could skip a question. Questions used for the semi-structured interview sessions are shown in Appendix 7.1. However, for the analysis, the questions were grouped by concept and theme because there were overlaps between the answers. This is also because all the interviewees in each session did not generate rich feedback on each question, or they sometimes suggested inter-related or overlapping ideas and opinions between questions.

For a more in-depth discussion and to understand the participants' attitudes toward and opinions of the writing course in this study, all the participants in the intervention group

were asked to take part in one session of the second semi-structured group interview again. These second interview sessions were operated in order for participants to express their ideas and opinions further, and were expected to specify and clarify the most frequently generated concepts in the first interview sessions. In addition, this second opportunity to voice their opinions was offered to reduce the possibility of procuring no data from quiet or shy interviewees in the first session. Also, they were conducted 3.5 to four weeks after the first interview sessions, so that participants' changes of thought over time could be included.

In total, 20 interviewees participated in one of the second interview sessions, which were newly organised and different from the first interview session. This rearrangement of groups was to reduce the effect of the first interview group members such as dominant respondents and those with strong opinions, and create a new group dynamic in another communicative environment. There were six interview groups, each made up of three to four interviewees.

In the second group interview, the most frequent responses, new ideas or suggestions generated by participants in the first interview sessions were presented to the interviewees. The points that needed to be dealt with in the second interview sessions were suggested according to the major categories of learning content, e-learning environment and general questions, which were also sub-categorised into stages of the writing process or instructional aids applied in this study. A handout of the themes was given to each participant to help them skim the points and think of their ideas ahead, but not all the themes needed to be discussed one by one. The suggested points for further discussions were as shown below. A handout including these points in Korean was given to each participant, so that all the participants could read through them before or during the interview session. They were allowed to skip points, or focus more on specific points, so that they did not have to cover every point in the handout. The themes used in the second interview sessions are shown in Appendix 7.2.

4.3.3.2 Instructor and e-Developer Interviews

After student interview sessions, as part of the main study, nine specialists in the field of English education joined each interview session to explore their perceptions and opinions on the teaching of writing and the instructional design for learning used in this experiment. In detail, five of these specialists had been working as English lecturers in universities in Korea for more than three years and, in particular, had experience of teaching English writing to university-level students; most had more than five years of English teaching experience. To find interviewees, I contacted acquaintances who had been teaching English in universities in South Korea and asked them to suggest potential interviewees around them, especially teaching staff who had experience in teaching English writing in South Korean universities. Teaching staff interviewees were selected among the suggested lecturers with teaching experience in writing. The other four interviewees had been working as e-learning English content planners and/or developers for more than seven years. To find e-learning developer interviewees, I also contacted my friends teaching English in higher education or working in e-learning companies for adult language learning in South Korea, to ask them to recommend and introduce relevant people for the purposes of the interview. The purpose of the interviews for this study was explained so that they could suggest available professional people around them. For the e-learning specialist interview, only people who had been working in the publishing world of learning and teaching English writing, and planning and designing e-learning English writing courses or developing e-learning English writing content were selected and then contacted to arrange their interview schedule.

For the individual interviews of teaching staff and e-learning developers, the same outline as for the first student interviews was used, but each interview was not limited to the list of possible questions. Prior to each interview they were allowed to read through the suggested questions, but they were also informed that they would have freedom to skip questions or generate new issues to discuss during the interview. 4.4 Materials and Instruments

4.4.1 Rubric Criteria for Feedback in this Study

Based on the literature, specific rubrics for feedback were created for this study, including peer and teacher feedback, to act as a fundamental guide during the writing process. For rubric development, it is necessary to consider specific criteria for targeted tasks for feedback in terms of what is to be fulfilled and what extent is to be considered successfully fulfilled. As Barkaoui's (2007) study suggested, feedback should be divided into two stages, one for meaning-focused revision and the other for language-focused revision. Considering that the aim of this study is students' argumentation development, logical coherence should be the focus of students' writing while creating and revising drafts towards the final outcome of a complete argumentative essay. During this process, students need to rely on a systematically structured rubric that is made up of specific and explicit argumentation components, not vague or conceptually implicit categories of organisation/structure, content, and so on. As discussed earlier, although Jacobs et al.'s (1981) analytic rubric has a specific scoring scheme for each organisation, vocabulary, language and mechanics, it cannot help teachers or students make judgemental decisions on the soundness of arguments when they pursue evaluative and reflective work. This limitation signals that argumentation-focused rubrics need more segmentalised and structural criteria in the analytic writing rubric.

To address this issue, argumentation components in the Toulmin model were selected to help a teacher to develop a specific rubric for argumentation-focused writing and, at the same time, encourage students to have a tangible sense of and consciously care about logical coherence in written discourse. Adapting Jacobs et al.'s (1981) analytic rubric to make an argumentation-focused rubric implies that the first rubric has a characteristic of multiple trait scoring. The rubric for argumentation also means that a teacher can teach students the criteria as a source of argumentation-focused instruction, and students can learn how to build structure and set practical standards for their own writing and self- and peer-assessment.

Therefore, with the two common criteria maintained, general organisation and general content, one overarching category concentrating on argumentation, so-called 'details of

argumentation' was created, which is comprised of Toulmin's key elements, claim, grounds, warrant, rebuttal. In fact, it is important to consider how to enhance students' understanding of writing and review work. As Toulmin's detailed components such as backing and qualifier may increase confusion in distinguishing supporting elements, some level of modification for compromise can be justified in the sense of developing students' self-assessment skills (Barkaoui, 2007) and using student-friendly language for assessment criteria (Wiliam, 2011).

Considering these important points, the first rubric in this study was created to focus on argumentation, as presented in Appendix 6.1. It has subordinate criteria under a category of 'details of argumentation' embedding characteristics of task-specific and process-focused rubrics, not generic scoring and products-based rubrics. As Wiliam (2011) differentiated characteristics of rubrics, the argumentation-targeted category asks students to learn and apply Toulmin's key argumentation elements in writing and feedback tasks. As Price et al. (2011) pointed out, the nature of gradually learned proficiency in the evaluation framework, the first rubric in this study, which is visually categorised and conceptually distinctive criteria focusing on argumentation, can reinforce students' proficiency in argumentation. Along with teacher's initial instruction in the argumentation elements of the first rubric in the orientation stage, students in this study were expected to develop English argumentation proficiency by using this rubric for their individual writing and peer feedback tasks, improving their enhanced self-regulation across the writing process.

In addition to categorical features of the first rubric in this study, both the first and second rubrics were incorporated with major characteristics of analytic rubrics, providing students with explicit standards for judging the level of performance in each category. The scoring criteria based on analytic rubrics can promote transfer and generalisation (Wiliam, 2011), which can enhance students' understanding of the specific quality of their work. In addition, considering Sadler's (1989) point that qualitative judgement should precede summative assessments, analytic rubrics have room for embracing quality-focused appreciations along with a scoring scheme. The dual mode of evaluation can promote students' engagement in external feedback in terms of a better interpretation of the given feedback and active

provision of peer feedback.

Moreover, as students follow a sequence of argumentation elements in the argumentation category of the first rubric towards building an argument, the process-focused nature can encourage students to develop an argumentative essay through self-regulation and, later, provide enriched and meaningful peer feedback against the shared explicit criteria. Considering the positive effect of students' enhanced capacity for self-regulation during a task (Nicol & Macfarlane-Dick, 2006; Sambell, 2016), cognitively enforced nature supported by a systematic process of developing arguments can facilitate student-led critical reviews of their own and others' written work. Even though a teacher does not provide common types of process-focused criteria in creating writing templates, check lists and so on, the genuine structural sequence embedded in the argumentation category of the rubric, which can be viewed as process-focused writing rubrics, can ultimately promote peer- and self-learning (Wiliam, 2011).

Also, the umbrella category of 'details of argumentation' in the first rubric can be considered as a whole, rather than as isolated parts of rubric criteria (Sadler, 1989) incorporated with other relevant categories such as general organisation and general content. This point also implies that it may not be appropriate or effective to include a single category of argumentation in the first rubric in this study. While the logical coherence is inevitably related to general organisation and content, judging the level of soundness of an argument itself cannot be enough to evaluate the overall quality of an argumentative essay, regardless of the level of linguistic accuracy. Considering this limitation, a combination of what Sadler (1989) calls 'sharp and fuzzy' criteria can address the issue. In the first rubric in this study, specific criteria under the category of argumentation can work as sharp criteria, while the general quality of organisation and content as fuzzy criteria can make room for judging a stream of ideas in an essay.

After the meaning-focused stage of feedback and revision, the next stage of feedback and revision should help the student to move their attention to peripheral features of language and mechanics. As Barkaoui (2007) recommended two-staged revision modelling from macro-level revision to micro-level revision, students can concentrate on the level of

accuracy in vocabulary, language use and mechanics in providing the second peer feedback and revising their own draft following the second feedback. In addition to the movement of focus across the writing process, incorporated multi-stage tasks from the task design perspective are more likely to promote timely reviews and students' feedback uptake (Yang & Carless, 2013). Tasks with two or more phases allow iterative feedback cycles, which enhance students' engagement with feedback and the possibility of improvement from one task to the next (Prowse et al., 2007).

In fact, the criteria are commonly seen in analytic writing rubrics, including Jacobs et al.'s (1981) 'ESL Composition Profile'. The second rubric is mainly about sharp criteria, which contain a clear 'right-or-wrong' quality (Sadler, 1989), and, thereby, include product-focused criteria (Wiliam, 2011). Given the fact that evaluators can make judgements on accuracy, the dual mode of evaluation in the analytic rubric can also be supported here. While it is easier to score the quality of language and mechanics in the second feedback, qualitative judgement can be used for reviewers to provide definite corrections or better options for increased readability. The flexibility in feedback provision has the potential for enriched feedback, which can help students to evaluate, select and apply for external feedback as a valuable source for improving their writing before submission (Nicol & Macfarlane-Dick, 2006). Given these points, the second rubric in this study was created as presented in Appendix 6.2.

4.4.2 Writing Platforms for Course Arrangements

In this study, the free online survey platform, *Google Forms*, was used for potential participants to read a brief explanation of and sign up for this study, and provide their personal information such as name, gender, student ID number, major, study experience in English speaking countries, the general amount of time spent in English reading and writing per week, their online usage and so forth.

One pre-test and two post-tests were conducted for this study in a specific *Moodle* class run by the Seoul National University of Science and Technology. The space for the online assessment was activated during a specific period on a specific day, during which participants were able to log in and write their essay on a given topic only for 30 minutes.

Moodle was also used for the control group to read each essay topic and submit their drafts to their lecturer during the experiment. For the intervention group, the web-based graphic organiser invented by a Korean software company, *Almind*, was used for brainstorming because it is free of charge and easy to access, install and learn to use; it enables the use of diverse data formats and the development and saving of a concept map in various versions. *Scholar* was used for the participants to develop and submit their drafts and interact with each other for peer and teacher feedback. The *Scholar* setting was used to give notice to all the participants in the intervention group of which tasks they should do for each stage and for them to view drafts by members of their group. *Scholar* was set up to show them anonymously, and each was identified as Reviewer 1, Reviewer 2 and so on. Anonymity was chosen to encourage active participation and enhance their confidence as a reviewer regardless of their English level, grade, major and acquaintanceship of each other, because people in Korean society tend to be self-conscious, read each other's attitudes and give comments that are not too harsh out of politeness while openly assessing another's work.

Figure 12: Screenshot of *Moodle* for the writing course in this study
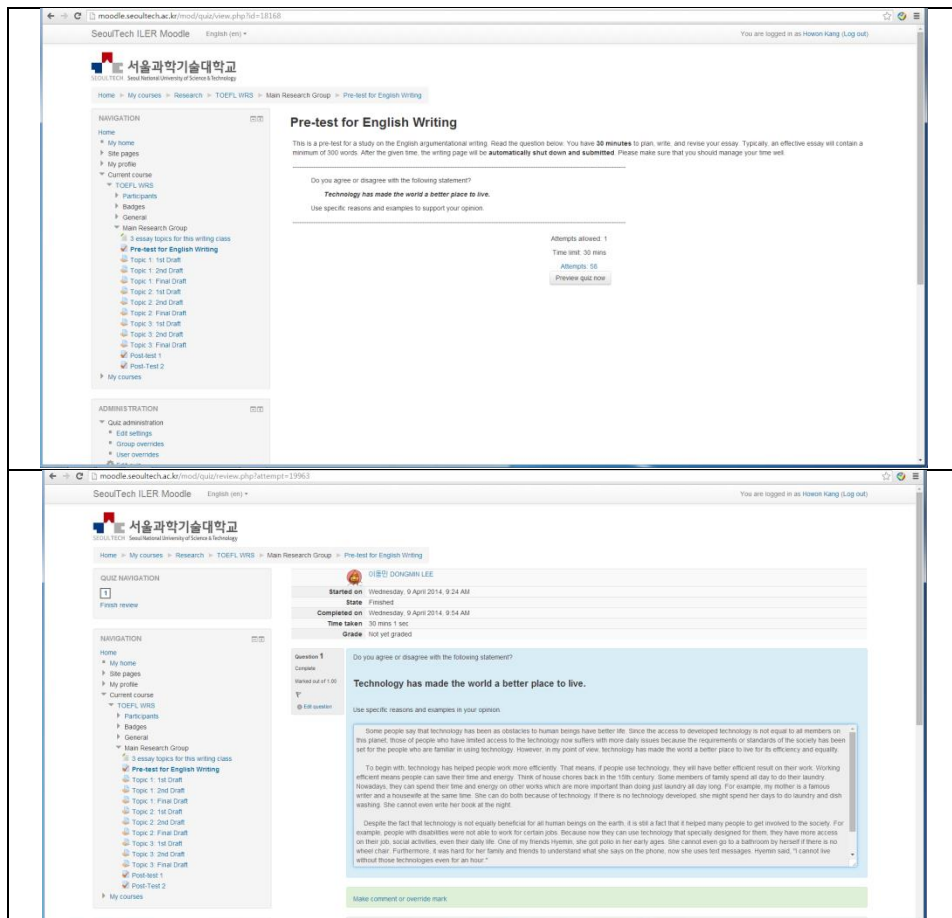
To increase equivalent-form reliability, pre-test and two post-test topics were selected from iBT TOEFL topics for argumentative writing which had considerable overlaps of topic areas and vocabulary. Generally, TOEFL essay topics ask students to write more than 300 words in 30 minutes. There were two practical reasons why TOEFL writing topics were chosen for pre- and post-tests. One was that it was easy to control the level of essay topics in the same subject area, because TOEFL topics have been officially and widely used and measured for a long time. It was helpful to use already developed writing assessment topics in order to reduce time and effort in designing reliable questions and analysing similarity between them for performing parallel tasks. The other reason was the high need of the students in the Seoul National University of Science and Technology for official English proficiency tests, including argumentative writing, like TOEFL or IELTS that had been indicated by the staff of the university. Actually, relevance for those tests and actual practice of writing essay topics for them were expected to increase students' participation in this study and motivation for the quantitative study processes. So three argumentative writing topics from iBT TOEFL were chosen for the writing tasks in the experimental phase. The thematic areas of these three chosen topics covered liberal arts/social science or science/technology, since participants came from a variety of majors. Also, they did not focus on the topical area of the pre- and post-tests. The topics during the writing stages were (i) *Which is better – working together in a company or working alone at home?* (ii) *Do you think that people were happier in the old days?* and (iii) *Do you think that the privacy of celebrities like famous entertainers and athletes should be protected?*

4.4.3 Testing Instruments

In this study, Jacobs et al.'s (1981) ESL Composition Profile was modified and used to judge the general writing proficiency of all the participants, and then randomly allocate them into the control group or the intervention group. Therefore, both groups were formed to start with no statistical significance in the mean score of overall writing proficiency. The 'ESL Composition Profile' as a type of analytic scoring has been widely used for a long time, giving a multi-level scoring scale for each evaluation component, and is able to be combined with holistic scoring (Ferris & Hedgcock, 2014). The detailed components of this scoring

system have been adapted to many of the analytic scoring rubrics for the evaluation of each course. In particular, this scoring system helps to give a total score out of 100 as a total numeric value and enables co-evaluators to minimise discrepancies in marks by using separate judgement criteria; its detailed descriptions in each component could be helpful to reduce the pressure on holistic judgement and reach an agreement between evaluators more easily through negotiating specific criteria which cause different opinions. Finally, the standardised rating procedures given by detailed criteria of analytic scoring facilitate a lower possibility of mixing two or more text-based categories (Weigle, 2002; 2007).

Originally, as shown in Appendix 5, the analytic scheme of Jacobs et al. (1981) is made up of content, organisation, vocabulary, language use and mechanics, but a category of task completion was added to deduce points from -3 to 0. This was because the pre-test followed instructions used by iBT TOEFL, which asks participants to develop an essay of more than 300 words within 30-minutes. The general test setting in this study was based on iBT TOEFL because many participants wanted to have actual practice similar to TOEFL writing and its setting for testing writing had been developed and widely used for a long time. As a result, setting this test with a time limit led to many of the participants submitting an incomplete or shorter essay than requested.

To investigate the effects of e-learning intervention on argumentation for learners, the new grading rubric, focusing on argumentation, was used to evaluate pre- and post-tests and all three drafts of each topic in the quantitative research. This rubric is a simplified version of the first peer-feedback rubric with fewer categories judging general organisation and content, and smaller grading scales of 0 to 2 or 3. To narrow down basic argumentative elements, the sub-categories of content were only made up of claim, grounds and warrant, and rebuttal. This was because some of the elements in the macro-level first peer-feedback rubric found it difficult to distinguish the interwoven content of essays. It was also to facilitate grading work and increase the clarity of evaluation between evaluators.

4.5 Analytic methods

4.5.1 Scoring Framework

For the analysis of the pre-test scores, the ESF Composition Profile (Jacobs et al., 1981) was modified and used to judge the writing level of each student participant and then divide them into two statistically identical groups before the actual writing course started. In this phase, it was considered more reasonable to analyse the general level of writing through a wholistic scoring measure as a placement test analysis at the starting point rather than concentrate on only the level of argumentation skills, which is the focus of this study. This is to consider any possible impact of linguistic features such as grammar, vocabulary, expression and so on that may affect evaluators' judgements on the level of English argumentation in scoring post-tests, and construct two similar groups. Before they started taking this course focusing on English argumentation, participants should be ready for a wide range of English writing aspects, not only argumentation itself. This decision was made in the South Korean context where students are likely to have less opportunity to write argumentative essays in English until they go to higher education.

All the quantitative data was graded by the two evaluators for enhanced reliability in scoring. As a pre-allocation process, each participant's writing proficiency was established by the mean of the two evaluators' scores in his/her pre-test writing score, in accordance with the modified ESL Composition Profile (Jacobs et al., 1981). With the pre-test mean of each participant, two were randomly selected in each five-point range and then randomly allocated to one of the two groups, the control group and the intervention group. In addition to selection by each score band, the same number of each gender was maintained by exchanging members in the same score band between groups as necessary. When the initial group allocation was done, an Independent Samples T-test was performed to determine if there was a statistically significant difference between the two groups. If a statistically significance was found, a re-allocation process was undertaken with random selection of two participants in each band; this process was repeated until two groups with no statistical difference were formed.

After all the quantitative research processes in this study were completed, all the quantitative data collected from pre- and post-tests were evaluated by a single rubric, newly created to focus on the assessment of the level of argumentation of each student participant. As shown in Appendix 8, a rubric for argumentative writing for pre- and post-tests consists of the two main categories of general organisation and content, each divided into four levels from zero to three points. In particular, the category of content, covering the soundness of argumentation, consists of three sub-categories – claim, grounds and warrant, and rebuttal.

For each category of this rubric, a different weighting measure was applied; argumentation criteria have higher score values by trebling the original score, while general organisation has relatively lower values by doubling the original score. Further, the sub-total of general organisation and content, 30 points, was again multiplied by 3·3 towards the full marks of 100 points. The last point, to complete 100 points in total, was compensated by another category of volume satisfaction because each essay in pre- and post-tests required 300 words at least: minus one point for failing to meet the volume limit and plus one point for fulfilling it. It is anticipated that different weighting scales between categories will result in higher gaps between essay scores for each student participant, which means that a one-point gap in any of the argumentation criteria finally expands to 9.9 on the final score, while the same gap in the general organisation causes a 6·6-point difference in the final score.

The content of the written essays was thematically coded by the MS Word colouring method according to the argumentation categories – claim, evidence and rebuttal. This thematic coding was reviewed by a co-evaluator to establish inter-evaluator reliability, and reach agreement when disagreement was detected. Specifically, in the scoring process from the pre-test to post-test II, the process for agreement between two evaluators was operated to confirm a coherent judgement based on the scoring rubric and resolve relatively large differences in the initial scores of each student. Until the final stage of scoring, two evaluators double-checked the initial scores given by the other and detected any large discrepancy in scoring between the two. For essays with low agreement, evaluators discussed them, re-applying the scoring rubric, which is called 'after operational scoring' (Boyer, 2020). As this negotiation process for correction ultimately enhanced

evaluative coherence in the final scores, scoring during training and monitoring helped to mitigate the possible impact of evaluator inaccuracy in assessment scoring (Boyer, 2020).

4.5.2 Analysis with SPSS

For all the analysis of the statistical results based on pre- and post-tests, IBM SPSS version 25 was operated for this study. Firstly, an Independent Samples t-test was conducted to compare the means and standard deviations of two groups in order to confirm no statistical difference in mean between the two groups established in the allocation phase.

After scoring both two post-tests, Pearson's Correlation Coefficient analysis was conducted to investigate the level of inter-evaluator reliability. In addition, for testing for normality, skewness and kurtosis ratios were calculated to determine whether sample data has been drawn from normally distributed data.

As an initial stage of the statistical analysis, descriptive statistics were used to summarise the characteristics of a collected data set, looking at the general trend of mean score changes in the control and intervention groups from pre-test to post-tests. In order to investigate the effect of the digital instruction in English argumentative writing on argumentation proficiency development and its retention—the differences in writing scores of both groups were analysed by a linear mixed-design ANOVA with SPSS. The mixed model approach to analysing repeated measures is to test for differences between two groups where all participants were measured on each variable, a between-subjects variable (group) and a within-subjects variable (time). For the descriptive statistics and the linear mixed-design ANOVA, the average score of each evaluator's result on each essay written and submitted by each participant at each point of testing was used.

4.5.3 Analysis with Thematic Codes

Qualitative data collected from student and teacher/developer interviews and evaluator the narrative essays of students were transcribed and analysed based on specific thematic codes to explore learners' attitudes toward and opinions of the instructional design and e-learning environments for developing argumentation. The views of teachers and developers

on argumentation and/or on the instructional design of existing issues and better modification was also analysed using categorised thematic coding to highlight relevant concepts. The thematic text analysis is considered to be effective in discovering, interpreting and analysing complex meanings in data sets (Greg, 2012; Gibbs, 2007; Saldana; 2013).

To prevent newly recognised or captured themes during interview sessions being forgotten or lost, analytic notes and summaries were written while interview sessions were held for qualitative data collection. This is because preliminary analysis can be effective and efficient for the later data analysis phase even though all the audio of all interviews was recorded. It is good to 'jot down any preliminary words or phrases for codes on the notes, transcripts, or documents themselves, or as an analytic memo or entry in a research journal for future reference' (Saldana, 2013, p. 17). These in-interview notes were reviewed and then used to create an initial set of codes prior to qualitative data analysis.

To analyse student and teacher/developer interview data and student narrative essays, a set of codes was created and applied during the actual analysis as below, meaning that upper categories are themes and lower categories are codes. While analysing quantitative data, newly noted themes went through a process of codifying, including the creation of a new code or subcode and subsumption in one of the current codes (Gibbs, 2007; Lewins & Silver, 2007). A list of thematic codes that were used for qualitative analysis is presented in Appendix 9.

4.6 Ethics

Before this study was conducted, the possible ethical issues were considered in detail and approval was sought from the Institute of Education (IOE) ethics committee. To recruit participants, my research proposal illustrated the necessary procedures, and a syllabus of my research study was submitted to an assistant professor of the department at the Department of Foreign Languages at Seoul National University of Science and Technology, to be shared with the administrative officers there.

The administrative officers of the University agreed that I would officially run English argumentative writing courses for their student volunteers, a series of non-credit English

sessions with no tuition fees, administratively arranged and supported by the Department of Foreign Languages. Once the agreement for conducting this study was in place, the targeting issue was discussed in depth in order to establish who and how to select as participants for my study. This is because it was appropriate to consider the general level of English of the students of English courses which are officially run for credits each semester, and to enhance their intrinsic and/or extrinsic motivation to learn English. After reaching an agreement on the curriculum moderation and classroom management between the department office and me, I was allowed to open my own course and recruit volunteer students for this study.

From the beginning of this study, it was made clear that an English writing class would be opened which would be part of a PhD research study. Also, it was announced that this class would be run by either classroom attendance or online participation, and how to perform their writing tasks would be explained in detail later. Even in the student recruitment stage, participants were explicitly assured that all information collected from them would be dealt with confidentially. For example, an official notice on the general procedure, the necessary time and possible benefits of this writing course, including opportunities for free peer and teacher feedback on their argumentative essays and valuable practice for the English as a foreign language (EFL) writing test, was posted in online and offline bulletin boards of the Department of Foreign Languages.

In addition, student participants were provided with full information about this study to promote informed decision making. Firstly, the pre-test and the orientation schedule were announced to the students who undertook the pre-registration stage. Before the pre-test started, they were provided with booklets including a consent form, a detailed guide on ethical issues addressing how their data would be confidentially and carefully treated during this study, a course syllabus with the task for each stage, an outline of the general processes for the control and the intervention group, tentative schedules with the anticipated time required for the writing course.

Also, before the pre-test, a brief session to present and explain these materials followed to assure a chance to re-consider and refuse to participate. At the same time, it was also

explicitly explained that the general procedure and course materials would be the same for the two groups and that participants would attend either a face-to-face class or an online class. In addition, it was clearly explained that they would have the right to drop out of this course whenever they decided to stop attending. These two key points were also clearly stated in the course guide, and they were allowed to keep and refer to all the booklets given to them in the pre-session. Then, informed consent to attending writing and interview sessions with agreement on the use of their data was obtained from all participants if they decided to continue to participate. After the pre-test, the notice of the group assignment was given, and the next step of how to attend each class was announced to each group.

As a significant ethical point here, it is not likely that the control group would have an unfair disadvantage or receive less benefit than the intervention group in this study. Since participants were divided into two groups based on their writing proficiency assessed in the pre-test, the control group and the intervention group, their preference for the learning environment, whether face-to-face classroom sessions or online sessions, could not be considered. In addition, the control group with face-to-face classroom attendance might experience inconvenience in attending at a specific time in a specific place. However, in the sense of quantity and quality of the tasks, it is hard to say that either group would receive more benefit than the other because all followed the same procedures, undertaking the same tasks and receiving peer and teacher feedback on the essay development stage in the quantitative study.

However, at the time of the design of the quasi-experiment, the merits of either educational setting were not known. The best possible way at that stage was to develop an environment where participants would be able to give well-informed consent. Moreover, a possibly reasonable interpretation of their full and voluntary attendance in the midst of their tight academic schedule is that they recognised some beneficial outcome of their attendance in either of the two types of classes and therefore decided to continue until the end of the course. The statistical findings, which will be fully discussed later, also support the fact both groups saw improvement in argumentation and long-term retention. In addition, the findings from the qualitative data indicate that the online group students even recognised the possible benefits of face-to-face writing sessions, although they preferred online writing

sessions. Among them, some students explicitly mentioned that face-to-face sessions would have more positive effects on some aspects, such as greater punctuality and responsibility for collaborative work.

To prevent enforced responds in the interview sessions, intervention group participants and instructors/e-developers were free to refuse to answer any questions to which they did not want to respond. Also, the written reflective narratives allowed intervention group participants to avoid anything they did not want to talk about. Of course, the dual role of teacher and researcher could have had an impact on students' responses in interviews and review essays (Clark et al., 2020; Galloway, 2017). Prior to each interview, and in each notice on reflective narrative essays, students were assured that the most honest and direct reviews would be the most helpful and valuable data for a researcher. Also, it was reiterated that their responses would be confidentially treated and saved only for academic purposes in this study.

Especially, the guarantee of their free decision to participate, before, and even after the start of, the writing course, can be supported by the fact that the total number of participants gradually decreased from the recruitment phase to the end of this writing course during the semester. Around half the number of participants who completed the pre-registration did not attend the pre-test session. Then, a small number of students who completed the pre-test decided not to attend the first session of the offline or online writing course, and, again, a few more students dropped out in the middle of the course. Also, to consider their academic schedule and reduce any potential harm to their studies, part of the schedule of this study was negotiated, re-arranged and re-announced when a majority of participants called for changes.

4.7 Limitations

Although a variety of considerations on the general design and the detailed settings of this study were carried out, there may be some possible limitations in this study. Firstly, the results of this research study should be confined to the specific participants in the Seoul National University of Science and Technology, which may be different in quantitative and

qualitative data on the instructional design used from other students in the university or other universities in South Korea.

Secondly, it is necessary to conduct the quasi-experiment used in this study on a larger group of participants for better reliability. The sample size of this study is 44 students, which may reduce the effect size. It is widely understood that a large sample size is more reliable because the effect size is less biased toward the sample size. Therefore, conducting this study with a larger sample size will increase the possibility of finding a statistically significant result.

Thirdly, this study only had one offline group and one online group, all of which were based on the same basic course design for argumentative writing. This study had results of one pre-test and two post-tests on the two groups, without a test-control group. Therefore, the results cannot verify whether any improvement was attributed to a test-practice effect.

Fourthly, the outcomes generated during the quantitative study could be affected by other independent variables such as other English courses which students were taking at the university or privately. The focus of this study is argumentation and how it improved, which is not widely taught in South Korean universities. However, a student reported that the writing course in this study complemented another English writing course that she attended in the same semester, providing a synergy effect.

Fifthly, this study was performed as a non-credit, voluntary course, though supported by staff and the administrative office of the university. Official course settings are more likely to enhance the motivation and participation of students who are eager to get better grades at the end of a semester, of course, which might reduce the number of no response or early leavers before the end of the study.

Sixthly, the use of *Scholar* might discourage participants from actively participating in feedback sessions because the operational speed in *Scholar* was generally slow, especially on Internet Explorer, and, only very occasionally maintenance work was carried out during the daytime in Korea, in which is the peak time for online users in Korea. (*Scholar*'s domain

is located in the US, operating in a different time zone.) In addition, the general size of letters on Scholar is much smaller than those on web-based learning environments in Korea, which might reduce its readability. Moreover, due to time limitations, participants could not fully learn every detailed function of *Scholar* before the main research study phase started.

Seventhly, different analytical findings on quantitative data might be generated if different types or categories of analytical features in rubrics on arguments are applied. As explained above, evaluative criteria for this study were based on the Toulmin model, but categorical elements of evaluation for pre- and post-test comparison were modified according to the needs and interests of the researcher.

Eighthly, all the participants should take part in one-to-one interview sessions to collect more candid, detailed and enriched feedback from them. Of course, individual interviews can be conducted under time constraints, and the possibility of a long time or higher pressure on responses may increase the rate of non-attendance of participants. To minimise the potential side effects of co-interviewees, interview sessions were reorganised and made up of different interviewees. However, it was possible that an individual participant may be influenced by other participants in small group interview sessions, which can lead to reluctance to be open or share sensitive episodes, or to having a lack of confidence in their own opinions.

Ninthly, this study has the nature of classroom-based research since a teacher played the role of a researcher at the same time. This situation could discourage participants from producing frank and straightforward reviews on the writing course that they had attended. From the beginning to the end of this study, participants were regularly informed that their data would be treated confidentially and their honesty would be welcomed. However, it might be still possible that participants were aware of the teacher-researcher in interviews and narrative reflection, and provided superficial and simple answers as an avoidance strategy, adjusting the intensity of their criticism or focusing on the advantages rather than the disadvantages of the writing course studied here.

Chapter 5 Results

This chapter analyses and identifies both the quantitative and qualitative data collected in this study. Based on the main research question: 'What are the reported effects of digital materials development for instruction in English argumentative writing for university students in South Korea?', four sub-questions were formulated: 'What are the effects of e-learning intervention on argumentation for learners?'; 'What are the effects of e-learning intervention on learners' retention for argumentation?'; 'What are the learners' attitudes toward and opinions of the used instructional design and e-learning environments for argumentation?'; and, 'What are the views of specialists in English education on argumentation and/or on the instructional design of existing issues and further modification?' The first subsidiary question is answered using quantitative data analysis, and the rest are answered using qualitative data analysis. Based on each of the data analysis methods, the findings are explored in this chapter.

5.1 Argumentative Writing Samples of the Participants

This section is to illustrate what and how student participants of this study performed throughout the writing course for English argumentation prior to the detailed analysis of quantitative and qualitative results. All the student participants were asked to complete 5 English argumentative essays in total: one essay for Pre-test, three essays during the writing course, one essay for Post-test 1 and one essay for Post-test 2.

As the participants of the control group and the intervention group were asked to undertake a sequence of writing processes in this study, they created and submitted a final essay for each given topic. The final essay of each student writer was evaluated and scored in accordance with the individual criteria of the rubrics presented in 4.6 Analytic Methods. A set of argumentative essay samples for Writing Topic 1, which a participant in the intervention group created per writing stage, including essay samples of pre-test and the two post-tests of the same participant, are as in Appendix 10.1.

First, among the argumentative essays generated by 'Student A' from the pre-test to the post-test 2, it is evident the student showed improvement in the level of argumentation

structure, especially in body paragraphs, using more detailed and sequential logical connections between supporting sentences to support the claim sentence. Of course, students were allowed to create all the drafts with no time limit during the writing course in this study, which means they were able to develop longer and more detailed essays with the aid of English dictionaries. However, it should not be overlooked that using dictionaries and no time limits alone cannot lead to developing the quality of argumentation in essays, especially the levels of clarity, relevance, coherence, and so on in the logical flow, which often require writers to develop specific knowledge and practical skills about the reasoning process for writing.

The level of improvement in argumentation can be investigated via the assessment, as shown in the analysis examples, below. Setting aside the differences in length, 'Student A' presented more diverse and illustrated evidence in the three drafts created during the writing course in this study, as well as the two post-test essays, compared with the pre-test essay. The student used more developed *ground*, *warrant*, and *rebuttal* to secure logical connections sentence by sentence in the two body paragraphs with concrete explanations and illustrations. On the other hand, the pre-test essay indicates this student knew basic organisation/structure of argumentative writing, generating sequenced paragraphs from the introduction to the conclusion, using ordinal adverbs and presenting the connection of claim-evidence with short and vaguely supporting sentences.

In addition, as the writing course started and its drafting stage advanced during the writing cycle for Topic 1, then comparing the three drafts created by 'Student A', it is apparent the student developed the quality of argumentation with clearer and stronger logical elements between the claim and its evidence. Of course, grammatical errors and awkward expressions were also reduced from the first draft stage to the last draft stage with self-, peer-, or teacher reviews. The examples of analysis regarding the level of argumentation in the essays created by 'Student A' in the intervention group are in Appendix 10.2.

5.2 Quantitative Analysis

This chapter analyses and identifies both the quantitative and qualitative data collected in this study. Based on the main research question, 'What are the reported effects of digital

materials development for instruction in English argumentative writing for university students in South Korea?', four sub-questions were formulated: 'What are the effects of e-learning intervention on argumentation for learners?'; 'What are the effects of e-learning intervention on learners' retention for argumentation?'; 'What are the learners' attitudes toward and opinions of the used instructional design and e-learning environments for argumentation?'; and 'What are the views of specialists in English education on argumentation and/or on the instructional design of existing issues and further modification?' The first subsidiary question is answered using quantitative data analysis, and the rest are answered using qualitative date analysis. Based on each of the data analysis methods, the findings from each analysis are explored in this chapter.

5.2.1 Preliminary Test of Normality and Interrater Reliability

As an initial stage of the quantitative analysis, it is necessary to test for normality to determine the measures of central tendency and statistical methods for data analysis. In addition, considering there were two raters who participated in scoring students' essays, interrater reliability analysis should be conducted to investigate the consistency of assessment decisions between the raters.

5.2.1.1 Normality Test

A preliminary test was conducted to check the assumption that the data collected in this study were normally distributed. To investigate normality, descriptive statistics, such as skewness and kurtosis, were used in SPSS. First, the results of the normality test with the pre-test scores are below:

Table 6: Results of the normality test with pre-test scores

Group	N	SD	Skewness		Kurtosis	
			Statistic	Std. Error	Statistic	Std. Error
Control	22	18.233	.753	.491	-.359	.953
Intervention	21	17.905	.765	.501	-.480	.972

The descriptive analysis above indicates that the normality hypothesis held for the two groups, with each ratio between -2 and 2 (for the control group, skewness= 1.534, kurtosis = -.376; for the intervention group, skewness= 1.526, kurtosis= -.493). Thus, the assumptions regarding normal distribution were met for the independent t-tests.

In addition, the normality test for Post-test 1 and Post-test 2 was used to check whether the two datasets were normally distributed. The test results for the control group and the intervention group are as follows:

Table 7: Result of the normality test with two post-test scores

Group	Test	N	SD	Skewness		Kurtosis	
				Statistic	Std. Error	Statistic	Std. Error
Control	Post 1	22	15.315	.813	.491	1.032	.953
	Post 2		17.811	.427	.491	.351	.953
Intervention	Post 1	21	15.518	-.528	.501	-.442	.972
	Post 2		17.240	-.371	.501	-.671	.972

The two datasets of the control group hold the normality assumption as for each ratio, for post-test 1, skewness = 1.655 and kurtosis = 1.082, and for post-test 2, skewness = .869 and kurtosis = .368. The two datasets of the intervention group also meet the normality hypothesis based on each ratio, for post-test 1, skewness = -1.053 and kurtosis = -.454, and for post-test 2, skewness = -.740 and kurtosis = -.690.

5.2.1.2 Interrater Reliability Test

To investigate the level of agreement between the two raters in this study, interrater reliability was assessed. The intraclass correlation coefficient (ICC) was assessed using statistical analysis to identify the relationship between the two test scores in each test from the pre-test to post-test 2. As explained in Section 4.6.1 Scoring Framework, the initial scores of the two raters underwent an adjustment process between the raters before all the

scores were finalised. These were used to measure the extent to which the two raters agree. The table, below, contains the Pearson product-moment correlation coefficient, which is Pearson's correlation coefficient (Pearson's R) for short.

Table 8: Pearson's Correlation Coefficient results between two raters (N=43)

			Rater 1		
			Pre-test	Post-test 1	Post-test 2
Rater 2	Pre-test	Pearson's R	.989*		
		Sig. (2-tailed)	0.000*		
	Post-test 1	Pearson's R		.998**	
		Sig. (2-tailed)		0.000	
	Post-test 2	Pearson's R			.999**
		Sig. (2-tailed)			0.000

**. Correlation is significant at the 0.01 level (two-tailed).

The analytic results of ICC display highly strong associations in the scores of all three tests. Pearson's correlation coefficient is .989 for the pre-test, .998 for Post-test 1, and .999 for Post-test 2. Considering that the closer the value of r to +1 or -1 the less variation there is between data points, each of the r values for the three tests means there is no variation between the two raters in writing. Furthermore, each test has a significance value of p=0.000 at the 0.01 significance level, which verifies that the correlation in writing test scores between the two raters is statistically significant. As a result, the statistical analysis correlation between the raters indicates a high level of similarity in the test scores.

5.2.2 Group Allocation by Pre-test

As an early stage of group formation, it was important to investigate whether there was any statistical significance between two groups: the control group and the intervention group. Before the writing tasks started, an independent samples t-test was performed to compare the mean scores for the two groups, which were randomly allocated: the control group and the intervention group. First, the null and the alternative hypotheses are formulated as follows:

H_0:   *There is no difference between the mean scores of the English writing of the two groups.*

H_1:   *There is difference between the mean scores of the English writing of the two groups.*

This test was to identify whether to accept the null hypothesis that there is no difference in the mean scores of the English argumentation between the two groups at the beginning of this study. This investigation was to guarantee that the two groups would start with student participants who had the same level of English writing proficiency across a variety of writing criteria, which were assessed based on the widely known and traditionally used analytic writing assessment rubric, ESL Composition Profile by Jacobs et al. (1981).

As shown in the table, below, the statistical results of an independent samples t-test indicate each mean of the control group and the intervention group (Mc =49.38462, Mi =49.80769), SD =12.61056, t(49.851) =-0.124, p =0.661, 95% CI. The t-test results show there is no statistically significant difference between the two groups, accepting the null hypothesis.

Table 9: The results of an independent samples t-test for the control and intervention groups

Group	N	Mean	SD	Levene's Test for Equality of Variances		t	df	Sig. (p < 0.05)
				F	Sig.	Equal variances not assumed		
Control	26	49.384	12.610					
				.195	.661	-.124	49.851	.902
Intervention	26	49.807	11.939					

Although the table above shows that each group started with 26 students, some of the students in each group (four in the control group and five in the intervention group)

officially dropped out of the writing course for this study half-way through or stopped participating in the rest of the tasks at a point with no further notice. Finally, 22 participants of the control group and 21 participants of the intervention group fully participated to the end.

Losing some of the initial participants already allocated to the groups meant it was not possible to control the initial balance in number and level between the two groups to maintain statistically no difference between the groups from the beginning. In other words, that a different number of the original student participants in each group randomly left early might have caused differences between the two initial groups. In such cases, it is necessary to identify whether there is any statistical difference between the two groups when the early leavers are excluded. To investigate any difference between the final two groups, the scores generated by the argumentation scoring rubric for the pre- and post-tests using the Jacobs et al.'s (1981) ESL Composition Profile, which is one of the most widely used evaluation frameworks with rating scales in writing, as introduced in Section 4.5.2, was only used for the initial group allocation before the writing course in this study actually started. According to the new assessment criteria, the null and the alternative hypotheses should be changed as follows:

H_0: *There is no difference between the mean scores of the English argumentation of the two groups.*

H_1: *There is difference between the mean scores of the English argumentation of the two groups.*

As presented in Table 10, below, the results of an independent samples t-test for the pre-test scores between the control and the intervention groups are as follows: (M_c =42.5955, M_i =41.0238), $t(40.964)$ =-.285, and p =.777, 95% CI. The analytic results of the pre-test for the evaluation by the argumentation rubric reveal there was still no statistical difference in the means between the two final groups. Therefore, the null hypothesis that there is no significant difference in the mean scores of English argumentation between the control group and the intervention group is still accepted.

Table 10: The results of a paired sample t-test between the pre-test scores of the control and intervention groups

Group	N	Mean	SD	Levene's Test for Equality of Variances		t	DF	Sig. (p < .05)
				F	Sig.	Equal variances not assumed		
Control	22	42.595	18.233					
				.016	.900	.285	40.964	.777
Intervention	21	41.023	17.905					

5.2.3 Changes in Argumentation

5.2.3.1 Descriptive Statistics

To investigate the effects of an e-learning intervention on argumentation for learners, the statistics analysis begins with descriptive statistics to capture basic information about variables in a dataset and to highlight potential relationships between variables, determining the measures of central tendency and dispersion with graphical representation. Regarding the pre-test and post-test 1 scores between the control and intervention groups, the mean scores of each group all increase, specifically, by 39.06364 for the control group and 43.72381 for the intervention group. In addition, the mean scores of the two groups between the pre-test and post-test 2 all drastically rise: 38.31364 increase for the control group and 44.94762 increase for the intervention group.

Table 11: The results of descriptive statistics of two groups

Test	Control (N=22)			Intervention (N=21)		
	Pre-Test	Post-Test 1	Post-Test 2	Pre-Test	Post-Test 1	Post-Test 2
Mean	42.595	81.659	80.909	41.0238	85.938	85.971

SD	18.233	14.670	15.64797	17.095	12.826	14.820

Comparing the degree of improvement between the pre-test and post-test 1, the mean score growth of the intervention group is relatively greater than that of the control group, which means the mean of the argumentation scores of the control group increased by 39.06364 points, and that of the intervention group by 43.72381 points. In addition, regarding the mean difference between the pre-test and post-test 2, the intervention group shows a higher increase of 44.94762, whereas the control group rose by 38.31364. Considering the overall trend of score changes across testing points, the line graph below shows the different level of increases and/or decreases of the two groups at each point of testing. Although the mean score of the intervention group was slightly lower than the control group in the pre-test, it surpassed its counterpart in post-test 1. After a semester, although the mean score of the control group decreased, the intervention group increased a little, widening the gap to its counterpart in post-test 2.

Figure 13: Trend in score changes of groups across testing points

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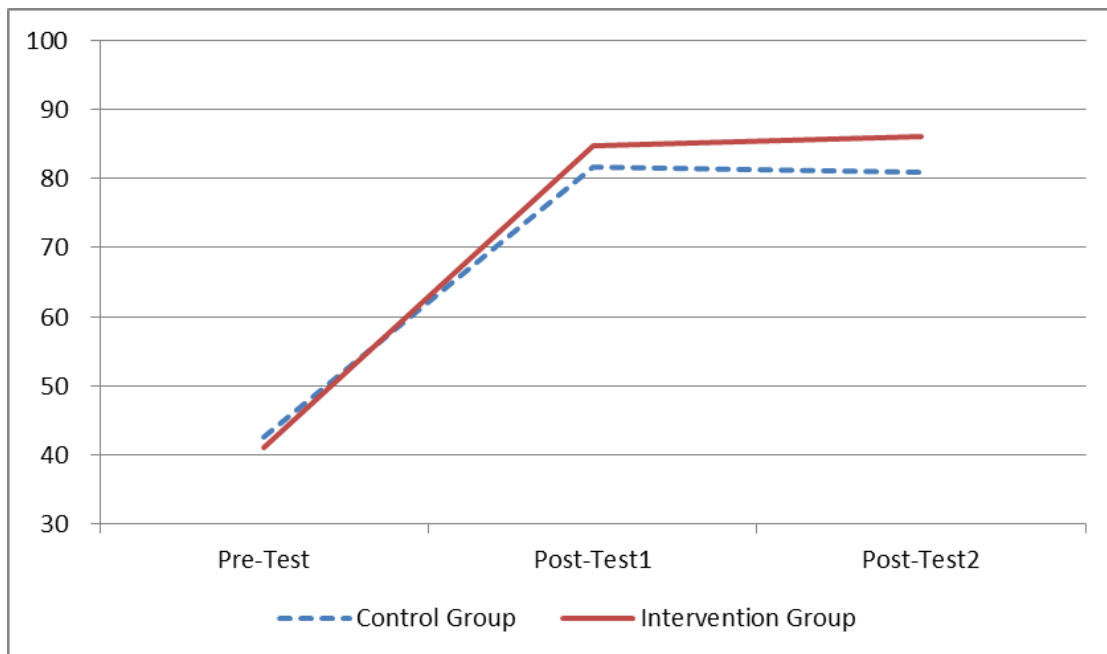
5.2.3.2 Mixed-Model Design ANOVA

To investigate the effects of e-learning intervention on argumentation for learners, it is necessary to examine the development of students' argumentative writing over time. The experimental condition of this study involved two types of variables: 'group' and 'time'. In this study, the difference in groups (the control and intervention groups) is a between-subjects variable, and the difference in testing time for post-test 1 and post-test 2 is a within-subjects variable. Of the two variables, there might be an interaction between the within-subjects variable (time) and the between-subjects variable (group). Therefore, a mixed-model design ANOVA was conducted to compare the mean differences in writing scores between the two groups across the different testing times, and to understand whether there is an interaction between these two factors regarding the dependent variable. As such, the null hypotheses are as follows:

$H_{0-1:}$ There is no difference in English argumentation score means between the control group and the intervention group at any testing time.

$H_{0-2}:$ There is no interaction effect between group and testing time.

For the mixed-model design ANOVA, the general linear model analysis was conducted using SPSS, and the results of the analysis are below. For all statistical analyses, the alpha level was $p < 0.05$, and partial eta-squared (η_p^2) was employed to measure effect sizes. As Cohen (1988) defined a range of values, η_p^2 values of 0.01, 0.06, and 0.14 were considered small, medium, and large, respectively.

Table 12: Differences in writing score by group and time: tests of within-subjects effects

		DF	F	Sig. ($p < .05$)	η_p^2
Time	Sphericity Assumed	2	252.606	.000	.86
	Greenhouse-Geisser	1.201	252.606	.000	
	Huynh-Feldt	1.248	252.606	.000	

	Lower-bound	1.000	252.606	.000	
Time x Group	Sphericity Assumed	2	1.276	.285	.03
	Greenhouse-Geisser	1.201	1.276	.272	
	Huynh-Feldt	1.248	1.276	.274	
	Lower-bound	1.000	1.276	.265	

The analytic results above show that the effect of time is statistically significant (DF = 2, F = 252.606, p = .000, η_p^2 = 0.86). This finding means there are changes in the students' writing scores in both groups over time. Thus, each writing course given to each group in this study aided their writing development.

In contrast, the interaction between time and group is not statistically significant (DF = 2, F = 1.276, p = .285, η_p^2 = 0.33). This analytic result reveals there is no statistically significant difference in argumentative writing development between the two groups according to each time point of testing. Thus, the finding indicates there is no significant overall effect of interaction between group and time. This result fails to reject the null hypothesis.

In addition, it is necessary to compare the mean differences between the pre-test and post-test1, and the pre-test and post-test 2. Therefore, a mixed-model design ANOVA was conducted via the general linear model analysis but only with the within-subject variable (time). The analytic results are as follows:

Table 13: Difference in writing scores by time: tests of within-subjects effects

	Pre-test & Post-test 1				Pre-test & Post-test 2			
	DF	F	Sig. ($p < .05$)	η_p^2	DF	F	Sig. ($p < .05$)	η_p^2
Time	1	309.901	.000	.883	1	242.229	.000	.855

The finding of the difference in students' writing scores in each testing point indicates it is still statistically significant for the improvement of scores in both groups when comparing argumentative writing scores between the pre-test and post-test 1, and between the pre-test and post-test 2 (for pre & post 1, DF = 1, F = 309.901, η_p^2 = .883 , p = .000; for pre & post

2, DF = 1, F = 242.229, η_p^2 = .885, *p* = .000). Furthermore, these results indicate that the students' writing development in post-test 1 was maintained in post-test 2.

5.2.4 Summary of Quantitative Analysis

There is evidence to suggest progress in mean score regarding the level of argumentation of the student participants in both groups (offline and online) when comparing before and after they attended the argumentative writing course in this study. Despite no statistically significant difference in the effect of interaction between group and time, the analytical results show that the control and intervention groups' improvement in argumentation scores at each time point of testing: post-test 1 and post-test 2. Furthermore, the results of the statistically significant difference at each testing time, comparing the pre-test and post-test 1, and the pre-test and post-test 2, indicate that the participants' retention for argumentation was maintained over the period of the two testing points. However, there is no statistical difference in argumentation development between the two groups. This finding might be related to some constraints embedded in this study. Primarily, one semester of the intervention of this study was probably too short to result in significant difference in argumentation development. Moreover, the participants of the intervention group may have needed more time to become familiarised with how to use the digital platform for their own writing and review exchanges. Based on the statistical findings that suggest statistically significant difference in argumentation between the pre-test and each of the two post-tests, the created digital instructional design for argumentative writing for university students in South Korea may have many positive effects on progress in argumentation as the traditional (offline) design.

5.3 Qualitative Analysis

This chapter explores all the findings from the qualitative data analysis: group interviews with student participants, reflective narrative essays of student participants, and interviews with experts who have taught or developed writing courses for university-level or adult students. Two sets of interviews with students were conducted with about a month's interval to identify and focus more on key issues and concerns generated in the first phase of the student interviews and to develop more in-depth discussions on the generated points

in the second phase. While many of their ideas might be repeated between the interview sessions and the narrative essays for reflection, it was anticipated that the repeatedly raised content would reinforce their attitudes toward and perceptions of the created instructional design of this study and reveal significant implications for teaching and learning argumentation, which should be seriously regarded in the planning, development, and management for argumentative writing courses.

5.3.1 Analysis of Student Data

This chapter explores all the findings from the qualitative data analysis: group interviews with student participants, reflective narrative essays of student participants. Students' narrative essays, which were a type of written review or personal diary collected from the intervention group, were analysed and incorporated into the student interview analysis. A reflective narrative essay sample that was written by a participant, which was thematically coded according to the coding scheme of this study, was suggested in Appendix 10.3.

5.3.1.1 Student Data Analysis for Each Stage

The data collected from student group interviews and narrative essays were divided into two categories: learning content and e-learning environments. Then, the data were analysed according to each writing stage of the instructional design of this research, and the relevant themes were integrated for comprehensive analysis. This approach was taken because each participant developed their thinking with different focuses. Each interviewee was labelled by *G(group)* and *S(student)* number, and each essay writer was encoded with a *W(writer)* number and then a *T(topic)* number.

5.3.1.1.1 Learning Contents

5.3.1.1.1.1 Orientation Stage

Regarding the question of usefulness and/or necessity of this stage to develop argumentative writing, all the interviewees but one in the first interview were positive about the orientation stage. Participants in the first interview evaluated that it helped them

understand the common structure and specific elements of argumentation for an overview of the logical development of writing.

- *1G1S2: I think it was helpful. I didn't know anything about logical structure like claim or warrant… I had no idea of them, and I used to write incoherent essays at first… Since I learnt them, I understand supporting details to back up the claim and additional details to support those details, too.*
- *1G2S2: After I learned argumentative structure in the orientation, 'Oh, what kind of elements are necessary in argumentative essays?' I learned these kind of things, I could see that my essays had developed as I wrote.*
- *1G4S1: This stage itself seems necessary. Rubrics are helpful to know how to evaluate others' essays and we unconsciously write our essays finding our focuses.*

One interviewee with a somewhat sceptical attitude toward this stage said it was difficult to apply fully what was taught in the orientation stage, and thus, could not recall later all the time, pointing out the short period of this course. However, most responded that they learned detailed components of argumentation for the first time; many had only been familiar with a simple set of topic sentence and its evidence. Furthermore, concerning rubrics in the first interview, they acknowledged that they learnt not only what to include in the process of constructing their logical elements for better coherence, but also how they would have to evaluate essays of peers or how their own essays would be evaluated by others, which made them more familiar with logical elements for argumentation.

In line with the needs for further assistance before actual writing, all the interviewees explicitly stated or agreed that the orientation stage in this writing course should be more emphasised or even extended for increased systematic and detailed instruction regarding what and how to apply logical and structural elements into their writing. The strong need for a more intensive or extended orientation stage was reconfirmed in the second interview. Sixteen of the 20 respondents in the second interview expected to have longer instruction with clearer and/or more detailed explanations regarding what to use in their writing. In particular, two participants thought it would be better to make the orientation period longer,

mentioning a deeper understanding of how to write argumentative writing and the second orientation session on frequently made mistakes or errors.

- *1G2S2: So I think the orientation stage should be operated to motivate students and make them responsible for their writing… It'd be good for you to manage it as a complete session and formally instruct students what we are going to do in this course and how meaningful activities are…like this.*
- *1G6S2: It is necessary to spend more time on contents (argumentative features and structures). They are new to us and it's not easy to fully understand.*

In addition to the need for a more intensive orientation stage and the necessary assistance or further activities they would like to have at this stage, all the interviewees in the first interview wanted good examples for them to refer to in their own writing process, so they could have more help to polish their essay regarding organisation templates and useful expressions for argumentative essays, or frequent grammatical errors in English made by South Korean students. Furthermore, the students with a relatively lower level of English writing proficiency were likely to need further help and preparation for their writing, as they explained in the first interview.

- *1G1S2: It would be good to present one completed essay as an example of good structure, which lets us understand how it should be written. And I made a lot of minor errors. (…) I made a lot of errors on conjunctions, so frequent errors? If they can be summarised and shown, we can understand them in advance then (things are going better) because some will continue making the same errors over and over.*
- *1G1S1: Later I found that common errors like using contractions and, what's that? Should not start a sentence with 'And' but I didn't know about that before. It'll be good to let us know about that. It won't take much time, I think…*
- *1G2S2: And the part of "hook" in the introduction, you know. I've heard that there're a variety of ways to do that, like using figures or social issues… I mean, if we learn some of them…because (I don't know much) what we should start essays with is the introduction…*

In general, respondents liked enriched materials and/or instructions on argumentative writing, so they could be more aware of logical flows and refer to or even copy good examples of a variety of assertive sentences and vocabularies. This point was especially because they were learning English as a foreign language, which means they generally had a lack of exposure to the English language itself, including English writing conventions. Seven interviewees in the first interview wanted to learn more in-depth rhetorical features, including how to develop attractive introductory paragraphs or sentences and incorporate counterargument paragraphs or sentences.

In addition to good examples mainly focusing on linguistic features in English, most of the students expected to learn more about genre-specific features of English argumentative writing. Specifically, other than additional support for rhetorical or linguistic features in English argumentative writing, more detailed illustrations on rubrics were thought to be the most necessary instruction in this orientation, which 11 respondents in the second interview mentioned. For example, a student suggested more instruction on optional ways of using rebuttals in paragraphs, which implies that students expected to see and learn how to apply each component of argumentation in their writing, with more practical examples presented.

- *1G2S2: When we write, rebuttals… we've never thought about them. But now we have to consider them… so how to apply rebuttals in writing? I mean, I tried using rebuttals and then attacking them once… Other times I tried putting rebuttals together in one paragraph and writing my thoughts on them… In various ways… If we learn various ways to apply them, it'll be better, I think. The ways to represent rebuttals more effectively and strengthen my contents at the same time? I've learnt some in previous classes, but they're just simple.*

The response to stylistic characteristics of the target genre was closely related to their further needs to acclimatise to the first rubric created based on Toulmin's argumentation elements. The students found some elements confusing when they started to distinguish and apply them to their first draft developments and the first peer reviews. More detailed discussions on Toulmin's argumentation element included in the first rubric are made later,

in Section 5.2.1.1.1.3 First Peer Feedback and Teacher Feedback, and the instructional points generated for the orientation stage are focused on here.

- *W10T1: We have talked about vagueness in the first rubric. It'll be better to explain the rubric itself in the orientation for our better understanding.*
- *2S3I4: I think more explanations on concepts between confusing elements in the rubrics are necessary for clarification. I remembered that I had learnt but I found I forgot in actual use later. I tried to read them again, but I found them confusing.*

For an enhanced understanding of Toulmin's argumentation elements included in the first rubric, the students recommended more practical opportunities for practice in the orientation stage. They often proposed an activity in which they could develop and evaluate one paragraph following the rubric. The students' responses indicate what to focus on more in the instruction of the Toulmin model in the orientation stage. The major difficulties in understanding Toulmin's argumentation elements were distinguishing between sequentially categorised components such as ground, warrant, and data, all of which fall into one broad category of evidence to support a claim.

- *2S5I1: I think clear explanations on rubrics are necessary. When we are well trained in them, we can provide better feedback and do better revision with feedback (from others). (…) It'd be good to show us good and bad examples of this.*
- *1G4S2: It'll be better to use more practical activities, not focusing on a formal lecture, for us to acquire actual use of them.*
- *1G4S4: It could be helpful to practise developing one paragraph with claim and warrant.*

Furthermore, in the second interview, more explanations on how to provide feedback were cited as the second-most necessary instruction by nine respondents, whereas four respondents disagreed on the need for feedback training in advance. This finding also shows they had a lack of experience in exchanging feedback in class, where they were just passive receivers of feedback, rather than active providers in a language learning environment. Despite their unfamiliarity with feedback production, the students directly asking for

feedback training may indicate they are willing to work as more active or influential participants, which is far from playing a passive role in traditional teacher-centred writing classrooms.

- *2S4I3: I hope that we could have more training in how to give feedback to others. In fact, we have learnt how to write in English in other classes, but I have never learnt how to offer feedback.*
- *2S4I2: I agree. I want to have explicit and concrete instructions on how to give feedback.*
- *2S5I2: It'll be good to offer us an example that shows our actual rubric was applied into providing feedback on a sample essay.*

Regarding content development, two interviewees said that a specific topic in this writing course, such as the third topic on privacy vs. right to know, was relatively difficult to understand or generate their ideas. They suggested that key points of each topic could be suggested when the writing topic is assigned, which might prevent them from developing off-topic essays. This viewpoint can also fall into the category of additional help for them to begin their own writing, which means other types of supporting material for better advanced preparations.

- *1G1S1: If a writing topic is not easy to understand, some develop their writing from different points of view. When I gave feedback, I was not sure if it's right to be developed that way. It'll be good to suggest key points of a topic. (...) Yes, things to make a topical point clearer?*

In addition to aspects relevant to argumentation or actual writing, one interviewee in the first interview stated she would like to master how to use *Scholar* in a hands-on practice session, so she would be ready to use it effectively. Respondents in the second interview also suggested more practical experiences with exercises and/or strengthened hands-on practice on *Almind* or *Scholar*, so they could be prepared before the first writing topic started. Specifically, three respondents in the second interview reported the need for further training in *Almind*, and two respondents suggested the need for more training in *Scholar*.

Although two respondents mentioned the need to practise brainstorming, 10 respondents disagreed, stating that brainstorming should be for the free generation of ideas or be optionally used if necessary.

Considering all the comments regarding the extra assistance for their writing in the orientation stage, such as activities, examples and models of argumentation elements, typical frameworks in paragraph/sentence formation, or useful expressions, these can be interpreted as an indirect signal they felt a high level of mental pressure or other barriers regarding linguistic proficiency and genre-specific knowledge. This situation might be because they seriously considered the state of readiness for creating decent essays in English, decreasing their level of anxiety about English argumentation and English writing itself. Therefore, they asked for more direct and specific input from the teacher for rapid progress in knowledge and practical skills for argumentative writing within a short period in class.

It might be difficult for students to have more time to perform exercises and familiarise themselves with English writing regarding arguments and the online learning environment before they write their own essays, which implies the possibility of traditional teacher-led classes rather than student-led, task-based ones. To avoid the high possibility of one-way lectures delivered by teachers, which is far from the process writing approach, teachers should develop more clear, specific, and representative models and examples to promote effective understanding of the abstract concepts of argumentation. Furthermore, a sound understanding prior to the writing stages should be directly transferred to the students' construction of sentences with logical flows. It is interesting that the findings show the interviewees often emphasised this orientation stage as much as actual writing stages, considering what they learn at this stage plays an important role in their writing in later stages. Given the tight schedule for allocating warm-ups per term, teachers should consider the high-value students place on this stage and plan a range of effective and efficient activities and instructional material according to the writing proficiency of the target students.

5.3.1.1.1.2 Brainstorming & First Draft Stage

Regarding the necessity and usefulness of brainstorming to develop argumentative writing, most of the interviewees in the first interview agreed that using mind-mapping as a brainstorming activity was necessary. Every interviewee except for three in the first interview stated that brainstorming was necessary before writing. Furthermore, 18 out of 20 respondents in the second interview agreed that brainstorming using mind maps was helpful, affirming the first interview.

- *1G6S1: Brainstorming is absolutely necessary because I need reasons. How to connect claim and evidence is the most important thing.*
- *1G6S2: I can make more coherent essays after I write, seeing and checking visualised materials with process and structure.*

However, two interviewees in the first interview said they did not mind if there was no brainstorming, and one in the first interview said he preferred not to use it. These three interviewees in the first interview were accustomed to generating ideas in their mind immediately before they started to write while they were thinking of their position and reasons. For the students not used to brainstorming before writing, a minority suggested the need for brainstorming practice in advance, or its specific need for longer essays and inexperienced writers.

- *1G2S1: I prefer not to use mind maps as well… I make them but I don't see them again, though.*
- *1G2S2: But in case of longer essays, mind maps seem to be necessary.*
- *1G4S5: Especially for beginner writers, brainstorming is necessary.*

Four interviewees in the first interview suggested that brainstorming could be optional, which was similar to the result of the second interview. Although 13 respondents in the second interview session thought brainstorming should be obligatory for all students, five thought it should be optional. One respondent in the second interview reported he had developed essays without this stage when he had a lack of time, such as for TOEFL writing. The positive respondents to brainstorming in the second interview reported that it should be

required because they were less likely to do optional activities. In addition, another four supporters of brainstorming in the second interview said it was helpful for them to save time in writing or to enhance the logical structure with prearrangement of their claim and supporting details. The findings show that most of the students valued the use of brainstorming, but a minority considered it a somewhat time-consuming activity and, therefore, had low dependence on it for essay development.

Interestingly, four interviewees in the first interview answered that some feedback on brainstorming or other easy options for brainstorming, such as outlining or listing, would be necessary to develop a better logical structure, which might help them to save time revising.

- *1G6S2: Topics can be offered only for practising how to do brainstorming. I hope I can have chances to practise it.*
- *1G6S1: I think the stage of outlining is necessary. It'll be better to have feedback on it.*
- *1G6S2: I've always done brainstorming and then developing the first draft as a sequential process. I think I need a stage to check my logical structure. The feedback on the brainstorming outcome is necessary as well.*

The ease and time-efficiency of brainstorming were found to be related to options; all 18 positive respondents to the brainstorming in the second interview reported they would like to choose their own style for idea generation – especially outlining or listing with keywords, which had been generally done in ordinary note-taking. Regarding modification of the mind-mapping in later stages of writing, only one respondent in the second interview reported she modified hers later, when she changed some of the content or general organisation in drafting, whereas all the other respondents in the second interview said they had never made changes to their mind map after the brainstorming stage was over. This finding shows that the types of brainstorming should be easy and simple, and students should be free to choose their favourite type, lowering their physical and mental burden for essay development.

The students' preference for brief brainstorming was related to the pressure regarding argumentation development in an essay. In other words, they were more likely to emphasise idea generation in their mind rather than materialisation through visual representation. This tendency often caused loose or underdeveloped brainstorming outcomes, compared with their production of an essay. Specifically, all the interviewees in the first interview reported that it took much time to generate ideas on topics, which was the most difficult part for them. In particular, generating and selecting supporting details were considered time-consuming. To reduce their burden, many learners were likely to choose their stance based on having more supporting details regardless of their actual position on a specific topic.

- *1G1S1: (…) In the first drafting stage, brainstorming was the most difficult. (Interviewer: Did it take somewhat a lot of time for brainstorming?) Yes… (Interviewer: Did it take a lot of time to grasp each topic?) Yes… (…) I have lack of knowledge of examples. Which examples to use…anyway I had to use them. And I had to prepare rebuttals even though my logic was not secure, so…it took a lot of time.*

Examining the outcomes regarding brainstorming that the two groups produced for the same topic, it was commonly observed that the intervention group produced more detailed and systematic mind maps than the control group. Therefore, the intervention groups were more likely to generate more extended and complicated mind maps comprising more sub-branches/nodes and boxes/bubbles of key ideas and supporting details. The findings from the student interviews and narrative reflection data show that some students still felt more comfortable with a traditional way of mind-mapping, with paper and pen. This tendency is further discussed in 5.2.1.1.2.1 Almind.

However, the online group that used digital graphic organiser Almind tended to create more developed mind maps even though they had to endure the inconvenience of running the digital application, clicking a mouse, and typing texts on the keyboard. In contrast, the control group was only required to create a mind map on paper prior to starting the first draft and bring it to class to share with peers and the teacher. Although the participants of the control group allowed peers and teachers to see their mind maps, they were generally

less active regarding sharing their own creation with their group members, mainly focusing on undertaking and then exchanging the first peer feedback task during class.

Directly comparing the products of the two groups, the following examples show mind maps for the same topic produced by one participant from each group. The students came from the same score band of the pre-test, which means they had the same level of English writing proficiency. As shown below, the intervention group's example presents a more structurally complex map than the control group's one, but both students developed two standpoints to use one of them for rebuttals.

Figure 14: **Example of mind maps of two groups**
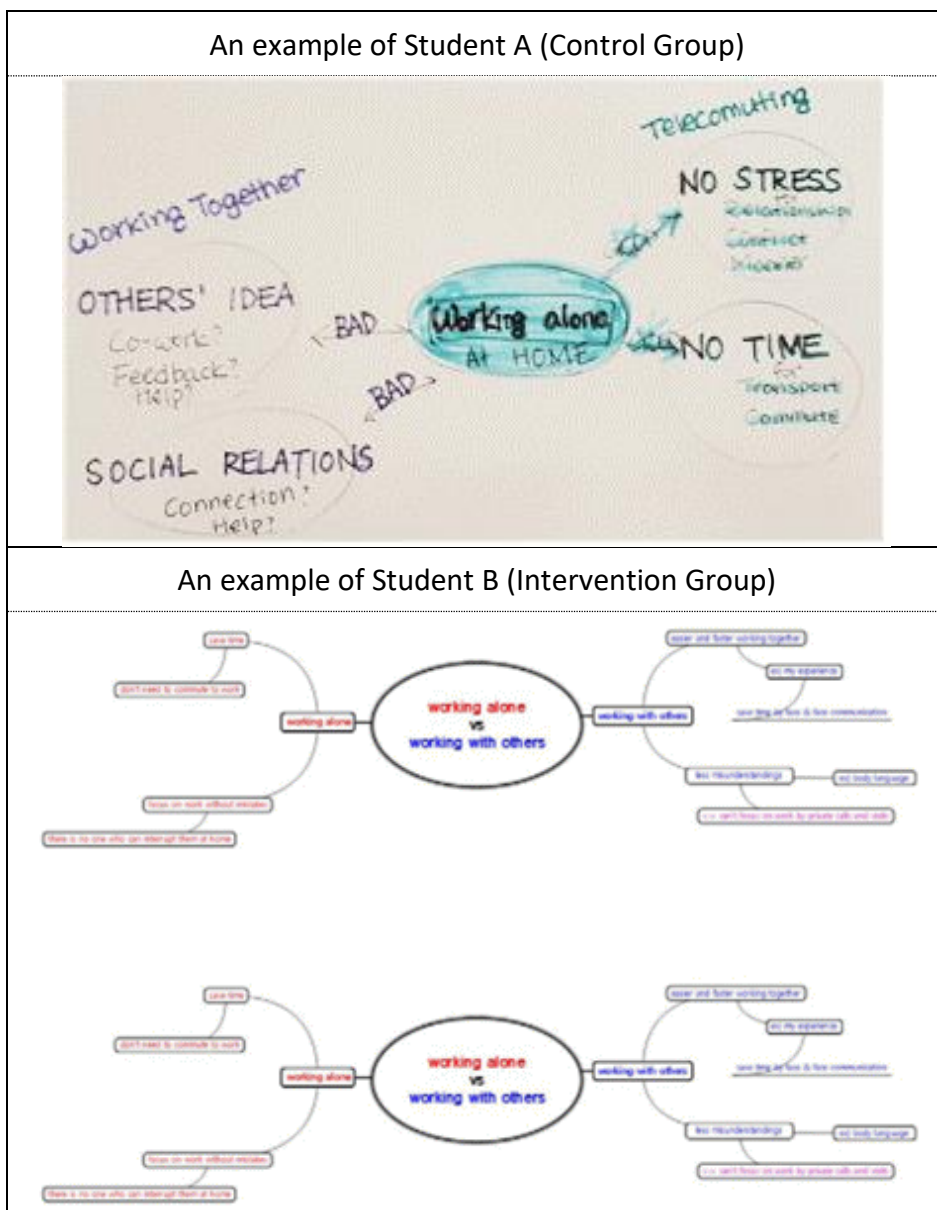
The intervention group had to post their mind map on the first draft writing panel on Scholar, and this condition could have encouraged them to develop the mind map further. This posting mission presupposed that the group members would definitely see the uploaded mind maps when they started reading their peers' first draft to undertake the first peer feedback task. This condition of 'being publicised to peers' could have had a greater influence on their task quality than their own curiosity of or interest in the new digital application. This interpretation is supported by the finding that the general attitude of the intervention group towards Almind was more negative than positive.

All the interviewees in the first interview agreed that the first draft was necessary. Since every participant submitted more than one draft of a topic, they felt this was inevitable. Regarding the necessity and usefulness of the first rubric, all the interviewees in the first interview judged the first rubric as being helpful in the sense that each category of it functioned as a detailed guideline to follow in the actual writing stage. More important, all participants in the first interview stated they seriously considered argumentative elements in the first rubric because they knew their essays would be evaluated based on them, and they would assess others' essays later.

- *W2T1&2&3: I think this Internet-based argumentative writing program helped me a lot. This was the first time that I wrote in English actively exchanging feedback through the Internet. With feedback of teacher and peers, I raised the ability to read my writings objectively and gained a lot of pieces of advice on how to write logically, so this was a good opportunity to learn many things although I spent a lot of time and effort.*
- *2S5I2: When I pointed out some in other's essay, I felt pressure on the same things because my essay would be assessed in the same way. That made me careful about the rubric elements in writing.*
- *W5T1: (In peer review) It's convenient for me to write in each category blank because rubrics were made up of required evaluative categories, which made me stop from writing comments disorderly. Also, when I wrote comments there, I*

thought that I would have to consider these assessment categories in my own writing.

Students' reviews on their own essays mean they were going to be higher self-monitors, sensitively reflecting and re-evaluating their own writing even during peer reviews, as well as during their own writing. The first rubric created based on Toulmin's argumentation components encourages students to develop clearer and more objective viewpoints of the assessment of argumentation quality with shared evaluation criteria, which could ultimately lead to higher credibility of the quality of peer reviews. This finding shows that the categorial elements of the first rubric played a significant role in developing logical coherence, encouraging the students to follow its procedural structure, although it was a little bit difficult to distinguish between two sub-categories, which are further discussed later.

In the first interview, the students said that the first rubric was helpful for them to consider argumentation elements in their writing, which helped them grow more accustomed to and be more aware of the logical structure of their essays. Furthermore, the findings of the first interview show the students considered the first rubric to be focusing on major issues in writing, such as organisational structure and general streams of content, to be effective and efficient because they could save time in revision as the stages proceeded. The results imply that the two-tier rubric system, from macro-level to micro-level reviews, helped students narrow their focuses when developing an essay.

- *1G2S4: What I liked is… When we did the reviews, the first focus is different from the second focus. We focused on the structure in the first review and then on other things like the spelling in the second review. Actually, when I attended previous classes, I was confused because I did every review work all at once. But we could only focus on the divided review criteria this time…well, it's better for me to see each focus only.*

Although the first rubric was reported to encourage the students to develop their logical structure more easily, all the respondents in the first interview stated they felt pressured to use every element of argumentative features in the rubric, which made them spend more

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time writing their first draft. In line with this tendency, many participants in the first interview expressed some level of pressure to use rebuttals to strengthen their logical structure because a category of rebuttals existed in the first rubric. This tendency was based on their anticipation of higher scores and more positive comments from peers and a teacher, which made them do their best to meet every element of the given rubric. More detailed discussions regarding this rubric issue are addressed in the next part of the first feedback.

- *1G2S1: I felt a little bit difficult… (…) I mean I felt like I should write according to the rubrics… (…) Just fit the rubric elements…*
- *W1T1: On the one hand, I got into my head, 'Am I too obsessed with rebuttals in argumentative writing structure?' Unexpectedly, I found some essays introduced rebuttals. I wrote to them, 'It'd be good to include rebuttals against expected counterarguments,' but I had a question about whether I needed to persist with rebuttals.*

Regarding supporting materials, such as a list of relevant vocabulary, matters of consideration, and articles, it was interesting that all the respondents in the second interview agreed it would not be good for them to have too much help from the beginning of developing their first draft. This point was generally because enriched input might discourage them from using dictionaries or searching for data relevant to their opinions, and instead just passively depending on the given materials from the teacher and developing essays similar to their peers. However, the students suggested a good timing for providing each supporting material. Five respondents in the second interview answered that all the supporting material might be given after the first drafting stage, whereas three respondents in the second interview did not want any extra material from the teacher. Those who did not consider some additional support necessary in this stage stated that it would be better for them to search for necessary things on their own because writing their own essays was an independent work.

- *2S2I3: I think it will be helpful for me to build up my first draft on my own without thinking of other things.*

- *2S3AlI: Once I can write my own alone, and then materials can be given later. With too much help, all of us are going to copy and use them, I think.*

In contrast to the low preference for the provision of reading materials, some linguistic help was relatively preferred at this stage. Regarding a vocabulary list, six respondents in the second interview clarified that they would need it after this stage, whereas four respondents in the second interview wanted to receive it right before this stage. Only one respondent in the second interview said he did not need a vocabulary list. In addition, four respondents in the second interview said a list of grammatical errors frequently made by Korean students would be helpful, and two respondents in the second interview asked for reading material or online links as their possible references. Those who wanted more help with grammar or ideas in developing content at this stage wanted to save time and effort in proofreading or revision in later stages or, sometimes, to reduce the possibility of rewriting the entire content.

- *2S5I1: It will be good to receive a list of frequent errors when a topic is completed. I am surprised at my errors and find out what was wrong in reading it. This can help me to learn something. It was helpful to read it again.*
- *2S6I1: It's better to receive a list of vocabulary in the first drafting stage. It'll take more time in revising errors later. So it'll be good to select what we need (in this stage).*

In general, although students expected brainstorming to be mandatory, the findings show that more options for brainstorming types should be offered to students for them to use their favourite and familiar one with less time and effort. Furthermore, the students expected to have more linguistic help, rather than reading resources, to develop content in this first draft stage, which indicates that lack of English proficiency is a major barrier to them creating a new essay. Regarding the first rubric focusing on general organisation, structure, and logical flows, the students tended to take its categorical elements seriously and include all of them in their first drafts, considering it to be a practical guideline to follow in writing.

5.3.1.1.1.3 First Peer Feedback & Teacher Feedback

All the participants except for one in the first interview said exchanging the first peer feedback was helpful. Respondents in the first interview stated they seriously considered and applied peer and teacher feedback in the revision of their essays, referred to the first rubric, and thought about what to focus on in feedback.

- *1G1S2: It's good to divide into two feedback stages because I had to rewrite my first draft after reading the first feedback anyway. And what we did at first is somewhat…correcting major errors, not minor ones. In the process, we can additionally correct minor errors as well. Through this process of another correction, we had fewer errors to comment on in the second feedback. So that's more efficient.*
- *1G4S2: I could be aware of the main focuses here all the time because I tried to give feedback to others considering them.*

Furthermore, in the second interview, 16 out of 20 respondents reported that peer feedback was helpful, while the other respondents mentioned nothing on this. For example, one respondent in the first interview suggested it was necessary to pay attention to various opinions to make one's opinion concrete; otherwise, one might believe one's opinion too much. This exemplary response shows that the student valued others' opinions regarding their essay development and was aware of the need for others' feedback.

In addition, 17 out of 20 respondents in the second interview stated that first feedback should be required because students would not be willing to offer first peer feedback if this became optional or skippable. Interestingly, all four respondents in one session of the second interview agreed that giving and receiving feedback was fun, and it would be better for them to have more group members for more review work at a time.

- *2S3I2: For full participation, our compulsory participation in peer feedback is necessary. And in the process of feedback, I learnt some like how my essay was understood by others… (…) Feedback is fun. It'll be okay to have more peers to review, for example, five people in a group or so?*

Although the first feedback stage was highly valued by respondents in general, a key prerequisite for the value of the first peer feedback was suggested in both interviews. In the first interview, all agreed the level of English proficiency of peers was basically important because good peer reviews with accompanying high participation and credible revision could provide valuable feedback to others. Specifically, all the interviewees in the first interview thought that the quality and the quantity of peer feedback depended on the level of English writing proficiency and the sense of responsibility of group members. Furthermore, two respondents in the second interview highlighted the importance of responsible and hard-working group members for exchanging useful feedback. In this sense, two respondents in the second interview explicitly mentioned that they had the benefits of useful feedback given by diligent group members.

- *1G6S2: If my peers tried to work hard to give me quality feedback, then it was effective. (…) Also, it was good to have other new opinions that I didn't get from teacher feedback.*
- *1G1S2: And people worked hard to give me good quality and quantity of feedback. For I was not a good writer, I didn't have many things to say to them. But my peers considered well and analysed one by one carefully and I was very thankful for it.*

The findings show it was difficult for relatively lower levels of student writers in English to indicate and comment on the weak points of the essays of the higher levels of student writers. However, the advantage was that the lower-level students had valuable chances to learn useful expressions written in better essays. Therefore, each feedback group comprised different levels of participants from low to high writing proficiency for collaborative learning. Moreover, students in the first interview responded that they referred to and applied peer and teacher feedback to develop their next draft. However, not all the feedback was accepted since they did not believe all the comments from their peers were accurate, and, therefore, they depended more on teacher feedback.

- *1G6S1: It's necessary (…) useful to receive others' feedback. But I was not confident in providing my feedback to others. I tended to be careful because I might give incorrect reviews.*

- *1G1S1: It was easier to give peer feedback to those whose level of English writing was lower than me, but honestly, I didn't have many things to offer to better writers, other than just saying there's no error. (…) 'This is how to present the meaning in English' I could learn and use it next time. But in terms of just peer feedback, that's not useful both to receivers and providers of feedback. I wanted to give some help but I couldn't find anything, so that's…*

The only participant with negative views regarding the first peer feedback in the first interview claimed that only the feedback from more advanced peers was useful, whereas feedback from those with a lower level of English proficiency was distracting. However, the feedback from others was generally considered relevant and effective; only a few students had experiences in receiving confusing, aggressive, or superficial comments from others.

The low level of reliability regarding the first peer feedback often resulted in a higher level of dependence on the teacher feedback. Seventeen respondents in the second interview acknowledged that they depended more on teacher feedback than peer feedback, saying that they read the teacher's more thoroughly and had high credibility regarding its accuracy. Although one respondent in the second interview stated he applied both teacher feedback and peer feedback in the same proportions, two respondents in the second interview said they carefully read teacher feedback but just briefly went through peer feedback. One respondent thought that peers could participate in providing first peer feedback more actively than the second peer feedback, which was a good chance for them to contribute to others' essays.

- *W3T1&2&3: When I gained both teacher and peer feedback, I definitely relied on teacher feedback. This is because I was wondering if they really read my writing when I got very low quality of peer feedback sometimes.*
- *1G6S2: It's necessary to exchange reviews because we are all writing on the same topic and are well aware of it. I more depended on teacher feedback for logical aspects, though.*

The credibility of peer feedback is closely related to group member assignment, which means whether similar levels of students are grouped together or mixing up different levels of students in a group. This issue was considered more serious in the second peer feedback than in the first, since the first made students focus on broader issues of a general framework and logical coherence rather than language and style issues.

Regarding the importance of the first rubric, five respondents in the second interview reported that they were carefully aware of the first rubric and it was helpful in this stage. Three respondents in the second interview stated they did not consider it in particular. Those who were conscious of the first rubric said they cared that their essays would be evaluated with the same assessment criteria when they provided peer feedback, which encouraged them to consider carefully the rubric elements when creating their essay to earn good scores from others.

- *1G1S1: But the rubric in the first feedback was really good. When I did writing, I found how to develop writing following it.*
- *2S5I2: When I pointed out some in other's essay, I felt pressure on the same things because my essay would be assessed in the same way. That made me careful about the rubric elements in writing.*

Although the value of the rubric was highly regarded, all the interviewees in the first interview agreed it was not easy to understand and that they were somewhat confused about the detailed categories in argumentation, such as ground and warrant. Thus, everyone in the first interview suggested that interrelated and detailed components should be combined for a clearer understanding and simpler evaluation. Detailed categorical elements in the rubric might be more complex than expected, causing the students to spend more time and energy struggling to score or comment on others' first drafts following each component of the first rubric. The findings in the second interview also confirm that most of the participants felt ambiguity regarding clear differentiation between sub-divided supporting components.

- *1G2S1: There're some overlaps, somewhat similar things between elements (of the rubric)… There's one and another… There're two or three grounds as evidence… They all seemed to be the same things, but I had to evaluate each element separately, so that's hard for me. (…) Our rubrics clearly present separate elements, so when I wrote the second draft, I was pressured to use every element mandatorily… That's why I couldn't write at ease.*
- *1G2S2: I think there're some overlaps between ground and evidence, a little bit… (…) Generally look similar, but slightly different…*

Although the first rubric was modified in advance and, finally, included fewer elements than the Toulmin model, the students still reported they felt confused with the sub-categories to support a claim, such as grounds, warrant, and data. This finding indicates the specific need for more explicit instructions on the sub-categorical components with broader categorical elements. The further moderation process may lead to far easier understanding and application of student writers when developing their own logic and providing feedback to others.

Regarding this issue, it is necessary to consider students' overall evaluation on the writing course in this study. In students' reviews, they specifically valued the opportunity to learn how to build a logical flow with specific elements in detail, which they had never learnt elsewhere. Some participants clearly mentioned that the Toulmin model, introduced in the orientation stage, helped them to write arguments. They added that explanations on building logical structure helped them to obtain better understanding regarding argumentation in the orientation stage.

- *W3T1&2&3: I think the writing model used in the orientation was useful. Especially, I thought explanations on warrants, showing how evidence could be evidence, would be extremely helpful in writing on arguments. This is because I used to think others could find somewhat logical leaps whenever I did English writing or any kind of writing. At a time like this, I can use warrants. The orientation session was too short, so it should be carried on more intensively, I think. Particularly, it seems good to write a short essay with the writing model and then have feedback to check if we*

have an accurate understanding of that. If we practise writing a short essay, using warrants or rebuttals, it will be much help for us to do our next argumentative writings and assess others.

Importantly, the finding that students had difficulties differentiating between elements also indicates they were active in applying each element of the first rubric into their own writing and peer reviews. Most respondents often mentioned they had tried to reread and think about each component suggested in the rubrics when they reviewed others' essays and wrote their own essays. The careful consideration of the students may mean the rubric plays an important role regarding practical guidelines for developing and evaluating the quality of argumentation in the students' writing. Consequently, the rubric with argumentation elements can help to raise student awareness of and sensitivity to how to build an argument between sentences throughout their writing process.

- *W5T1: The writing methods and evaluation criteria given in the orientation were helpful. Especially, it was interesting that I learnt both ground and warrant were necessary in giving evidence. In writing, I tried to use proper ground and its warrant clearly in the general flow because I knew that they were evaluated. But it's hard for me to distinguish the two categories from each other, and these were the most ambiguous in writing reviews to others. If these can be more clarified in the orientation, the next step will go smoother.*

In addition to difficulties regarding argumentation elements, the students suggested possible ways to enhance their understanding of the argumentation elements in the first rubric. Along with the need for more intensive instruction in the orientation stage, the need for Korean to be written first in the rubric was highlighted. Six respondents in the second interview pointed out that everything in the rubric should be described in Korean, so they could understand fully. Among the six, four interviewees confessed it was difficult for them to understand English descriptions in the rubric. In fact, categorical elements in all the rubrics were briefly explained in Korean, in addition to detailed explanations in English. This approach was to make the Korean language act as a quick and clear reminder. However, the finding indicates that some participants still struggled with clear understanding in separate

criteria, so they had to read the descriptions repeatedly in their own writing and peer reviews.

Furthermore, giving scores in each category was thought to be unnecessary by two interviewees in the first interview. Four interviewees said that they tended to be generous with grading essays of others, not to hurt others' feelings, which could result in low reliability of the scores given by peers. It was noticeable that the students preferred reading detailed written comments of others to checking scores they earned. This reaction was because they valued something practical to refer to in their next draft. In contrast, the remaining respondents in the first interview thought scores were necessary. One interviewee stated that checking the scores given by her peers was interesting.

- *W1T1: But I questioned whether the way of scoring is purely formal work. Personally, as I remembered, I only gave my peers 3 or 4 (out of 5 maximum). This is because I'm not that tight and I graded them 4 unless they are totally off-topic or hard to comprehend. If scoring is introduced, a clear standard or a way to use a checklist based on that, rather than scoring, would be better.*
- *1G2S5: To me, right after I got the first feedback was the most interesting. It's exciting to see all points that I'd got…(laugh) It's sure that all the other members pointed out ambiguous parts that I felt unclear about as well. Of course, it's only you that gave me an answer about them, though…*

For better use of peer feedback, one interviewee in the first interview suggested that discussions between reviewers would be necessary because there might be a conflict between student reviews even though students tended to follow teacher feedback. Furthermore, one respondent in the first interview suggested that giving feedback could be optional, so participants could provide peers with comments only when they had something to say. Moreover, the students could not address their curiosity regarding unclear feedback because they could not respond by asking direct questions to their peers.

- *W3T1&2&3: One-sided feedback was the most inconvenient. I wanted to ask why reviewers thought so, and sometimes, it was confusing to see which part was*

pointed out. But these were not solved appropriately, which often frustrated me. If I can exchange questions and answers on the feedback itself, the quality of the feedback and next draft itself can be enhanced.

Regarding the feedback process, one-way feedback between reviewers was criticised as an inconvenient feature. In fact, although Scholar enabled the students to exchange asynchronous messages between group members, a small minority used this message tool just to ask questions to the teacher. This function might not have been fully announced to or understood by many of the students. Moreover, many were pressed for time due to their own academic schedule, which could also have discouraged them from spending sufficient time giving feedback and exchanging questions and answers.

Although there were practical problems of time spent giving feedback, it might be necessary to create a learning environment in which student writers can solve their ambiguity and uncertainty regarding feedback given by others. This mutual process could motivate and encourage students to engage in the constructive process of improving peers' essays and enhancing the responsibility and credibility of their feedback tasks.

All the interviewees except one in the first interview agreed that the anonymity of group members helped them give honest feedback to others, even though it was impossible for them to stop having an interest in others' feelings towards their comments. Even anonymous in the online environment, it was difficult for them to provide frank and straightforward comments on others' work. In this sense, all but two of the respondents wanted their names to be kept confidential while they were participating in online feedback.

- *W10T1: It's the first time for me to share essays between peers and give feedback to them. Although I've attended writing courses, I had no experience of this kind. This is because, in reality, it's hard to give peer feedback. Firstly, participants should have a suitable level of evaluation of the writings of others. Secondly, according to Korean culture, it's really difficult to point out errors in public, which can injure other's pride. Online feedback through Scholar resolved the second problem at least. With the*

essays of anonymous group members, we did not know which was whose, which enabled us to do honest assessments.

In addition to honest feedback, anonymity was considered a good way to work without prejudice against others. The students often mentioned the importance of English proficiency in the quality and, thus, the reliability of peer feedback. This response implies their positive perception of or attitude toward more-able peers, which can result in prejudice or discrimination against, or even neglect of, less-able members in a group. This tendency can discourage students with less confidence or proficiency in English to become involved or have a voice in a group task. Therefore, anonymous participation online helps to foster an environment in which all the members can work without being alienated or discriminated against, increasing collaborative engagement within a group.

- *W1T1: Also, as a merit of mutual feedback by this kind of use of the Internet, it was noticeable that we didn't have any prejudice against group members. If I had met them face to face and recognised which essay was whose in the first peer feedback, I could have my own first impression of and prejudice against them, which might cause any possible negative impact on the next peer feedback. For example, I might have some prejudice against their English proficiency, writing style and so forth. During face-to-face peer feedback, it's possible that I was able to have instant feedback, which was positive, but, at the same time, it's hard to guarantee the quality of immediate feedback. (Of course, it's also hard to guarantee the quality of peer feedback through the Internet.)*

Behind this high preference for anonymity in feedback tasks, the sociolinguistic conventions in South Korea of 'not being offensive to others,' 'not injuring others' prestige', and 'circumlocution rather than a straightforward way of speaking' impacted their feedback practices during learning. These avoidance strategies for being polite to others and saving face may act as a cultural barrier to providing more active, explicit, direct, outspoken, or trenchant critical reviews, rather than vague, ambiguous, indirect, unfocused, or, sometimes, complimentary review remarks. Considering this communal context of intertwining relationships between culture and language, anonymity as a participant in a learning

community can promote more risk-free engagement, enhancing active and direct involvement in a participatory written discourse, which should be carefully and importantly recognised as establishing interactive collaboration in a learning environment.

However, two interviewees in the first interview answered they did not care about revealing their names in online sessions because group members did not meet directly. Furthermore, these two interviewees claimed they preferred having face-to-face peer feedback sessions for higher responsibility and more convenient verbal discussion than online peer feedback sessions.

- *1G6S2: I think it's better to meet each other and exchange feedback. It's possible for us to explain our comments to make others understand. There might be an issue of privacy, though. (…) I felt comfortable when I gave online feedback with my name hidden, of course. If our names had been open, we could have been more cautious of giving feedback to others. And yet, it will be necessary to reveal our names.*
- *1G2S3 I3: We would rather have performed with our real names to get background information of reviewers (to judge their level).*

Despite a few students preferring less sensitivity about names, they placed greater emphasis on the quality of feedback practices than on interpersonal aspects, focusing more on the fundamental aims of given tasks and supporting development in writing through feedback exchanges.

With this matter of student engagement in peer feedback, it is necessary to consider the quantity and quality of the students' feedback practices, which can support the advantages of anonymous participation in peer reviews. Comparing quantity and quality of the peer feedback given by the control and intervention groups, the latter tended to provide more peer feedback in terms of the length of the written text and the number of given points. In addition to the face values of student peer feedback, participants in the intervention group often offered richer and more detailed reviews with explanations or illustrations, suggestions or advice on possible examples or options, indicating a direction for a possibly better way. Although they were still employing a form of face-saving technique, such as

keeping their tone light and using circumlocution, they presented relatively more active and critical engagement in generating specific feedback.

Table 14: Example of the first peer feedback in Group A

Student A's First Feedback on Student C	Student B's First Feedback on Student C
General Organisation **2** of 5 Weight: 2/8	**General Organisation** **4** of 5 Weight: 2/8
You need to delete "developed home appliance and technology" in the second paragraph or need to make the second paragraph separate and add more additional explanations. The conclusion needs to be reinforced. It'd be better to present clearer claims in the introduction of each paragraph. This essay needs sounder and more coherent structure with clarity.	It's good to start with calling attention to news. In the body parts, two grounds were well explained.
General Contents **3** of 5 Weight: 2/8	**General Contents** **3** of 5 Weight: 2/8
I think this essay is off-topic. The point of this topic is to compare more developed and advanced contemporary times and underdeveloped past times, but I'm afraid you understood it differently. It'd better not to use too conclusive a tone of voice. It	The contents are generally logical. But I'm a bit sad that you wrote this essay being biased toward Korea's position. In general or academic writing, authors may not be Korean, so it's better to talk about general situations around the world and then give

	an example of Korea.
Details on Argumentation: CLAIM **2** of 5 Weight: 1/8	**Details on Argumentation: CLAIM** **3** of 5 Weight: 1/8
It looks a bit far-fetched to compare the economic war and Korean War.	What you want to argue is clear.
Details on Argumentation: GROUNDS **3** of 5 Weight: 1/8	**Details on Argumentation: GROUNDS** **3** of 5 Weight: 1/8
Grounds need to be more specified.	It looks insufficient that grounds were suggested only based on Korea's position. Also, the first and the second grounds seem to overlap each other; they all are about unhappiness caused by a war.
Details on argumentation: WARRANT **2** of 5 Weight: 1/8	**Details on argumentation: WARRANT** **2** of 5 Weight: 1/8
You need enforced warrant in general. I think you should explain how facts support the relevant ground, not just listing simple facts.	The second grounds need more warrants. You need clearer reasoning on why working hard makes people unhappy. In other words, you have a lack of connections between 'in the past, we lived this way' and 'this situation had problems of one kind or another.'
Details on argumentation: REBUTTAL **1** of 5 Weight: 1/8	**Details on argumentation: REBUTTAL** **3** of 5 Weight: 1/8
Rebuttals are not dealt with.	Rebuttals are used with the past situations mentioned.

In contrast, the control group, traditionally the face-to-face class, was more likely to provide simple, superficial, and/or recapitulative or comprehensive comments on the overall quality of each evaluative component. It was clearly evident that the students in this group stated surface remarks such as 'this is good or bad', 'a specific element is included or excluded in the text', and 'you need this and that'. Often, the students just underlined or drew circles around specific words, clauses, or sentences to show which was good or bad in a given draft, to link these visual representations to the scores or the brief remarks they wrote on the rubric sheet. With this feedback participation, many paid more attention to or even spent more time scoring than offering explanatory written reviews, following the checklist in the first rubric.

To understand the different participatory circumstances of the two groups, it should be considered that the concrete and relatively full responses need strong support involving high awareness of and familiarity with the rubric elements. Considering the writing conventions commonly shared by the students in this study, their reluctance for direct criticism, for providing more direct and concrete feedback to their peers, they might need to read the rubric again to feel confident in the specific features of each element of argumentation listed. While they were reading and evaluating others' essays following the rubric elements, they could have chances to practise applying their understanding of argumentation into others' essays, and this situation might enable them to have some time for retrospective and evaluative reflection on their own essay. This constructive cycle of collaborative feedback performance might help students of the intervention group to reinforce a more rigorous and systematic understanding of argumentation, which could lead to long-term retention of knowledge of argumentation.

Regarding one more cycle of the first drafting, 12 out of 20 respondents in the second interview thought that one more series of drafting and reviewing for the general structure and contents of a topic would be necessary, whereas only two respondents in the second interview explicitly mentioned that another cycle was not needed. Moreover, six respondents in the second interview said those who did not develop a good first draft would need one more chance to rewrite or improve the general organisation and contents because there might be individual differences in the level of English writing. Another two respondents in the second interview claimed this additional sequence should be applied to everyone, not as an option, so all members could move to the next stage simultaneously, and one respondent thought it would be okay to have one more chance to think about their current essay. The findings show the students expected to have rich feedback from others to improve the quality of the contents before moving on to minor corrections. It can be easily understood that non-native writers of English want more help with the English language than with the contents. However, this finding implies that the students highly valued assistance in content development, including argumentation. Therefore, courses for argumentative writing should not skew towards feedback stages for minor corrections but should be focused on drafting and feedback stages for content organisation, including argumentation development.

5.3.1.1.1.4 Second Peer Feedback & Teacher Feedback

All the respondents in both interviews said the second feedback for minor error correction was useful and necessary, which means they felt detailed editing through annotations was what they wanted to have at this stage. Although the second draft stage was not actively discussed in the second interview, 11 out of 20 respondents in the second interview sessions agreed that the current stage for improvement based on the first peer and teacher feedback should be maintained. The students highly considered grammatical accuracy and appropriate word choices because they often felt somewhat anxious about their linguistic clarity and accuracy as non-native writers of English.

For minor error corrections, the student writers generally felt they had a lack of linguistic knowledge, which made them feel insecure in valuing and applying feedback from peers. Furthermore, the low level of confidence caused by their limited knowledge in English often led to inactive participation in the second peer feedback and, thus, zero or simple corrections for their peers. Some respondents pointed out incorrect or unexplained corrections given by their peers could cause more confusion rather than help.

- *2S6I2: I didn't get much help from peer feedback. I depended on teacher feedback. Students didn't explain why something is awkward because they were not confident. They just mentioned, 'This is awkward. I think you should change this.'*
- *W1T1: For the second feedback, like the first one, I had nothing to say about grammar or items. From this time, I doubted the meaning of the second feedback. I didn't feel like the first feedback was weak, but I felt the second feedback was meaningless without strongly skilled guides.*

Students' lack of confidence in the target language accuracy or their high expectations for others' corrective feedback on grammar and vocabularies at this stage was found to cause students' negative valuation for peer feedback. Regarding the reliance or credibility of second peer feedback at this stage, the number of respondents who depended mainly on teacher feedback was higher than those who depended on peer feedback. Five respondents in the first interview answered that teacher feedback was the only necessary help because they rarely trusted the accuracy of peer feedback. Putting more value on teacher feedback

at this stage, they reported that they rarely had many things to offer their peers. This tendency was reconfirmed in the second interview, in which 10 out of 20 respondents reported their over-reliance on teacher feedback, and two respondents mentioned teacher feedback as the only necessary help at this stage. Especially, those who were sceptical of the value of peer feedback in the first interview claimed that exchanging feedback between peers could be scrapped.

The excerpt, below, explicitly shows that the interviewee highlighted his insufficient English proficiency for minor corrections and his low credibility regarding the accuracy of peer feedback. Although he acknowledged he accepted and referred to feedback, including peer feedback, as much as possible for revising and editing his draft, he questioned the real feasibility of students' contribution to others' minor corrections.

· *W1T1: I carefully read teacher feedback in detail, and this served me as a momentum for considering my way to develop topics, which was greatly helpful for me. (…) In the second Peer Feedback, the gap of English proficiency between peer reviewers was not that big, so I had nothing to write in particular. I could point out clearly outstanding errors like English word usage, but I was not sure of English grammar or idiomatic expressions. That's why I didn't have much to say. (…) I received a lot of negative feedback from peers and the teacher, which made me change the overall content while writing the second draft. At this moment of the second draft writing, I accepted almost all of the comments given by feedback, but I had a lack of effort to reconsider and revise pointed out things by others on my own since I just used to copy and put the suggested exemplary sentences by them.*

Some respondents proposed another chance for the macro-level peer feedback that students could take part in to contribute to others' work, instead of minor corrections targeting language errors in the second peer feedback stage. As shown below, the alternative option they suggested implies their general understanding of the potential of their contributory work in the peer feedback stages. Including the respondent below, many students believed they were able to be more mutually beneficial for macro-level feedback,

such as developing ideas and a logical stream of thoughts, which is focused on the first peer feedback, rather than micro-level feedback.

- *W4T3: The feedback written by peers with their utmost sincerity seems to be very helpful for writing. Of course, rough feedback does not help me to write. Some peer reviewers recommended better content or examples to use, which was good for me. (…) In feedback activities, I could not sometimes trust and just skip peer feedback on grammar. So I think it will be more effective to have grammar feedback only from the teacher. Sometimes, I could not make up my mind between my opinions and others when they were different. I am not sure if the feedback given by peers is right or wrong. Instead, what about allowing peers to give more feedback on sentence structure or ideas in the second feedback? Ideas given by peers seemed to help me to write and revise more than I expected.*

The students' higher reliance on teacher feedback at this stage can be a matter of proper timing for teacher involvement in the feedback tasks. Four out of 20 respondents in the first interview preferred receiving feedback from peers and the teacher simultaneously, whereas the rest of the respondents preferred receiving peer feedback before teacher feedback. Those who wanted feedback all at once in the first interview worried that they might waste time reading and considering inaccurate or confusing peer feedback. In contrast, those who wanted peer feedback earlier than teacher feedback in the first interview pointed out the possibility they were likely to ignore or skip peer feedback after reading teacher feedback. However, those who preferred delayed teacher feedback in the first interview also considered peer feedback valuable enough to read, which encouraged them to spend some time reading peer reviews.

- *1G2S1: When I got reviews from peers and teachers at the same time, I only read teacher's, really. (That's why I prefer to read the teacher's feedback later.)*
- *1G2S2: To check if this is right or wrong, we need all the feedback at the same time. This is because I was in trouble when one of my members gave me two points (out of five) but my teacher gave me five points (at the same criteria).*

Although the necessity of the second peer feedback was widely questioned in both interviews, seven out of 20 respondents in the second interview acknowledged that peer feedback was still necessary as an extra chance to learn in the process of giving feedback. These respondents were more likely to be active and independent learners who valued learning by doing.

- *2S4I3: I was more dependent on teacher feedback for comments on the detailed grammatical errors like articles… But if I give minor error corrections to others, I have to look up in dictionaries. So this could make me learn something as well.*
- *2S3I2: But peer feedback is necessary. It's better to have it because I could learn my own errors when I correct them for others.*

Although some had negative opinions regarding the feasibility of second peer feedback, the review work focusing on minor errors was welcomed by every respondent in both interviews. In particular, they considered the annotation activity highly because they provided direct comments on how to amend minor errors. However, the students pointed out that direct annotations on specific errors were sufficient, with no general reviews or scores given by each detailed category of the second rubric. The responses to the necessity of giving general comments and scores in each criterion of the second rubric varied in the second interviews. This response was because more detailed categories of the rubric were considered difficult or confusing, which made them think about what to say in each category. Furthermore, the participants reported that they wanted to reduce overlaps between annotations and general commentary boxes. The general finding of their written feedback data shows that the students' annotations and general comments often overlapped in the second feedback, which suggests the students should have the freedom to choose either of annotations or comments for their efficient feedback work.

- *1G1S1: Annotation itself is very good, I think. I could easily recognise which expression this person was talking about and how s/he wanted me to correct it.*
- *1G1S2: Oh, to me, mechanics, expressions in the second feedback… It's difficult for me to distinguish among categories. They all looked similar. It's hard to understand, so I used to use the annotation tool over and over.*

Other suggestions were generated to develop this stage in the first interview. As shown below, one respondent in the first interview mentioned that commentaries were unnecessary at this stage because it was sufficient to edit each *Annotation* appendix. This problem was attributed to Scholar allowing uploading feedback only when every category in the second rubric was complete. This situation forced the participants in the online group to fill in each category of expressions, mechanics, and punctuation.

- *1G1S2: Other than the annotation, reviews were unnecessary in the second feedback. (…) I had nothing to say (in the commentary boxes of each category of the rubric), so I just mentioned, 'Refer to the annotation.' I had not used them. Oh, additionally, there're two separate categories like choosing a type of errors (and put commentaries in a specific area with the annotation tool)… But the tab (of error types) was not that useful. (Interviewer: Was it complicated to click one by one?) Yes, every comment was suggested in the annotation, which means that the tool was unnecessary.*

All the negative reviews of the numerous categories in the second peer feedback highlight the need for a simpler and more efficient design for the second rubric, which also allows students to have options to choose what to use for providing help with editing. Considering their low confidence in the reliability of peer feedback, the necessity of the detailed categories of peer work can be questioned. Rather than increasing their meaningless workload, the main activity, annotating, can be a target activity at this stage, leaving room for providing overall commentaries at the end.

At this point, it is necessary to examine the students' great preference for making annotations within sentences for peer feedback in this stage. Although the somewhat different characteristics of feedback practices between the two groups were maintained in the second peer feedback, the level of engagement of the students in the two groups in the second peer feedback was less than in the first peer feedback. Considering the quantity of their feedback, the level of engagement within a group was generally biased towards the level of writing proficiency of the student participants. Apart from the level of responsibility of each participant, it was commonly indicated that more-able ones tended to provide more

revision points in the peer's draft than less-able ones. A few students with lower writing proficiency often skipped pointing out something to be revised or edited, and just provided brief and summative reviews to evaluate the second draft overall, leaving their role of a coeditor to other peers.

Despite the relatively passive nature of the second feedback task, students in the intervention group were more likely to provide participatory and collaborative contributions to their peers. Comparing the general tendency of the two groups towards the second peer feedback practices, the intervention group generated more points in the minor reviews than the control group. In the control group, many of the students often confined themselves to pointing out typos and simple grammatical errors, using visual enhancements such as underlining, drawing circles, or putting question marks in texts. Regarding the second rubric, control group students were apt to check each score mark and put short notes to evaluate peer essays overall, rarely giving detailed and direct editing on the draft sheet with a pen.

In contrast, students in the intervention group were likely to append specific annotations on errors in the texts, directly correct errors, or suggest more appropriate options. Although many annotations only included corrected results of words or expressions, some included detailed explanations about why something in the text was inappropriate or should be revised in a specific way.

Table 15: Example of the second peer feedback in Group A

housel chores	Student A commented: *house chores*
· the number of	Student B commented: *a number of*
· airplane	Student B commented: *an airplane*
· housework	Student B commented: *a housework*
· and more	Student B commented: *etc.*
· were released	Student B commented: *have released*
· charged	Student B commented: *was charged with*
· charged	Student B commented: *were charged with*
· housel chores	Student B commented: *house chores*
· menial	Student B commented: *tedious*

Considering the quantity and quality of the second peer feedback, the intervention group tended to present more active and direct engagement in peer review tasks. The option of peer editing directly on the sheet may be still considered easier and more convenient by some students. However, that the option of online editing led to a higher level of feedback involvement may imply a range of possible benefits for a digital writing classroom. First, considering the students' high anxiety or low self-confidence regarding correct editing, the anonymous learning environment, in which group members were not estimated based on their English writing proficiency, could motivate students to participate in peer reviews. This is because they have less pressure regarding losing their face or failing to meet public expectations as a member of their writing community. Although the first peer feedback often needs more critiquing regarding suitability or justification of an individual's ideas, the

second peer feedback has a relatively lower risk of offending others, focusing on minor error corrections that can be supported by reliable sources such as English dictionaries. Despite the potential of less stressful engagement, the students still had concerns about the level of accuracy of their feedback.

Furthermore, the basic online group setting of being allowed to undertake the second feedback tasks whenever they were available before each deadline might encourage more active participation, regardless of their own level of proficiency and confidence in English writing. Especially for student confidence, the online setting may enable students to have more time to seek help from online dictionaries to provide peer feedback with greater self-assurance and to suggest specific resolutions to necessary changes.

Considering all the findings in the second feedback stage, including the students' lower value regarding peer feedback and more influence from the teacher in the feedback stage, delayed teacher intervention in the feedback tasks can encourage students to pay attention to peers' review work. The finding that some students consider the second peer feedback stage to be a chance to learn and reinforce their linguistic knowledge of English can still support the justification for undertaking the second peer feedback task. The finding also implies the teacher should become involved at the end of each feedback stage to play the role of a coordinator or a chief adviser, helping student writers to settle conflicts regarding contrary or divergent ideas and evaluations generated within a group. This approach is because incorrect or opposite peer feedback concerns students who are non-native writers of English, which reduces student credibility regarding peer feedback. As a possible solution to this issue, the teacher's delayed engagement, focusing on disputes in group tasks, can promote student participation in a written discourse in a writing community, relieving student anxiety about 'being in a state of confusion without any reliable solutions'. Therefore, the teacher, especially working in an EFL learning environment, should not assume an attitude of an onlooker or an observer but should work as a mediator, providing a better option for revision and editing if necessary.

5.3.1.1.1.5   Final Draft & Publication Stage

Concerning the necessity and usefulness of the final draft stage, all students in the first interview answered that it was necessary to submit their work and receive a final score. Every respondent in the first interview considered this stage to be the last chance to develop their essays for self-satisfaction as intrinsic motivation or better grades as extrinsic motivation, which let them think this was the final outcome of a given topic.

- *1G6S2: Submitting my final essay can be a good stimulus. (…) I was wondering if my writing had been improved as I developed my essays on given topics.*
- *1G6S1: I can have the last chance to amend my essay. And I can focus on and think of my essay one more time.*

Regarding the need for another chance at proofreading before submission, only one respondent in the second interview was positive. The vast majority in the second interview mentioned that the general sequence should not be too long because they might grow tired and bored, and it would be difficult for them to offer any further help to others. Regarding the evaluation of the final draft based on the level of progress from the first to the last draft, nine respondents in the second interview were optimistic about their progress, whereas nine were sceptical. In addition, 10 respondents in the second interview suggested that good essay examples of peers should be selected by the teacher and shared after submission.

- *S1I1: Too long sequence is not good. Actually, proofreading is endless.*
- *S2I2: It's not necessary to make the current stage longer. That will reduce our concentration in writing.*
- *S1I2: It'll be good to evaluate our progress. I think the general comments for this is necessary. To do so, we could see the first and the final draft together.*

All the respondents, except for one, in the first interview did not publish their series of essays. This factor was mainly because they thought it was unnecessary or important for them as learners to publish and share their work with others. They focused on the writing practice to develop their English argumentative writing ability.

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Generally, the respondents were reluctant to release their own work to the public. Among the positive respondents to publication in the second interview, only three agreed to open their work to other readers, whereas 16 wanted to store their work and reread it alone. The majority of the students considered publication a fancy way to save their work all together and not to show it to others.

- *S6I2: It would be better to do. I can see what I did wrong and how my drafts have changed. But I don't want to show this publication to others.*
- *2S3I1: Publication should be connected to web posting. And I feel good when I print my work and see pretty formats of it.*

All students in the first interview agreed that publication was an option for those who wanted to do so, which was confirmed in the second interview. Although 19 out of 20 respondents in the second interview were positive about the publication of their essays, 11 mentioned this could be an option, with one respondent not caring. A minority of the respondents in the second interview mentioned this stage should be mandatory for students to participate more responsibly in feedback stages.

- *2S3I1: This should be optional for those who want to do so. Publication should be connected to web posting. And I feel good when I print my work and see pretty formats of it.*
- *2S4I2: If this is obligatory, peers would work hard to provide their feedback because their feedback could be included.*

Considering the important and frequent concerns and ideas of the interviewees in both interviews, the findings show that the allocation of class time for teacher instruction, the categories of the rubrics, and the sequence of the peer and teacher feedback need to be reconsidered and adjusted. Although the writing course in this study is based on the process-based writing approach, which theoretically allows a high degree of freedom and autonomy of student writers, the results point out the need for more direct or focused teacher intervention in specific stages of this writing course, which targets EFL students. Since they, as non-native writers of English, tend to have great pressure and anxiety about

argumentation and writing in English, the students are more likely to depend on teacher instruction throughout a writing course, including teacher feedback in the drafting stages. Some specific levels of student writers, especially those with a lower level of English writing proficiency, seriously expect to have more direct intervention from the teacher. A modified argumentative writing course for EFL students should be based on their needs: a more intensive orientation stage with specific teaching and learning materials, more-focused instruction in Toulmin's argumentation elements, simpler rubric categories for easier and clearer understanding in both rubrics, enhanced participation of students in an online anonymous writing environment, and the delayed engagement of the teacher.

5.3.1.1.2 Digital learning Environment

5.3.1.1.2.1 Almind

A graphic organiser for drawing a mind map, *Almind* did not elicit clearly positive responses from the respondents. The students thought the program might be a little quicker for brainstorming than with handwriting, easier to save, and to expand the scale of concept maps by adding more details later. Furthermore, some assumed *Almind* would be much more convenient to use, as it is a graphical organising program in the tablet/PC environment, so just touching or dragging on the screen can make boxes and nodes.

- *W4T2: I started to use Almind in this course for the first time, and I think it's very useful. I'm in the design department and brainstorming is part of my life. But there's no software which lets me draw diagrams, and I used to draw every single item with Illustrator or Photoshop. In this sense, this is surely a good program to do brainstorming on computer. In particular, it's good to modify anytime because I can save my own file or save it into image files.*

Despite its basic platform, some points of inconvenience were pointed out, which led to generally negative reviews for *Almind*. For example, a topic box in the centre of the screen could not be moved elsewhere, and it was difficult to append detailed sub-categories. The reason for selecting *Almind* was because of its simple usage for the quick arrangement of

mapping activities, and it required little time to learn how to use its basic tools. Contrary to expectations, however, the respondents preferred detailed options to adjust as they wanted.

The findings of the interviews and narrative reflection data show that many of the students still felt more comfortable and familiar with developing a mind map with pen and paper or typing in key points on a keyboard. These comfortable habits were one of the main reasons they felt awkward using *Almind* or any other mind-mapping software. The excerpt, below, specifically indicates the existing familiarity with handwriting or keyboard typing for brainstorming.

- *W3T1&2&3: I think Almind itself is an innovative software, but I'm curious about its effectiveness. Personally, I'm used to doing brainstorming in my own handwriting, and I often generate ideas while I'm moving, and I take notes when it's necessary. So brainstorming in front of a computer on purpose was not that effective. And even while I did brainstorming, I inserted or deleted some while writing. I was annoyed with the fact that modification and brainstorming tended to be a formal matter. But I think brainstorming is a necessary process. Any writing needs structure to be developed with details, so introducing the process of brainstorming is necessary. But using Almind can interfere with generating rich supporting details. Almind UI is quite difficult to use, which is not good.*

In addition to being accustomed to the traditional style for brainstorming, many of the students considered using a new brainstorming application to be an extra burden of writing. The respondent, below, pointed out that she had no time for coming up with ideas other than right before or during actual writing, so she was already under heavy pressure regarding generating new ideas for a given topic. This attitude implies that the student's expectations were that brainstorming as a prewriting task should be as simple and brief as possible, regardless of it being web- or paper-based.

- *W1T12&3: With the use of Almind, it's reasonable to make a rough structure on writing before actual writing, but actually it gets out of use while writing. In fact, writing on a topic itself is stressful because it needs a lot of thinking and*

considerations. In addition to it, learning new functions of Almind and how to use them is burdensome, and it seems hard to enjoy the effectiveness of it against the time spent in using it. So I didn't often use it. I learned how to use it, anyway, but it doesn't look essential, considering the necessary time to use it. Perhaps, most of the students could have been efficiently prepared for writing just by typing in key points for an introduction, body part 1 to 3 and a conclusion.

The inconvenience that students often perceived may have resulted from no interconnection between *Almind* and Scholar, which are two distinctive digital environments. The collaborative writing platform Scholar did not include any specific tool for mind-mapping, which was a major reason an additional tool for graphically organising ideas was added to the writing course for the intervention group. This addition made students create their mind maps using a separate application, *Almind*, and post it on their writing panel of Scholar. Moving between different digital platforms may have caused an extra burden of time and effort throughout their prewriting stage. However, this issue can be addressed if digital brainstorming tools, such as a graphic organiser, listing, and note-taking, are embedded in a writing platform. This incorporative and comprehensive writing environment can allow students to continue their work from the beginning to the end in the same operating environment, storing phased productions of their work.

5.3.1.1.2.2 Scholar

The respondents had mixed reactions to the usefulness and convenience of *Scholar*. The findings indicate the greatest advantage of Scholar is providing and receiving feedback, and then continuing further revision work on the same page. The comprehensive, incorporated, and unified digital setting for writing helped them to save time and effort reading others' feedback and revising their writing draft. In addition to its comprehensive environment for individuals, *Scholar* was highly regarded because it can overcome practical difficulties in attending face-to-face classes held in the same physical space and at the same time. The excerpt, below, clearly represents these benefits.

- *W1T1&2&3: Now it's the time that we work and study with the Internet, writing reports, doing assignments, and even taking computer-based exams. In this time, it's not efficient to write down with pen and paper, and then receive feedback on a printed essay. People have their own handwriting, which takes some time to recognise, and it's not convenient to compare and explore others' comments given on one sheet of paper. I think, in line with the times, it's efficient and effective to practise argumentative writing with websites like Scholar. (…) It's hard for many people to get together in one place and exchange feedback at the same time because of their personal schedules. So it's really good that we could give feedback to others' writing online during a set period.*

This response resembles the students' general review of *Scholar* regarding exchanging feedback, which was considered its greatest advantage. Undertaking a series of drafting with peer reviews embedded in process-based writing, it was significant that the student participants, and even teachers, could save time interacting with feedback. *Scholar* is an asynchronous writing platform, but it provides an easy environment in which all the participants work on the same page for a specific writing task and stay on the same platform throughout completing an essay. This digitally integrated writing space can encourage engagement and collaboration among all the participants, including students and teachers.

- *G2S1: Well, possibly there are some… There are some different kinds of writing websites for argumentative essays. In the case of the Scholar website…web pages there were set up to easily exchange feedback with each other just inside there. That's true.*
- *W5T1: If I use emails and the like, it would be more complicated and hardly give me a feeling that I have communications with others through texts. But this site let me feel that I could exchange feedback for sure, which made me take part more actively.*

Regarding the specific feedback tools given in *Scholar*, the tool for appending annotations received the best reviews from the students, whereas the inconvenient operational feature was criticised. All the students said that Scholar was better for giving annotated feedback in

the second peer feedback than giving written comments on each category in the first peer feedback.

- *W2T1&2&3: The annotation tool looks fresh. While reading another's essay and providing annotations on it, I came to read it thoroughly. And it's good to check on my frequent typing errors when I received annotations from others. It's good to learn and correct grammar, and its errors that I didn't know, too. The function, moving a mouse over annotations to find annotated and highlighted errors in an essay, is really convenient and good, but easy correction doesn't help my long-term memory. An old saying goes like easy come, easy go, knowledge gained with ease is easily forgotten.*

However, the students found it difficult to track back to the annotated place in the essay panel on the left side of the screen, especially when an essay had a large number of annotations. This issue was because of a double view of the essay panel on the left side, and an annotation panel on the right side was not allowed because the list of annotations given by reviewers was longer on the right panel. Therefore, the students often suggested that the two panels of the writing content and the annotation list should move separately for them to manage each panel in isolation.

- *1G2S4: I want to see feedback from others all at once… like this… actually review comments as well. After I got annotations from others and read them one by one, I had to close each annotation. If not, the list of annotations on the right side of the screen became so long that I had to scroll down through the page, which finally made my texts go beyond the page, and only the annotations visible. Then it's difficult for me to see which annotation was about in the essay.*

In addition to the inconvenience of tracking annotations, many more complaints regarding *Scholar*'s default setting were reported in the student interviews and their narrative reflection reports. All the respondents said they had to suffer great inconvenience when reading texts on the feedback panel in the right corner because the platform only allowed too small a font size, too little space between letters, and unclear grey text, all of which

were very difficult for them to recognise. Many of the respondents stated they used to work on their essays with MS Word first and then copy and paste texts into Scholar's writing panels. Thus, the findings show that the program's design features with little clarity and attractiveness should be improved to make them more noticeable and user-friendly.

As a good example of user-friendly and highly intuitive platform design, some students cited social media sites such as *Facebook*. They added that these famous social networking platforms need less time and effort to learn and become accustomed how to use, and are considered ideal environments for pursuing tasks. The two excerpts, below, show that the students had to make some effort to become familiar with Scholar's environment.

· *1G2S2: Other sites such as Facebook are so easy to learn how to use the functions there as we keep clicking on them… (…) I want to learn how to use while I try one thing or another on the page. We need some time to get familiar with this site. Ah, there are many things to learn. (…) I felt that I would not be willing to use this and had to learn some more functions to use. However, it seems to be really convenient to use once I get accustomed to it.*

· *W1T1: I guess its system was less optimised. Needless to say, this aspect made it difficult for me to operate it in Internet Explorer and its speed went down in Chrome browser sometimes as well. And the less intuitive interface of it made me spend a lot of time familiarising myself with how to use it. As a result, I found myself not using functions or tools except for just the notification and some essential tools.*

Among a range of their negative reviews for *Scholar*, its slow operation was criticised the most. Every respondent complained about this aspect, adding that the *Chrome* browser was a little better for *Scholar* than *Internet Explorer*. However, Scholar's auto-save function for every activity held on the website was welcomed by all respondents. They reported that Scholar automatically saved every single change, and this made them feel free from worries of losing data accidently.

Regarding the publication, the low number who wanted to publish their essays was discussed in the publication stage. One reason for their low rate of publication was that the

students preferred to use popular word processing programs. All the interviewees stated that they did not need to use the tool for publication because they could save their work in *MS Word* instead, which was familiar to them. One interviewee said it would be necessary to see and compare each draft of a topic on a page, which could enable users to recognise their improvements. Considering the participants' desire to publish was low, the portfolio viewpoint can be a good alternative for them to review the process of development of one finalised essay rather than a restricted option for saving drafts in digital formats of *PDF* and *HTML*.

- *G2S1: By the way, I've submitted three times. At last, it might be good to see all of the three drafts on one page right before submission. Just like slides…. That can show us what has been changed at a look… Frankly speaking, it's difficult for me to look up all the drafts of a topic. (…) I could get a better impression of it, but actually it's difficult to figure out changes immediately… Well, the first draft was like this and the second one was like that, and then the final one was completed this way… It'd be good (to present this way).*

As a general reaction to the online classes, every interviewee preferred online writing sessions to traditional face-to-face meeting sessions. The reason was because they could enjoy flexibility to use their own time, which let them log into Scholar and do the writing tasks whenever they wanted. Furthermore, the online sessions enabled them to continue all the writing work on a computer. All these characteristics were considered effective for the students to save time and energy.

In addition to flexible time management, anonymous participation was cited as one of the major benefits of online writing sessions. Many of the respondents stated that anonymous feedback via Scholar encouraged them to do feedback tasks. Their highly positive attitudes towards and perceptions of anonymity importantly resulted in the students' enhanced engagement in and developed provision of peer feedback, as discussed in 5.3.1.1.1.3 First Peer Feedback & Teacher Feedback.

The findings show that two major benefits that online-based writing classrooms can provide are fewer constraints in time and space and anonymity, which may ultimately contribute to the improved quality and quantity of peer feedback. The excerpt, below, specifically represents the interrelationship between two advantages of online classes and peer feedback improvement. The student mentions that online anonymity helped her feel less pressure regarding avoiding straightforward critiquing in others' presence, and the flexible use of time enabled her to spend more time accessing others' drafts and feedback. She thought these benefits positively impacted providing richer feedback to others.

- *W2T1&2&3: When we meet together in the same place and come face to face, it's hard to give an honest opinion to others. But by exchanging anonymous feedback online, I didn't need to consider the feelings and emotions of others too much, so I was able to provide more honest and sincere comments. Above all, we were freer from time constraints than those who met face to face, and it was possible to leave better quality comments because we could have more time to read over and over on another day. It's good that I was able to receive scores from peers and teachers and compare them. Sometimes, feedback content and scores between peers and teachers were different, but it was convenient to study and compare them thanks to its system, which enabled me to compare scores and comments of each with ease.*

Despite an overwhelming preference for the online writing course in this study, some disadvantages were reported. The most frequent comment concerned less responsibility and punctuality. The digital space enabled the students to attend to their own or collaborative tasks whenever they wanted. Although a specific deadline for each task was set, the asynchronous nature of the tasks made the students feel less pressured to complete their work on time. Since they did not see their peers and teacher face-to-face, this promoted working behind schedule, and this situation led to a lack of peer feedback. The low level of punctuality between group members encouraged them to do only private tasks rather than collaborative ones.

- *W2T1&2&3: I like writing during an appointed time and period. If I think about something inconvenient with online classes, unlike direct meetings, it's common that*

some teammates are not punctual (in online activities). When we meet face to face, we are hardly late completing our tasks because we have to finish with them on the spot. But in online activities, it's true that we think it's fine to upload a little bit late. Yet, it was convenient to work because the notification function of Scholar informed me of what to do in time, including my task schedule and announcement of feedback completion of peers.

5.3.1.2 Instructor and e-Developer Interview

Another phase of interviews investigated English education specialists' attitudes toward and opinions of the developed instructional course design. The interviewees in this phase were English teaching staff at colleges and universities, and English e-learning course developers at a company for technology-based language learning and teaching in South Korea. The interview sessions with English writing instructors and e-learning developers were performed after the student interviews, and nine professionals in English teaching and learning participated in this stage. An interview session for each individual was conducted for 1.5 to 2 hours in general. To recruit English teaching staff at universities and online content developers, snowball sampling was used. One English lecturer and one e-learning content developer in English education introduced and asked other English lecturers working in a college or a university in South Korea or e-learning content developers working in an online language teaching/learning company. All the rescores used in the writing course in this study, including course procedures, syllabuses, digital and non-digital materials, and online settings of *Almind* and *Scholar* were presented and explained, with hard copies of the materials shared and demonstrations on screen for about 30 minutes before an interview session. This presentation arrangement was made to elicit the participant's practical and evaluative views on the writing course in this study.

Four interviewees were college or university teaching staff in English, with experience in teaching English writing. Five interviewees worked in developing English e-learning content and instructional courses. Of those five, two had English teaching careers as well, including experience teaching English writing to university students or adult learners. All the interviewees had been working in their areas for three to 10 years. The outline of questions

used in the interview sessions was the same as that used in the student group interview sessions, which was sequentially divided into each writing stage and topical area. However, the interviewees were allowed to develop their own ideas and/or opinions with freedom and autonomy, focusing more on their own expertise, or skip some of the questions as they wanted. The interviews were conducted according to the procedures of the writing stages used in this research study. Each lecturer or e-developer interviewee was nominated as *E(xpert)I(nterviewee)* followed by each interview session number. Furthermore, each lecturer or e-devloper interviewee was differentiated into their own career between *T(eacher)* and *D(eveloper)*, which sometimes caused them to suggest different views and/or opinions on a specific issue in accordance with their own expertise.

5.3.1.2.1 Learning Content

5.3.1.2.1.1 Orientation and Brainstorming

All the respondents agreed to the necessity and usefulness of the orientation stage as an introductory phase of a writing course. In particular, seven respondents, five lecturers, and two developers pointed out that South Korean learners were not accustomed to some of the English writing genres and had a lack of real opportunities to write in English. Regarding the necessary amount of time, opinions varied. In general, the English lecturers stated they would not invest a large amount of time in this stage, whereas most of the e-learning developers wanted enough time to prepare learners for writing. Two of the teaching staff interviewees reported that in their own courses they had generally devoted 10 to 15 or 15 to 20 minutes out of 2 hours per class to orientation. An e-learning developer thought that 1 to 1.5 hours could be necessary, and another e-developer said that students should be provided with enough time to engage in learning exercises with concise explanations. However, one e-learning developer had a slightly different opinion: She considered learning by writing more important than setting up a specific period in class, saying this orientation stage should include basic knowledge of writing on arguments and, therefore, have more exercises than explanations.

Regarding how introductory instructions should be presented, eight respondents, four lecturers, and four e-developers highlighted representative learning material, such as useful expressions, specific models or formats of writing on arguments, and good/bad examples of writing, for students' enhanced understanding. Among those positive about providing examples or exercises, one e-developer was not in favour of giving too much input at this stage because rich input such as feedback is necessary for the actual writing stages. With the high level of agreement regarding the provision of enriched help at this stage, the identification of the current level of the students was considered important, especially for offering extra help to less advanced-level students.

- *DEI5: In this stage, setting up targets is important based on their needs. We have to consider each level significant because TOEFL requires up to advanced level of writing, which means that students can complete an essay only if they are beyond a specific level of writing. Those beyond the intermediate level of writing can do it. So, kind guidance is necessary. Those who are below intermediate level need pattern practice. And they need to read good examples of writing. This can be warming-up, which can help fast brainstorming. (…) It's good to provide tips on how to write on screen, such as air views. It's better to present actual examples.*

An e-developer interviewee suggested that students should discover specific argumentative elements in writing examples or put each exemplary sentence into blanks in paragraphs, all of which could be presented as exercises. For a better understanding of student writers in this stage, one lecturer respondent mentioned chances for students to assess writing samples, and two lecturer respondents stressed clear and explicit instructions on how to review their peers' writing. In addition, one e-developer respondent said it would be necessary to instruct students how to undertake peer reviews with a reference link for explanations, with not required activities. Furthermore, one teacher and one e-developer emphasised a good level of understanding of writing rubrics, focusing on their specific elements. Another e-developer particularly stated that it would be necessary to provide examples to show good logical flows that components of argumentation were embedded in.

- *DEI6: It's necessary to provide sample writings, which let students find out elements, reading exemplary writing pieces, and see a general flow. Or it's good to let them put each argumentative component into a [correct] blank in them. It's necessary to be well aware of logical flows and argumentation elements, distinguishing them in reading actual writing examples. For example, reading a simple model and writing a short essay can be given as an exercise. It's good to show [argumentative] elements, but it's hard to see the general flow. Of course, it's good to show [students] components in detail and let students understand them. The pre-stage with detailed and logical explanations like this can be better than traditional classes.*

This finding indicates that enhanced input, such as more argumentation-focused explanations and activities, was highly considered to prepare students better for writing, which supports the finding from the student interview data. Calling for enriched input means the more intensive and prearranged intervention of teachers before students start writing, and sufficient preparation for writing is a more critical need for lower-level students. For the level of the provision of supports in this stage, e-learning developers tend to have more active and progressive perceptions of and attitudes towards expansive input in terms of the level of time allocation and opportunities for actual practice. This situation might be because e-learning environments are more likely to allow flexibility in time management and a diversity of task arrangements for learning.

Concerning face-to-face instruction versus online instruction in this stage, seven respondents (four lecturers and three e-developers) considered face-to-face orientation courses more effective than online orientation, whereas one lecturer respondent thought there was no major difference. Among the four lecturers who supported the offline orientation, one interviewee said that face-to-face instructions were more effective at increasing momentary concentration than online instructions, and face-to-face instruction does not allow students to replay what they had learned in class. She added that online instruction enabled students to reiterate for reviews, and live chats had no limit in distance and time, supporting the schematisation of contents and the security of note-taking.

- *LEI8: Face-to-face instructions are better for the momentary concentration of students. But it's not possible for them to replay contents. If they are provided online, they can learn them again. If there's live chat, it's okay that they are not limited in distance and time. It's good that online instructions can make content schematised and students don't need to worry that they might not take notes.*

One e-developer respondent with a neutral viewpoint said face-to-face instruction could be integrated into online courses but, if not possible, it would be appropriate to focus on the online-only environments. Different from this e-developer respondent, it was interesting that another developer reported that online orientation had not been effective for users. To address this problem, materials for detailed guidelines for learners, as a way of indirect instruction, should be developed and provided, but this causes an additional burden on time and money.

- *DEI6: I think online orientation has no effect. Our customers thought that's not effective as well. Users tend to spend time just mouse clicking without thinking. We need to draw outputs from them, so we need to make the users take part in the pre-sessions to learn guidelines. Also, it's too expensive for us to develop flash instructional clips, so it's better to explain them in face-to-face sessions. Offline instructions have high immersion level of learners. In fact, the targets of online instructions are those who live in faraway spots or have lack of time, so online pre-sessions have low effectiveness.*

Considering all the reviews of the teaching staff and the e-learning developers, an important point can be drawn. The findings from their interview data show they valued face-to-face pre-sessions more than online-based distance ones, although they generally acknowledged the benefits of online orientation, such as fewer constraints of time and space. They recognised that offline orientation was more likely to enhance students' attention, whereas the offline environments encouraged students' passive participation in the orientation stage. This finding is generally in line with the finding from student interview analysis. As discussed previously, the students had a great preference for online classes due to greater freedom

and flexibility in participation, but they pointed out the higher risk of being less responsible and punctual in online classrooms.

All the respondents considered brainstorming as a prewriting stage essential and useful. They thought it should be required, not optional, because it increased the systematic and self-initiated development of ideas. One lecturer respondent specifically pointed out the importance of free idea generation, saying that one student could share her brainstorming work with her peers, but she was sceptical of the necessity of peer or teacher feedback at this stage. One e-developer respondent disagreed regarding the necessity of feedback in the sense that others' feedback could influence one's own idea generation process. In contrast, two lecturer respondents were positive about providing peer and teacher feedback, whereas one e-developer respondent was only in favour of sharing and discussing brainstorming work with peers for possible feedback on the argumentation element of *ground*.

The excerpt, below, indicates that one lecturer respondent considered brainstorming significant, and that it needs an additional phase for shaping brief ideas in detail before starting to write an essay. To help students develop their key ideas further, she suggested more options for expanding their thoughts with as many details as possible, such as graphical outlining, and allowing students to have more freedom and autonomy.

- *TEI4: If they share their brainstorming with others, they can learn other things from different brainstorming pieces. I think brainstorming should be required, not optional. Sharing is required, too. Feedback is necessary in the process of sharing. But I'm curious about the necessity of teacher feedback and intervention. This is a stage for free activity. But students shouldn't go in the wrong direction, so the intervention with the least amount of feedback can be done. And it's better to make an outline from brainstorming to detailed and visualised outlining. It's good to write down necessary expressions because a detailed outline helps actual writing.*

This viewpoint is related to the need for modification of this stage. The respondents generated numerous suggestions regarding how to facilitate student idea generation. An e-

developer said a variety of schematised patterns in diagrams should be provided to help students to structure ideas of given paragraphs, such as cause-effect relationship. In addition, another e-developer highlighted an option of categorisation or classification based on a rough outline, as shown below. These suggestions all fall into the category of graphic organisers, which explicitly present categories of ideas for students to increase recognition regarding the incorporation or separation of details.

- *DEI7: It's just okay to set up a big theme and enumerate relevant words. The most important thing is categorising (ideas) in this stage. It's categorisation based on a rough outline and then classification into small categories. (…) Types of brainstorming should be optional. It's good to have outlining. It's necessary to make a plan in the way they want. This is the most import thing. We should help them to elaborate and then structure (their ideas) in order to make a good plan.*

The general responses of the lecturers and e-developers to a variety of options for brainstorming also support the findings from the student interview data, in which they asked for further options, especially outlining and note-taking, to generate detailed ideas with more freedom and ease. One outstanding difference regarding brainstorming between lecturers/e-developers and students is that the former wanted to provide an option for classification with visual enhancement. This means that the English education specialists specifically valued grouping and ordering ideas by relevance and hierarchy, so students can produce more detailed structure in their arguments in the prewriting stage.

In general, although the lecturer and e-developer interviewees had diverse opinions on the necessary time and types of exercises in the orientation stage, they all acknowledged the importance of the stage, claiming the provision of rich input and intensive instruction leads students to enhanced understanding and then promotes active and independent performances during writing. Furthermore, face-to-face instruction in the orientation was still highly recognised for its own values. Moreover, there was high agreement on the significance of brainstorming, whereas their opinions on the need for feedback at this stage varied. In addition, a diversity of recommendations for further activities, such as

schematised patterns, categorisation, outlining, and planning, show the need for more options to develop ideas with ease and clarity.

5.3.1.2.1.3 First Draft and Feedback

Regarding the first rubric in this stage, two e-developer respondents valued two types of rubrics at the macro- and micro-levels. One e-developer reported that teacher users asked for two phases of proofreading for their training for writing, pointing out the importance of narrowing down the scope of their work gradually.

- *DEI7: It looks good because each rubric has its own criteria. It's not repeating the same ones twice, not combining those two. The first draft focusing on a major stream and structure is required. In teacher training, this kind of demand is actually generated. According to each feedback structure twice... Actually, two stages of drafting bring quite different outcomes.*

The other e-developer respondent thought that rubrics written in Korean might be better for some students, and some elements needed to have more weighted values in the rubric. This response overlapped with the point some of the student interviewees suggested, that rubrics should be written in Korean for their clear understanding.

- *DEI9: It is better to provide rubrics written in Korean. For some learners… Criticising others' opinions doesn't seem agreeable to the Korean sentiment. Is there a weighted grade for that? Is each element functioning well? I think a weighted value should be given (for a specific element). And it should be divided for grading into major and minor errors.*

Concerning the provision of a list of vocabulary or reading resources in this stage, three respondents, two lecturers, and two e-developers had a negative opinion, saying that too much input tended to discourage students from developing their own creative and independent writing. However, one lecturer and one e-developer consented to it. One lecturer respondent said it would be helpful for advanced learners to have good samples to refer to, while those at the beginning level feared to copy them.

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Except for one lecturer respondent and one e-developer respondent, the rest agreed that peer feedback would be necessary and helpful because it could allow each student writer to read comments from different viewpoints, including points the teacher missed. They also stated that giving feedback to others would be another chance to learn regardless of the quality of their draft. In the case of negative respondents, one lecturer respondent thought that only second peer feedback was necessary because the first drafts with low quality were not appropriate for peer feedback. However, she agreed about a possible benefit that students struggling to develop their own writing could learn from others' drafts.

Despite their high agreement regarding the need for peer feedback, one e-developer respondent claimed that relatively better student writers could rarely benefit from peer feedback. The excerpt, below, explicitly suggests a possible challenge – that peer feedback may not have specific benefits for developing an essay because it cannot guarantee a high level of participation and accuracy. In this sense, the interviewee strongly pointed out the possibility that student engagement in feedback could be very low and limited to a chance to interact with peers, which rarely offered consistent and accurate reviews. Moreover, this respondent believed that students may not provide accurate assistance for editing in the second peer feedback, which is discussed further later.

- *DEI5: I'm curious about the level of participation and accuracy in the peer review. What are the benefits for providers? They might bother doing it, so it's necessary to give them some benefits. In fact, feedback can be a weak point and, at the same time, the strongest point. Is it just for exchanging opinions? If discussions are possible, they need to discuss the same things, but it's difficult to collect opinions of all. I'm wondering what the merits are that better writers could earn. Giving help to others is just what they can get? This is a matter of the target students who need this writing course. So I doubt the peer feedback. (…) Looking at the rubric and then giving comments, I doubt the consistency between scores and comments. That's not standardised. The rubric itself is good. (…). Active participation of students is good, but if a lecturer sums up in the end, then peer feedback is just a chance for discussion? Instead, peer feedback can be done in the brainstorming stage, or after the first draft is completed, the second drafting stage will only have teacher*

feedback then. Peer feedback cannot be undertaken at the same time [as other tasks] because there is no discussion in class at the same time. Matters of the standardisation and the accuracy level come up.

This significantly negative review on peer feedback does not support the general findings from the student interview analysis yet does partially support one specific point. The findings from the online group student interviews show that their level of engagement in the two peer feedback stages was generally high and, especially, in the first peer feedback, many of the peer reviews were specific and illustrative. Furthermore, in general, the student respondents agreed that they carefully read and reflected on the peer reviews to develop their essays, although they tended to depend more on teacher feedback, especially when they received opposing reviews and for minor corrections in the second feedback stage.

The perception of low credibility in peer feedback is connected to reliance on teacher feedback in this stage, as discussed in the student interview analysis. Students' less reliability regarding peer feedback often resulted in higher dependence on teacher feedback. One lecturer respondent emphasised that teacher intervention should be minimised in this stage to encourage students to provide feedback to others and discourage their heavy reliance on teacher feedback. The developer respondent highlighted that teachers should encourage students to offer detailed and concrete feedback to others, adding that this condition should be significantly emphasised in this stage. The excerpt, below, clearly indicates that she stressed the teacher's role as a dispute mediator in a collaborative communitive environment for feedback exchanges, avoiding the role of an absolute controller.

- *TEI4: It's possible that peer feedback activity is ignored if students are reluctant to read peer feedback and only depend on teacher feedback. It's true that students tend to treat feedback of those at a relatively lower level of writing lightly. It's necessary to read all of the feedback given by others, and also to ask for responsive feedback on the given feedback as well. Teacher interventions should be minimised. It's better to let them go on discussing controversial issues, and then minimised teacher feedback should be given at the last stage. This can increase the*

effectiveness and meaningfulness of peer feedback. It's better to work actively together with peers. Also, teacher feedback on things which students missed should be given. I think teacher feedback on peer feedback is necessary, so that students can get necessary help as much as possible. (…) Peer feedback should be shared with teammates. And it should be necessary to provide feedback to the feedback given. Because each student is at a different level, students can distrust feedback given by a specific group member. They may pay attention to comments that many peers agreed on. It's good to let them all discuss and then reach a conclusion. That's why discussion activities are necessary. If possible, it's good to use a chance to do a whole class activity so that they can collect feedback from others, which can result in a student-centred writing class. Here, the teacher needs to judge the level of each student. The teacher's role is growing for this because teacher control should be stronger to manage unexpected questions when students have free discussions.

As a possible way to construct interaction between students, the previous respondent recommended teacher intervention at the last moment, so students could have enough time to suggest and discuss ideas and then draw a possible conclusion within a community of practice, with freedom and confidence. In this process, the teacher appears during the final stage of feedback exchanges for conclusion inducement. She also suggested a possible option that the specific time for class conferences may help students to be prepared for and familiar with collaborative feedback tasks. Most of the valuable and practical points support the findings from the student interview analysis, indicating the importance of the teacher's specific role in facilitating students' constructive engagement in the feedback stage.

Regarding the necessity of scoring others' drafts, two lecturers and three developers thought that both giving numerical scores and written comments would be necessary. Their positive opinions were based on the assumption that students could discover their weak areas by checking the scores given by their peers or reading their scores and written comments side by side. This finding from the lecturer and e-developer interview analysis supports the general perception of the students, indicating the benefit of recognising strong and weak points at a glance. Furthermore, two e-developers pointed out that a small scale of points would be needed because students could feel confused about overlapping criteria.

Another e-developer and one lecturer suggested it would be necessary to reduce the current scale.

However, one lecturer thought that scoring seemed to require a somewhat higher level of writing and, therefore, it would be difficult for students to undertake scoring. Instead, this respondent recommended self-assessment before peer feedback. Furthermore, one e-developer respondent revealed her negative opinion on scoring when she pointed out a possible discrepancy between scores and comments. The problem of gaps between scores and comments was also mentioned by some student interviewees. The difference between the two was generally found in the process of South Korean students attempting to soften their remarks to avoid harsh and straightforward expressions.

Most of the respondents considered peer feedback necessary and helpful as a chance to learn different points of view. In the entire stage of first drafting, the general findings show it may be necessary to reduce excessive input, such as supportive materials to help their writing performance, and direct and active teacher intervention in the middle of peer feedback. Avoiding too much input and intervention may motivate students to participate in their individual writing and collaborative work of feedback. Furthermore, almost half of the lectures and e-developers stated that giving both scores and comments to others' essays simultaneously would be effective for students to evaluate their own essay again. However, for students' enhanced understanding and coherent evaluation, the necessity of simplifying the current assessment categories or scale of the rubric was highlighted.

5.3.1.2.1.4 Second Draft and Feedback

Three lecturers and four e-developers reported that students need to write a second draft, whereas two lecturers and one e-developer had somewhat diverse points of view. One of the two lecturers thought that only poor writers need second drafting, and the other stated that one drafting stage before the final draft is sufficient. However, both agreed this stage should not be obligatory for all students. In contrast, among the seven positive respondents to the second draft, two lecturers and one e-developer disagreed about this stage being

optional, saying that students would not try optional activities. One lecturer and two developers mentioned it would be better to go through this stage if possible.

Another developer failed to clarify the necessity of the second draft as an optional stage since the level of each student should be decided first. This point was made because the well-developed drafts of higher-level students might be good enough to skip the second drafting stage. In addition, one lecturer and one e-developer specifically pointed out that the teacher role and intervention should be greater in this stage. This viewpoint is in line with the students' general recognition of the increased necessity for teacher feedback for minor corrections.

The excerpt, below, points out the benefit of the detailed drafting stages. This respondent perceived that a rubric with specific focuses on each draft stage may positively impact student revision work, helping them to discover correction points.

- *DEI7: This is a necessary stage. When I created and operated the editing system, I found that the more stages, the more benefits. In each drafting stage divided with each rubric and focus, more advanced-level student writers can find errors based on each focus. It's often that students make mechanical errors, which can be revised here as well. So it is essential to include this stage.*

Regarding the second peer feedback, six respondents (four lecturers and two e-developers) were positive about the second peer feedback focusing on minor errors, whereas one lecturer and two e-developers disagreed that this stage should be mandatory. Those who were negative about peer feedback mentioned that students tended to receive more help from the teacher than peers or depend more on the teacher than peers due to their low level of linguistic proficiency. The majority of lecturers and e-developers were positive regarding the second peer feedback, which differs from the finding from the student interview analysis. The finding from the student data reveals a preponderance of negative perceptions of the necessity of the second peer feedback and, thus, over-reliance on teacher feedback.

The two excerpts, below, are opposite viewpoints on peer feedback. A lecturer respondent acknowledged the positive effect of peer feedback even on lower-level students, stating that even they could do error corrections. However, an e-developer perceived that self-reviews would be more helpful than peer reviews due to a lack of language proficiency.

- *TEI3: It's required. Students at the lower level are good at finding out errors in others' writing. In order to do self-assessment, they need to evaluate others. So I make my students participate in this. This shouldn't be optional.*
- *DEI9: This is not necessary, I think. Students are more likely to depend on teacher feedback rather than student feedback. Self-feedback can be more helpful than feedback from others, instead. (…) But if this should be included, it is required to take part in by all students, not an optional activity. I doubt their activeness. If this is optional, a lot of students won't do this.*

However, one e-developer among the three negative reviewers to the second peer feedback added that this stage should not be optional, not discouraging students to participate in this stage, but, at the same time, acknowledged that forcing them could lead to low credibility and accuracy of peer feedback. This perception was also based on the assumption that students often had a lack of English proficiency for minor error corrections. Furthermore, one lecturer supportive of peer feedback in this stage worried that only proficient writers might try to participate in peer feedback. To address this issue, the e-developer and the lecturer pointed out the specific needs of studies regarding how to increase active participation and how to teach poor writers to become involved in this stage. She also suggested that overall comments would be more recommendable than specific editing to let students discover and identify them on their own.

- *TEI2: Obligatory feedback can cause a lot of students to do fast and loose this task, I think. The younger students are, the less interested they are in writing. As they are busy with their own writing, they have lack of time and intention to read others' writing and give comments on it. It seems that students who are good at writing do their best only. Peer feedback is necessary, but it's necessary to study how to encourage students to participate in this. I know this is needed and important, but*

students have lack (linguistic) knowledge. So studies on how to teach them should be preceded.

Regarding the type of feedback, scores, and written comments, three lecturers and three e-developers out of nine respondents had negative opinions regarding the necessity of scores in this stage, saying that written comments or annotations on specific errors with general comments seemed sufficient. The general negative perception of scoring in this stage is in line with that of the students'. One lecturer had a neutral position, reporting that all kinds of reviews need to be customised based on the level of each student. Other than the six negative responses, one lecturer and one e-developer mentioned it would be better to use both scores and comments. One of the two positive ones explained that scores could be used as a reference with a focus on written comments.

Most respondents recognised that peer feedback focusing on minor errors is necessary and helpful, whereas a minority were sceptical, saying teacher feedback is more beneficial or appropriate than student feedback in this type of editing. To encourage the engagement of students with low writing proficiency in English, some suggested more studies on how to motivate and teach students to be involved in this revision/editing task. Furthermore, written comments were more highly regarded than numerical scores in this stage.

5.3.1.2.1.5 Final Draft and Publication

All the lecturer and the e-developer respondents acknowledged that the submission of students' work should be mandatory. In this stage, in addition to teacher assessment, self-assessment or self-reflection on progress regarding a topic was suggested by three lecturers and one e-developer. In particular, the evaluation of progress by oneself or a group was acclaimed by two lecturers and two e-developers to enable students to undertake their own process of progress when developing a topic. In contrast, one lecturer and one e-developer were negative about progress evaluation, with one mentioning that another evaluation standard might be necessary, but this kind of assessment might be too subjective to be measured. In addition, four lecturers and two e-developers agreed that students needed to share good examples of writing for illustrative purposes and to understand how to write

well-developed essays. However, two lecturer respondents raised an issue of opening students' final work to group members or classmates based on their experiences and, thus, suggested that revealing one's own essay anonymously might be required. The findings from the lecturer and e-developer interviews generally agree with the findings from the student interviews regarding the evaluation of progress, writing portfolios, and publishing one's work.

Except for one respondent, all the lecturers and the e-developers agreed that the publication of written pieces would be necessary and helpful for students to see their progress by reviewing their trials and errors, which might encourage them to have an output as the tangible product of a process and another motivation to be involved in writing classes. Only one respondent reported that publication should be optional for students. Two developers stated that an option to include or exclude feedback or annotations would be needed. Although a majority of students wanted this task to be optional, the finding from the lecturer and e-developer interviews differs from the student interviews.

Regarding the online writing course design of this study, all the lecturers and e-developers considered it helpful for student writers to develop English argumentative writing and English writing itself. In terms of the general sequence, one e-developer claimed that another drafting stage seemed necessary to develop an essay on a topic, whereas one lecturer thought the second drafting stage should be optional. Regarding argumentation, three lecturers and one e-developer mentioned that the instruction of the Toulmin model and the rubrics based on this model could help students to understand argumentative conventions and assessment criteria, and then develop their writing based on a more logical structure.

- *TEI2: I think this writing design is helpful. From the orientation to the drafts and feedback, it has appropriate connections to each other. (…) When I worked on writing in Korea, I didn't know how to give feedback or use it. But here, on one site, everything is possible. Introduction to the Toulmin model and its application to Scholar look good.*

In addition, more explicit instruction on argumentative components and peer review according to given rubrics in the orientation stage were generally highlighted for enhanced student performances during writing. Especially, one lecturer pointed out that the current writing course in this study should be more argumentation-focused instruction and course design, as shown below. This point generated the necessity for further studies on the argumentative writing course in this study.

- *TEI5: It isn't specifically for argumentative writing, but for general writing. (…) It's helpful to teach how to write argumentative writing in advance, but this still looks helpful for general writing. In this sense, orientation on argumentation cannot be emphasised enough. Rubrics should be given in accordance with argumentation, so rubrics related to argumentation should be fortified more. And formats should be more focused on argumentative writing. Actually, this is both a strong and weak point at the same time.*

Regarding offline and online learning environments, two lecturers and three e-developers agreed the online setting is more effective than offline, whereas three lecturers and one e-developer supported blended learning environments. The online environment was supported because of its convenience for sharing and reviewing writing without the limits of time and space, which implies that sharing drafts among peers and teachers is one of the most important issues for feedback. However, offline instruction was still considered necessary for brainstorming and classroom discussions for feedback, especially for students' enhanced understanding of orientation. In general, the offline learning environment was more highly regarded by lecturers than e-developers.

The instructional design received generally positive reviews from English teaching staff and online learning developers, although some suggested a transition to an optional stage or the addition of a drafting stage. Although instruction on the Toulmin model and the application of its argumentation elements into rubrics were highly acclaimed by many, some suggested that more intensive focus on argumentation and peer feedback on rubrics should be given in the orientation stage with more intensive explanations and additional relevant activities.

5.3.1.2.2 Digital Learning Environments

5.3.1.2.2.1 Almind and Scholar

Five lecturers and three e-developers reported that *Almind* as a mind-mapping tool seemed effective and simple to use and allows visualised brainstorming. One e-developer thought students would fill in each blank in an empty map with an idea until their map was completed, so it needed to be patternised, which could help critical writing. This viewpoint was not generated in the student interviews, but offers a specific and practical modification.

Regarding *Scholar*, four lecturers and one e-developer reported it looked simple and easy, helping users to understand functional elements intuitively, but three lecturers stated that the fonts looked small. Four lecturers indicated *Scholar* seemed convenient for giving scores and comments to students. However, one e-developer stated that *Scholar* seemed easy to follow but its environment did not look easy to use, but the *Annotation* tool seemed useful. This respondent highly regarded the tool for annotating since she had never seen this option on any other platforms. She also mentioned it would be necessary to think how *Scholar* could be differentiated from other digital learning environments, and that digital instructional design had been relatively underdeveloped. The excerpt, below, relates her professional review of *Scholar* in terms of its design and operational environment, including that further work is required for digital-based writing platform development. Furthermore, she questioned why we selected *Scholar* as a digital-based collaborative writing platform since it was not user-friendly.

- *DEI1: We need to think about its differences from other digital learning products. Is a Facebook-like environment the only difference from Scholar? Writing itself is a good area to take part in for it has been less challenged so far. The annotation tool looks good. I think I've never seen this in any other products. (…) This looks like Facebook. For college-level students, design should not be fancy and elaborate, but the font size is too small… And there's no function of magnification. It will be necessary to have a tool to magnify specific areas… Icons are too small. It's so*

simple. 'Easy to use' is a basic of all platforms. In this sense, it's good to be easy to follow, but this isn't the environment where we can easily use it.

However, the operational features, such as feedback panels, auto-saving, and the *Annotation* tool, drew positive reviews from many of the online learning developers. For example, one e-developer said the intuitively simplified design was helpful and might aid users to read each review and check numerical scores by aggregation or by each scorer. Furthermore, three e-developers said it seemed easy to save contents automatically and give and receive them through one site with the convenient *Annotation* tool. Generally, *Scholar* received highly positive reviews based on its feedback tools, which enabled users to stay and perform on the same page. However, despite its simple and intuitive operational tools, its design was not considered user-friendly due to its small letter size and division of screen, which was also frequently mentioned in the students' reviews.

5.4 Summary of Results

The findings from quantitative and qualitative data analysis can be summarised and integrated as follows. The quantitative findings show that the writing course for argumentative writing created for this study is effective for students' argumentation improvement regardless of whether it was online or offline. However, an indication that the online class had higher learning gains than the offline one, is not supported by a statistically significant result. In addition, the findings from the quantitative analysis show that the writing course for English argumentative writing of this study helps retention for argumentation regardless of whether it is online class-based or offline. However, the small and identifiable difference between the two groups in terms of argumentative writing proficiency over a month was not statistically significant.

In addition, the qualitative findings from the students' interviews and reflections show that there were positive attitudes towards them in general. The general sequence of the argumentative writing was considered effective for them to develop more logically coherent English argumentative essays. Also, two drafting stages accompanied by each feedback stage were considered effective for focus transition from significant aspects to specific ones. In particular, the modified Toulmin model embedded in the first rubric for macro-level

feedback was valued as an effective means of enhancing their awareness of and sensitivity to the systematic structure of ideas for writing and reading argumentative essays. However, some detailed components for suggesting evidence were considered somewhat difficult to distinguish, requiring some more intensive instruction on argumentation prior to actual writing. Along with students' higher appreciation of the first rubric, the first-peer feedback was more highly regarded than the second-peer feedback. This tendency was inter-related to different level of reliance on peer and teacher feedback, moving from macro-level feedback to micro-level feedback. Especially in the stage of micro-level revision, they were more likely to depend on teacher feedback.

In addition, the qualitative research findings suggest that the collaborative digital learning environment of the online class encourages students to have more freedom and flexibility for reading and reviewing both their own and others' essays in terms of the time and physical space for their task performances. The enriched and supportive setting for exchanging online feedback may encourage students to engage more in thorough and reflective reading and revision. Despite a mixture of positive and negative reviews on the digital writing platform, *Scholar*, the qualitative research findings show that students' high level of willingness to use its feedback tools may have resulted in their advanced involvement in feedback tasks overall. Also, the analytic reviews on the mind-mapping digital tool, *Almind*, suggest students' preference for outlining to graphing, calling for freedom of choice.

Moreover, the qualitative research findings show the importance of the anonymity of the digital-based writing interface for exchanging peer feedback with each other, especially for EFL student writers in a specific social context like South Korea. The anonymity is more likely to enhance the level of students' participation, encouraging them to give more specific, direct, and critical feedback. The reduced constraints of time and space for students' writing practices on the digital writing platform also improved students' engagement in peer feedback overall, encouraging students to exchange more substantive, illustrative and explanatory comments. Therefore, the qualitative findings suggest that students prefer online-based writing courses much more than offline-based writing courses.

In summary, the integrated findings from quantitative and qualitative study imply that the Toulmin model for English argumentative writing instruction needs to be modified further for South Korean university students of this study, reducing undesirable intricacy of understanding its logical structure. Moreover, the digital platform design for English argumentative writing for South Korean university students of this study needs to be further adjusted to enhance their engagement and argumentation proficiency, minimising linguistic and cultural barriers that they may encounter in the process of task participation. The discussions on the modified implementation of the Toulmin model and the insights for digital instruction design will be explored in detailed in the next chapter.

Chapter 6 Discussion

This chapter is devoted to providing a critical discussion of the findings and analysis based on the existing literature as presented in chapters 2 and 3, and, therefore, serves to identify the pedagogical implications and needs for future research. To address the key thematic issues in the findings of this study, this section is divided into four sub-sections: argumentation proficiency and the Toulmin model, rubric and feedback, process-based writing approach for argumentative writing, and digital argumentative writing course design.

6.1 Argumentation Proficiency and the Toulmin Model

As South Korean students are found to have suffered from a lack of in-depth understanding of argumentation in English writing (Choi, 2008), most of the English courses taught in South Korean higher education institutions have not met students' need for English argumentation development because English writing has been neglected (Choi, 2008; Kim, 2009; Kwon, 2012; Shin & Hyun, 2020; Tak, 2012; Ma, 2018; Shim, 2018). Moreover, students in South Korea are generally taught an oversimplified sequence of claim-evidence for standardised writing tests (Choi, 2008), which rarely helps them to develop logically elaborate argumentative essays in English (Ahn & Part, 2019; Choi, 2008; Chung, 2012; Kim, 2007; Shim, 2016). To address the needs of South Korean students in higher education, the design of the digital argumentative writing course in this study was based on a process-based writing approach and incorporated with the Toulmin model to teach argumentation-relevant knowledge of and skills in English. As a ubiquitous model for argumentation with a long history (Ellis, 2015), the Toulmin model (1958, 2003) has been applied to the instructional design for teaching English argumentative writing. After the Toulmin model components were taught in the orientation stage of this study, students were asked to develop and submit their first draft and, then, provide the first feedback to their peers against the first rubric including Toulmin's argumentation elements.

The findings of this study indicate that students generally learned two basic features of argumentation, *claims* and *evidence*, and their briefly patterned structure, which meant the participants considered the Toulmin model to be attractive and fresh. More importantly, students in this study generally deemed the model relatively sophisticated, detailed,

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systematic and procedural for understanding the structure of argumentative discussions in written discourse. While the limited usage of the Toulmin model as a scoring rubric has been criticised (Bugallo-Rodriguez & Duschl, 1997; Carlsen & Hall, 1997; Chinn & Anderson, 1998; Jimenez-Aleixandre et al., 1997), this study presents a broadened application of the Toulmin model as a set of critically evaluative standards that helps students both as readers and writers to judge the soundness of argument structure (Andrews, 2010; Lunsford; 2002) while working towards a final written outcome. While many students in this study found the Toulmin model cognitively demanding, the process-based diagram with categorical elements was considered helpful for understanding the order of an argument and examining the argument structure, reminding students of the terms and concepts of the model (Ellis, 2015).

As the findings of this study suggest both positive and negative aspects of the Toulmin model for writing instruction, we must seriously consider how to teach this model to students in actual writing classrooms. Although the Toulmin model only deals with paragraph-based arguments (Ellis, 2015) as opposed to essay-level argumentation, the general response of the students in this study indicates that specific categorical elements and the procedural organisation of the model helped to increase their sensitivity to logical cohesion and coherence in developing an essay. Although the length of argumentative essays during the writing course was not officially limited in this study, students generally developed up to 500-word essays that contained two to three reason paragraphs justifying their chosen stance. This was because their main reason for attending this writing course was to prepare for the TEOFL test, which requires at least 300 words for its argumentative essay task. In the participant recruitment stage of this study, the benefit of students having the opportunity to practice TOEFL writing was used to promote the writing course as a way to increase the participation rate. Given that students' essays were not long argumentative papers, the Toulmin model was found to work well in developing the relatively short reason paragraphs, increasing the overall level of argumentation in their essays.

In this sense, the criticism that the Toulmin model only serves a single argument structure (Ellis, 2015) might not apply to this study. Rather, Toulmin's simple unit in an argument was likely to help students to apply its structure when developing each reason paragraph in an

essay. Moreover, as the Toulmin model provided a more detailed structure than students of this study were generally familiar with, the model was perceived to encourage students to enhance their awareness of and sensitivity to critical cohesion. The qualitative findings from the student data suggest that the participants used more argumentation-specific features in their essays and consciously tried to apply Toulmin's components in the step-by-step process after learning it in the orientation stage. Therefore, the Toulmin model facilitated students' understanding of critical reasoning through its elaborate and structural framework and, thus, had a positive effect on developing short argumentative essays.

Meanwhile, the general views of the students in this study also highlight their confusion between *ground* and *warrant*, which supports suggestions in the literature that *warrant* is considered the most difficult element of the model (Ellis, 2015; Fulkerson, 1996; McGee, 2000, Lunsford, 2002; Warren, 2010). Along with delicate differences between Toulmin's elements, a lack of opportunities for students to learn a specific argument structure or sub-divided argument elements may have increased confusion about some components of the Toulmin model. Possible confusion between Toulmin's elements was also highlighted by the lecturers and e-developers. Therefore, this finding also supports the suggestion in the literature that teachers should carefully consider how to adapt the original Toulmin model to a specific educational context (Ellis, 2015; Lunsford, 2002; Simon, 2008; Qin & Karabacak, 2010), meaning that elements of the Toulmin model can be categorically combined or simplified.

Despite students' difficulties in differentiating between some elements of the Toulmin model, over-simplified argumentation categories are a matter for serious consideration. The sub-specialised components converging to a claim in the argumentation framework is a feature of the Toulmin model, which can enhance sensitivity to and a tangible sense of logical cohesion by following its structural sequence. While some of the components are likely to cause confusion, the fact that each element systematically supports a claim is also likely to help students to understand the relationship between Toulmin's elements. In this sense, blurred boundaries between the components under an overarching category of 'evidence' can eliminate the genuine characteristics or benefits that the Toulmin model provides, which can make the model less meaningful. The qualitative findings of this study

indicate that the schematisation of detailed components of the Toulmin model gained the positive attention of students, teachers and e-developers, and improved their perception of the model. Of course, the first rubric in this study excluded two elements of the model, *baking* and *qualifier*, but further simplification may bring it closer to common, general frameworks for argumentative writing, only leaving *claim*, *evidence* and *rebuttal*. This simple structure would hardly provide explicit explanations of logical leaps between sentences and may not meet the original needs of the students in this study, who preferred a systematically detailed structure for English argumentative writing. In addition, the fact that students face some challenges in fully understanding the model does not necessarily mean that teachers should teach only the comprehensible components or avoid teaching the whole model to students. In fact, how to modify the Toulmin model further should be explored in future studies as a reiterative process.

Despite the lack of focus on practical applications of the Toulmin model, it is important that teachers clearly introduce and explain the model to students (Qin & Karabacak, 2010). To enhance understanding, instructors can introduce the three major elements, *claim*, *grounds* and *warrant*, first and then move on to the remaining elements such as *backing*, *rebuttal* and *qualifier* (Qin & Karabacak, 2010). Or, closely overlapped components such as *grounds* and *warrants*, both of which were frequently deemed the most confusing elements by student respondents, can be incorporated into one category to be taught as one large backing process in accordance with the level of students' writing (Simon, 2008). Having one, larger categorisation can decrease the complexity or elaborateness of detailed elements of the Toulmin model, relieving students' cognitive load. In addition to adjusting the model, the qualitative analysis suggests that students need sufficient time to get accustomed to Toulmin's elements and the enriched practice of using Toulmin's core components. It is important to listen to students' voices in the process of recategorising the argumentation elements, as other studies have highlighted the necessity of a joint development period for specific writing rubrics between a teacher and students (Evans, 2013; Harman, 1998; Stevens & Levi, 2005; Wang, 2014).

To put additional focus on English academic writing for university students who have a relatively higher level of literacy in their first language, the level of modification of the

original Toulmin model should depend on the literacy level of the target students so that the model can provide variations according to the degree of cognitive or logical difficulty required. For example, lower-level students can be taught three core logical components in the model, *claim*, *grounds* and *warrant*, along with *rebuttal*, while the rest of the components (*backing*, *qualifier* and so on) can be clustered and subsumed into *warrant*. As students' progress to the next level of argumentative writing, they can gradually be taught more of the detailed structure of the fully-fledged Toulmin model, gaining a broader and deeper understanding of and skills for logical cohesion and coherence.

In addition, when students reach each level of the elaborate structure of the Toulmin model, they should be given specific essay examples where this structure is represented. As a way of facilitating students' understanding of the Toulmin model, students and lecturers/e-developers generally recommended activities such as pattern practice or paragraph completion in a short writing piece as a warm-up task prior to actual writing. When students find Toulmin's specific elements in the given writing samples, supporting materials should match students' current level in terms of the detail of the Toulmin model and students' English proficiency. In addition, it can be effective to present the graphically-enhanced structure to help students to grasp the hierarchical relation between Toulmin's elements. As students' writing proficiency develops, the complexity of the visual representation can gradually increase, including more elements of the Toulmin model.

Figure 15: Interrelation between students' linguistic proficiency and teacher intervention
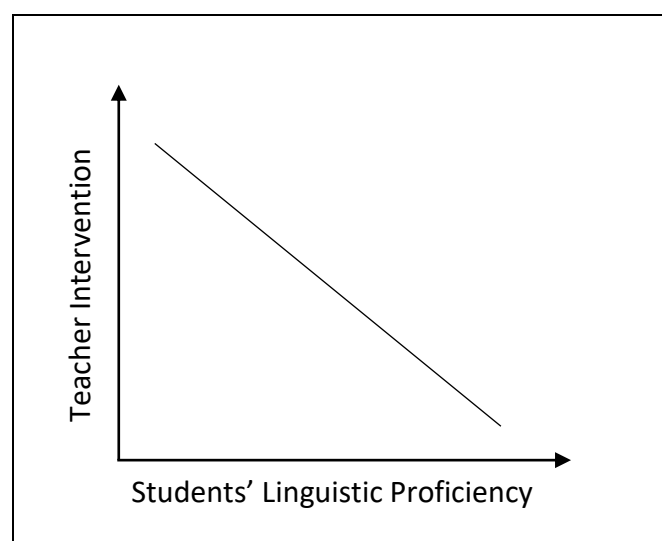
Considering modification of and support for the Toulmin model in writing instruction, the need for and the level of a teacher's adjustment of the model are inversely proportional to students' linguistic proficiency in English. The diagram below represents this inverse relation between teacher intervention and students' English proficiency.

Moreover, we need to consider and explore possible ways of adapting the Toulmin model for the development of argumentation beyond the limited boundary of traditional instruction that focuses on genre-specific knowledge, which is particularly addressed in English for Specific Purpose (ESP) and/or linguistic competence and mechanical skills. As Stapleton and Wu (2015) claim, argumentative writing should go beyond patterned essays with argumentation components, which means that the quality of reasoning should be well established beyond the surface level of logicality. This suggests that argumentation skills cannot be represented by or confounded with genre-based knowledge, linguistic skills or mechanical skills, although they are partially interconnected shown in Figure 17. This point highlights the necessity of students learning the process of structuring an argument for logical discussions, which has often been absent or neglected in English writing instruction on arguments, while genre-specific knowledge and linguistic competence usually receive significant attention.

Figure 16: Components of argumentative writing development
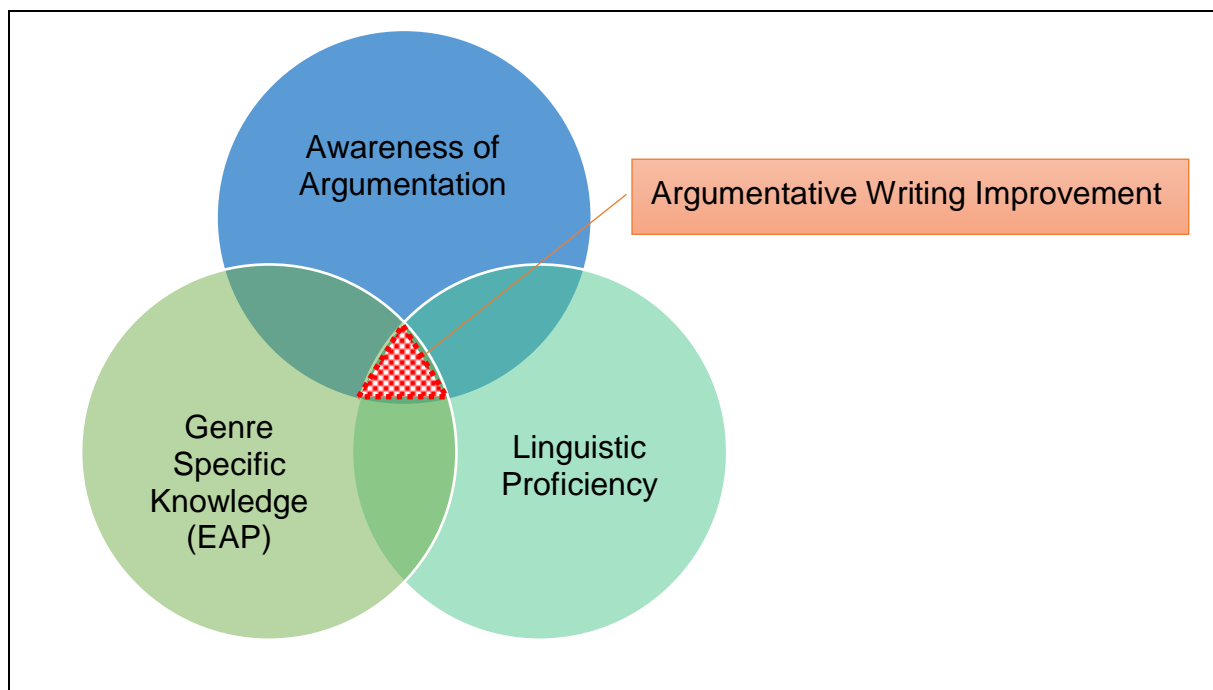
Therefore, to address the challenges and possible variables in argumentation instruction, more emphasis should be placed on studies of how to teach or apply the Toulmin model to each level of writing proficiency in addition to different writing environments relying on L1's specific writing conventions, as opposed to simply measuring students' improvement in argumentation by using the rubrics based on the model. At the same time, it is also necessary to explore how to develop relevant instructional materials to present and illustrate a modified logical structure and selected components of the original Toulmin model, which also requires relevant studies on the effects of the developed materials.

From a different angle, students' argumentation skills can also be discussed in order of knowledge development as shown in Figure 18 below. In terms of the developmental sequence, awareness of argumentation should not only be the last stage in writing development but is also the most advanced level of knowledge in linguistic proficiency. Given that the progress order implies a hierarchy of writing proficiency development, argumentation skills are not interchangeable with or naturally transferrable from linguistic and genre-specific knowledge. This point, in particular, emphasises the necessity of targeted instruction on argumentation, which cannot be neglected or underestimated in writing instruction. At the same time, the need for argumentation-focused instruction suggests that more argumentation-specific instructional materials for enhancing understanding of argument structure and necessary strategies should be developed and implemented, as opposed to relying on traditional teaching practices in ESP writing courses. As the Toulmin model is technically difficult to understand and apply due to the difficulty in differentiating between some elements of the model (Andrews, 2010), research evidence should support writing teachers so they can design more strategy-focused instructional materials.

In summary, the level of adjustment required in a specific writing environment, the development of instructional materials focusing on argumentation elements and the design of argumentation-specific writing rubrics still require attention, which highlights the need for further research in these areas. Furthermore, studies on English argumentative writing in South Korea, including the use of the Toulmin model in argumentation instruction, have been under-researched. In addition, some studies relevant to the Toulmin model have been limited to an analytical way of L1 argumentative writing (Carlsen & Hall, 1997; Chinn &

Anderson, 1998; Crammond, 1998; McCann, 1989; Ferretti et al., 2000; Jimenez-Aleixandre et al., 1997; Nussbaum & Kardash, 2005). Lack of studies on the Toulmin model can also increase the need for further studies on the usability and applicability of the Toulmin model in EFL writing classrooms, including South Korean instructional settings. As Fulkerson (1996) claims, there need to be further studies on the effective use of the Toulmin model in order to explore how to modify it in a specific context or the individual situations of participants. Future studies need to place more focus on classroom variables such as students' age, cognitive level, level of proficiency at the target language, necessary level for professional writing, ESL or EFL learning situation and so on, not merely focusing on the quantity or quality of students' use of the argumentation components of the Toulmin model.

Figure 17: Sequential progress of argumentative writing development
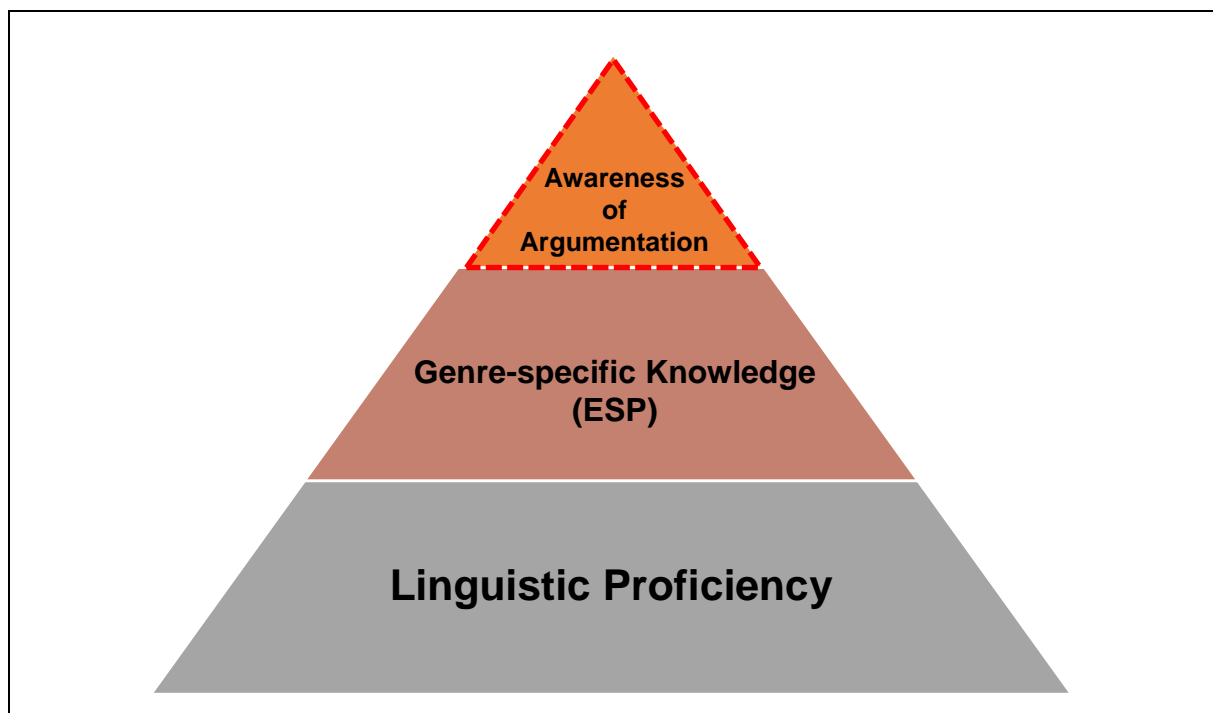
6.2 Rubric & Feedback for Argumentative Writing

In this study, analytic scoring rubrics were created and used based on Jacobs et al.'s (1981) 'ESL Composition Profile' for the first and the second rubric. In addition, the Toulmin model (1958, 2003) was implemented in the first rubric under the large category of 'Details on Argumentation' along with the other two categories, general structure and contents. Given that the first rubric for macro-level revision is argumentation-focused, this rubric also

contains key features of trait-focused rubrics, which were designed to concentrate on strategies and skills for argumentative writing. While the first rubric is for macro-level revision, the second rubric for language use and mechanics is for micro-level revision without trait-focused features.

The qualitative finding from the student data suggests that students responded more positively to the first rubric than the second, in the sense that the first was considered more helpful for revision. Strobel et al. (2019) stress the importance of macro-level assessment, the finding of their study supports the positive effects of macro-level assessment in improving argumentative writing skills. In addition, similar to the benefits of multiple phased assessments that have previously been suggested (Prowse et al. 2007; Yang, & Carless, 2013), students in this study found the two-phased rubrics with different focuses helpful for understanding the different purposes of a task in each stage and differentiating between the criteria and standards for assessment of two feedback and drafting stages.

Specifically, the responses show that students tried to remind themselves of rubric elements for both their own writing and peer review tasks, which encouraged them to provide reflective, consistent and evaluative feedback for themselves and others. This implies that the detailed criteria explained in rubrics, as advocated by Stevens and Levi (2005), helped them to be more focused and self-directed (Black & Wiliam, 2009; Nicol & Macfarlane-Dick, 2006; Spandel, 2006; Stevens & Levi, 2005; Wiliam & Thompson, 2007), providing them with opportunities to reflect on what they learnt in the orientation stage (Jonsson & Svingby, 2007; Nicol & Macfarlane-Dick, 2006; Saddler & Andrade, 2004; Stevens & Levi, 2005). The result that students paid careful attention to a targeted rubric and its criteria in each feedback and revision stage and considered what to evaluate is also in line with the finding of previous studies that rubrics help students to understand the learning targets and their performance standards (Brookhart & Chen, 2015; Jonsson & Svingby, 2007; Saddler & Andrade, 2004) and to anticipate the needs of revision and improvement (Black & Wiliam, 2009; Brookhart & Chen, 2015; Evans, 2013; Jonsson & Svingby, 2007; Mittan, 1989; Moore, 1986; Nicol & Macfarlane-Dick, 2006; Osana & Seyour, 2004; Reddy & Andrade, 2010; Saddler & Andrade, 2004; Witbeck, 1976).

Further, students felt responsible for or somewhat pressured into including all aspects of the rubrics, such as *rebuttal* in the first rubric, when they developed their own essays or scored and reviewed the work of their peers. This finding supports the claim that rubrics encourage students to take more responsibility for their learning (Evans, 2013; Jonsson & Svingby, 2007; Nicol & Macfarlane-Dick, 2006; Saddler & Andrade, 2004; Stevens & Levi, 2005). Although all the argumentation components are not required at all times, their prominence in the first rubric may encourage students to create more logical and structurally sound essays as writers and more content-specific, coherent and substantial comments as reviewers, increasing the quality of critical thinking as mentioned by Kuhn (1991).

In terms of the second peer feedback for micro-level revision, most participants noted that they were not confident enough to provide feedback on minor errors, especially grammatical errors, to their peers. This recognition further meant that they did not view their peers as credible providers of the second feedback, which Nelson and Murphy (1993) also found. As indicated in previous studies (Hedgcock & Lefkowitz, 1994; Lee, 2005; Leki, 1991; Komura, 1999; Rennie, 2000; Saito, 1994; Yang, Badger & Yu, 2006; Zhang, 1995), this study demonstrates that students are more likely to rely on teacher feedback, especially for linguistic features. This issue was also highlighted by lectures and e-developers. This finding is consistent with previous studies that suggest learners want to be corrected by teachers (Catchcart & Olsen, 1976; Chenoweth et al, 1983; Ferris & Hedgcock; 2014; Lee, 2008; Ellis, 2008) and place more value on teacher feedback than peer feedback (Komura, 1999; Lee, 2005; Leki, 1991; Rennie, 2000; Saito, 1994; Yang, Badger & Yu, 2006; Zhang, 1995).

To address students' over-dependence on their teachers, the qualitative findings from the student and lecture/e-developer interview data all suggest that teacher feedback should be delayed after peer feedback (Lee, 2008; Yang & Carless, 2013). To encourage students to focus more on their interactions with other students as opposed to teacher feedback, a teacher intervention should be given at the last moment so that students have sufficient time to generate, discuss and consider diverse ideas within a community of writing practice. In this process, teachers can work as facilitators to encourage each student to work as a confident, independent member of a group. Teachers can then become directly involved as

moderators in problem situations in the final stage of the feedback exchanges and provide corrective feedback to solve misunderstandings and fill the knowledge gaps of students (Hattie & Timperley, 2007).

While the findings from student and teacher/e-developer interview data indicate students' general tendency to be overly reliant on their teachers for the second feedback, the findings from students' feedback data show that many of the students in the intervention group also actively participated in the second feedback. Of course, among the active participants, higher-level students in English writing were more likely to provide the majority of the second peer feedback. In this study, each group was comprised of students at each level of writing proficiency in English, such as low, intermediate and advanced levels, for collaborative learning in a group.

In addition, the second peer feedback was considered necessary by most of the lecturers and e-developers. Moreover, it is worth noting that students at any level would be able to provide feedback with peers, which was mentioned by a minority of lecturer interviewees. This point can be interpreted as referring to how structures, accountability mechanisms and effective feedback training can encourage students to provide meaningful, helpful and accurate peer feedback (Schunn, 2016). Therefore, teachers should consider how to develop assessment measures, train students according to assessment criteria and engage students in peer feedback tasks. Considering that the role of the feedback giver has been found to have more educational benefits than feedback receiver (Stevens & Levi, 2005), lower-level students, in particular, should be encouraged to take part in peer feedback tasks. Moreover, more external feedback is likely to lead to further revision, and, therefore, enhance the quality of written outcomes (Patchan et al., 2018; Schunn et al., 2016; Wu & Schunn, 2020), emphasising the need for more active feedback exchanges between peers.

For peer feedback to have a positive effect on students' writing improvement, it is important that students have enhanced awareness of and training in those rubrics which they will use in the 'preparation stage' (Evans, 2013; Jonsson & Svingby, 2007; Wang, 2014). In fact, understanding the first rubric is relevant to understanding the Toulmin model in this study. In the orientation stage, the two kinds of rubrics were introduced with brief

explanations of their criteria and a limited set of exemplary activities due to time limitations in the course schedule. In line with the need for delayed teacher feedback, students should be well trained prior to actual writing stages, so that they can work as active and responsible members (Hirvela, 1999; Mendonça & Johnson, 1994). Between the two feedback stages in this study, students could work more actively in the first peer feedback than the second because the first feedback as macro-level revision requires focus on overall logical coherence and cohesion, not linguistic accuracy. For the first peer feedback, preliminary training in assessment against the first rubric criteria can enhance students' confidence in, readiness for, and, therefore, engagement in the first peer feedback.

Compared with the first peer feedback, the training in the second peer feedback needs to be level-specific. In this study, while lower-level students were more likely to focus on language mechanics such as spelling and punctuation, higher-level students were more likely to look at grammar and language use. This means that lower-level students tended to find visually identifiable items while higher-level students tended to consider linguistic accuracy. This suggests that teachers should motivate students to perform their best in a group to establish a relationship of complementary cooperation with their peers. As generated in a lecturer interview session, this partnership in peer feedback supports the idea that 'any students, even lower-level students, can provide feedback.' Therefore, for EFL student writers who often lack writing proficiency in English, teachers can focus on major errors like general structure and content as opposed to minor errors, so simplified categories can be applied in the second rubric for minor errors. Therefore, the categorially broader rubric for minor error revision can help to increase learners' participation and decrease the pressure of micro-level peer feedback. The findings from student data further indicate that students expected to have only one option for second peer feedback, either comments or annotations for corrections, which implies that the detailed, multilayered features of the second rubric were found to be complicated and not user-friendly (Diab & Balaa, 2011). Therefore, considering the suggestion that feedback should be adjusted to each student and help students in various aspects (Ferris & Hedgcock, 2014; Nicol & Macfarlane-Dick, 2006), the findings of this study suggest that the second rubric should be adjusted to students' English proficiency and their practical needs.

Also, considering the multi-dimensional factors and characteristics in EFL contexts, students' perceptions of and attitudes towards exchanging feedback should be regarded as a sensitive issue (Topping, 2009), which is fundamentally related to the socio-cultural customs of the target students. While students' lower level of linguistic proficiency in English as EFL writers is not the only issue in ESL writing classes, this study shows that students' reluctance to critically review others is one of the hidden barriers behind writing classrooms. Due to their socially reserved nature when critiquing, students in this study tended to avoid direct and frank criticism, particularly in face-to-face situations, which has been investigated in previous studies on Asian students, including South Korean students (Choi & Rhee, 2013; DeWaelsche, 2015; Lee, 2016; Nelson & Murphy, 1993; Ramanathan & Atkinson, 1999; Wang, 2014). This tendency is considered a fundamental challenge for process-based writing classes (Ramanathan & Atkinson, 1999), which emphasises feedback exchanges between students (Ferris & Hedgcock, 2014). Students' reluctance to give negative criticism might consequently encourage students to depend more on teacher feedback rather than peer feedback, decreasing active participation in peer feedback.

Having this cultural variation in mind, teachers should sensitively investigate how to encourage and motivate students to participate in feedback tasks more actively and constructively (Scott, 2014; Watling, 2014). As suggested above, feedback training sessions that increase students' awareness of rubric criteria and feedback strategies can help reduce some of their fears around giving straightforward comments to their peers. Also, as the e-feedback relevant literature (Patchan et al., 2018; Schunn et al., 2016; Wang, 2014) suggests, online feedback where students' identities can remain anonymous is a more convenient and less sensitive setting for students, which is strongly supported by the findings of this study. However, even in the online feedback environment, feedback training and clear guidance for given rubrics may be still necessary for students to perform as valuable reviewers. In addition, students' engagement in the process of rubric development can enhance the positive effect of rubrics on students' writing improvement (Evans, 2013; Harman, 1998; Stevens & Levi, 2005). Given that underlying features of the target instructional setting should receive more serious consideration in terms of feedback and rubrics, more research may be necessary to ascertain how to develop a feedback policy and explicit rubric criteria

in a specific writing classroom and how to train students for collaborative feedback tasks in a specific cultural environment.

6.3 Process-based Writing Approach for Argumentative Writing

As the findings of this study suggest, a period of more explicit and intensive instruction on Toulmin's components and its structure, how to interpret and implement rubrics for peer feedback and so on should be operated by teachers in the orientation stage. Teacher-led classroom instruction and warm-up activities prior to the actual writing stage start can enhance students' understanding of and familiarity with how they should perform in their writing tasks. Teachers should consider teaching students how to use rubrics, including each level of the essay quality and measurement scales, which may be somewhat time-consuming and challenging for teachers to manage in the actual learning context (Brookhart & Chen; 2015). Even though the process-based writing approach emphasises students' autonomy in writing, this study indicates that university students in South Korea still need the direct intervention of teachers across their writing process, not leaving them to work entirely independently in their writing process. This suggests that students should be provided with explicit strategy training and modelling of feedback in the pre-task stage (Evans, 2013; Kintsch et al., 2000; Schunn, 2016), which means that teachers should consider the needs of learners in advance and adapt their course design and supportive materials to the target context of instruction.

The need for teacher-led instruction suggests that we need to investigate how to integrate the process-based writing approach and teacher's direct instruction, while still maintaining student-led characteristics such as multiple drafting and peer feedback stages. In addition, the findings from student and lecture/e-developer interview data show that face-to-face instructional sessions, especially in the orientation stage, are still considered helpful and necessary. Especially for intensive instruction by teachers, many of the students and even some of the e-learning developers in this study still wanted an online writing course to include some period of blended learning in the orientation stage, even though students largely preferred remote learning to face-to-face. Moreover, while students were generally reluctant to have face-to-face interaction for feedback, they preferred a face-to-face mode

over a remote learning mode for teacher-led instructional sessions. This might raise the issue of how much we should depend on digital learning environments for instruction in English writing unless online instruction is the only option.

The students' strong need for teacher-led sessions for strategy and skill-focused instruction may be attributed to the fact that many South Korean students, as EFL writers, are not skilled writers in English and lack opportunities to write in English for social interaction (Horowitz, 1986; Hyland, 2002). In addition, process-based writing is criticised due to its lack of clear guidance on each genre (Ferris & Hedgcock, 2014), so writing multiple drafts with little understanding of genre-specific writing conventions rarely helps students to develop the necessary writing skills for the target genre (Horowitz, 1986). Although students in this study expected more intensive pre-sessions led by a teacher, students found the orientation stage that delivered compressed argumentation-focused instruction helpful for their knowledge of and preparedness for authoring argumentative essays and undertaking peer feedback. After the teacher-led preliminary session and the teacher's interim feedback of students' misunderstandings or major mistakes, students in this study became accustomed to Toulmin's argumentation elements and rubric criteria, improving the quality of peer feedback from the first writing topic to the third.

Therefore, the findings of this study support the critical necessity of strategy-focused and timely intervention of teachers for EFL students (Lee, 2008; Yang & Carless, 2013), which can ultimately encourage students' engagement in and contribution to writing tasks, including peer feedback. Also, the effectiveness of the pre-session can be emphasised to enhance the quality of peer feedback, considering this study's finding that poor quality peer feedback may decrease students' engagement and the credibility of peer feedback, and that it rarely contributes to improving in peers' writing. Moreover, given that the enhanced quality and quantity of peer feedback were deemed significant factors to improve students' responsibility for participation in and, therefore, revision quality in writing, teacher-led instruction should be emphasised when designing a writing course.

6.4 Digital Argumentative Writing Course Design

In terms of the digital, process-based argumentative writing course in this study, the convenience and effectiveness of exchanging written drafts and feedback between peers and/or among students and teachers were critical. The need for collaboration in developing an argumentative essay is the main reason for the use of a digital-based integrated writing platform throughout the writing process. However, the qualitative findings of this study show that writing platforms that are optimised for collaborative writing are still rare, although there are some writing-focused platforms in the education technology field in South Korea. It is necessary, therefore, to explore how to develop a more intuitive, familiar and effective instructional interface for students to minimise the time and effort taken to learn how to manage their writing tasks in a given digital setting, which emphasises introduction, implementation, evaluation, reflection and modification of digital tools for language instruction (Chapelle & Hegelheimer, 2003; Colpaert, 2006; Hawisher & Selfe, 2008; Laurillard, 1993; Laurillard, 2002; Robinson et al., 2019; Ward, 2006; Williams & Beam, 2019). Here, I will focus on key points, and the rest of the detailed discussions on the chosen digital writing tools are suggested in Appendix 11.

As frequently mentioned in the interview data, it is important to note that student users were well accustomed to current social media and expected to use their common interface in this study, which implies that customised instructional designs for digital writing should reflect the constructional design and mechanical functions of social media. While students valued instructional, motivational and operational advantages of social media (Akhiar, 2017; Handayani et al., 2018; Ismail et al., 2018; Ramadhani, 2018; Rinda et al., 2018; Sun & Chang, 2012), their familiarity with popular social media was considered one of the main factors that meant they considered the operational system of *Scholar* inconvenient, in addition to *Scholar*'s less effective design features. Based on the findings from student and e-developer interview data in this study, the major disadvantages of *Scholar* were its small font size, no eye-catching font colour for feedback, unsynchronised movements in two separate panels on a page, an un-identifiable set of auto-saved drafts, an indirect entry only to a writing task panel and more. Considering the need to develop a tailored writing platform and modify *Scholar*, we must find ways of implementing and adjusting effective digital affordances and

design features of social media into a digital writing course that enables users to share drafts and exchange macro and micro-feedback.
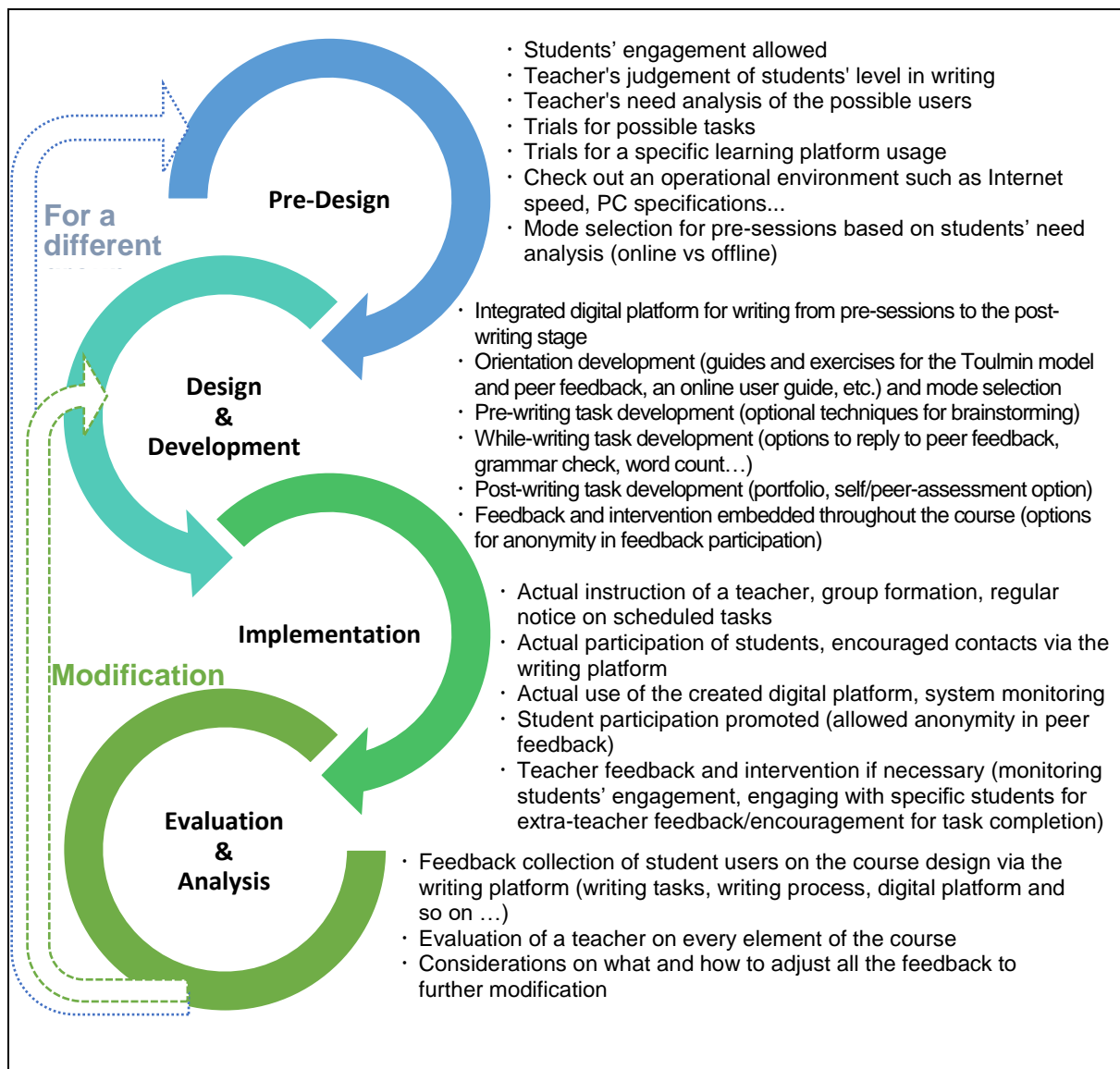
Overall, Figure 19 below illustrates the possible principles for developing a digital writing course design, including digital argumentative writing courses. Developing a course design model is an ongoing and cyclic process (Colpaert, 2006, Ward 2006) with mutually conversational processes between teachers and students (Laurillard, 1993; Laurillard, 2002), which is already well known by the ADDIE model (Andrews & Goodson, 1980), but key points for consideration in course design are suggested here. The pre-design stage can be included in the whole design process because it is a preparation stage prior to the actual design stage, which involves operating trials for the possible tasks and digital tools (Colpaert, 2006), and analysing the needs of the target students (Colpaert, 2006; Laurillard, 1993; Laurillard, 2002). It should be noted that students can participate in this stage as co-designers (Colpaert, 2006), not just as final commenters on a course for future adaptation, so that they can help teachers and e-course designers to identify any possible difficulties or barriers in task performances in the given setting. Based on the analysis, teachers and e-course designers should produce better-fit tasks and improved operational environments to support the actual users in a specific learning stage (Chapelle & Hegelheimer, 2003; Hawisher & Selfe, 2008; Williams & Beam, 2019). The importance of the pre-design stage is strongly supported by the fact that unexpected difficulties or problems in students' performances in *Scholar* occurred during the digital writing course of this study. In fact, many of the issues were not clearly identified in the pilot stage of this study.

The key principles in each stage are based on the findings generated by students, lectures, and e-learning developers in this study. In the pre-design stage, teachers and/or e-developers should consider the English writing proficiency and needs/interests of students (Colpaert, 2006), search for appropriate tasks and learning platforms (Colpaert, 2006), look into the possible technical environment (Chapelle & Hegelheimer, 2003; Colpaert, 2006; Hawisher & Selfe, 2008) and so on. It is also necessary to analyse and decide on the mode of pre-sessions (online-based vs. offline-based) before adjusting the target activities to the selected mode of instruction. During this stage, students are welcome to participate and

offer their personal views as users on possible learning modes, purposes of learning, preferred tasks, and so on.

Then, in the design and development stage, teachers and/or e-developers design an integrated digital writing platform with the Toulmin model throughout the writing course. For each writing stage, they develop pre-, while- and post-writing tasks, considering how and where argumentative components of the Toulmin model and writing rubrics can be embedded and suggested in the digital setting. The findings of this study suggest that students expected to refer to Toulmin's components and feedback criteria as a pop-up window so that they could read them side by side while undertaking any task. Also, brainstorming tasks for the pre-writing stage, and macro and micro-level peer feedback tasks for a specific drafting stage should be designed with user guides on how to perform the tasks and operate the learning platform. Students in this study requested more options such as note-taking and outlining for brainstorming techniques, word processing functions such as grammar check and word count for a writing panel. In addition, they asked for a reply option for writing extra questions to a specific peer review for further clarification and options to choose between comments and annotations for minor peer feedback. For the post-writing stage, they preferred a portfolio option after submission and an opportunity for self or peer assessment based on their overall progress across the drafts of a writing topic. Moreover, systematic allowance for screening participants' names is critical to promote student engagement in peer feedback.

Figure 18: Design principles for digital argumentative writing course

Pre-Design

· Students' engagement allowed
· Teacher's judgement of students' level in writing
· Teacher's need analysis of the possible users
· Trials for possible tasks
· Trials for a specific learning platform usage
· Check out an operational environment such as Internet speed, PC specifications...
· Mode selection for pre-sessions based on students' need analysis (online vs offline)

Design & Development

· Integrated digital platform for writing from pre-sessions to the post-writing stage
· Orientation development (guides and exercises for the Toulmin model and peer feedback, an online user guide, etc.) and mode selection
· Pre-writing task development (optional techniques for brainstorming)
· While-writing task development (options to reply to peer feedback, grammar check, word count…)
· Post-writing task development (portfolio, self/peer-assessment option)
· Feedback and intervention embedded throughout the course (options for anonymity in feedback participation)

Implementation

· Actual instruction of a teacher, group formation, regular notice on scheduled tasks
· Actual participation of students, encouraged contacts via the writing platform
· Actual use of the created digital platform, system monitoring
· Student participation promoted (allowed anonymity in peer feedback)
· Teacher feedback and intervention if necessary (monitoring students' engagement, engaging with specific students for extra-teacher feedback/encouragement for task completion)

Evaluation & Analysis

· Feedback collection of student users on the course design via the writing platform (writing tasks, writing process, digital platform and so on …)
· Evaluation of a teacher on every element of the course
· Considerations on what and how to adjust all the feedback to further modification

For a different

Modification

In the implementation stage, a developed digital platform for argumentative writing is used in a specific class. Before the class starts, the teacher should divide students into groups, set up the system to give notice of necessary tasks, decide whether to allow anonymous participation, monitor students' participation and contact specific students for late or no task completion via the writing platform. Moreover, teachers should be involved in the final phase of peer feedback to clarify major errors and misunderstandings in a group discussion and must decide whether to provide teacher feedback as a separate review to individual students or as a shared reply to a discussion in a group. This optional opportunity for teacher feedback should be supported by the digital writing interface.

In the evaluation and analysis stage, feedback from both students and teachers on the writing process, the writing tasks and materials, the digital writing platform and the like are collected for teachers/e-developers to refer to when modifying the current digital instructional writing design. This final user review should be collected by the same writing platform to enhance students' perception of their final feedback as part of the whole instruction process, which is emphasised in formative assessment (Nicol & Macfarlane-Dick, 2006; Smit et al., 2019; Wiliam & Thompson, 2007). In addition to the user review, the findings of this study indicate that students should be given the option to create a portfolio to skim through drafts of a topic, including their own and peers' portfolios, and provide self and peer-assessment as a summative assessment. This summative assessment can be simply scores or grades (Sadler, 1989) or accompanied by general review comments. Therefore, the reflective and evaluative opportunities can ultimately increase students' self-regulation and writing skills (Chen & Cheng, 2008; Gikandi et al., 2011; Kellogg & Raulerson, 2007; Roscoe et al., 2011; Roscoe et al., 2013; Roscoe & McNamara, 2013; Wijekumar et al., 2016).

After the evaluation and analysis stage, there are two possible paths: modification and re-implementation, or re-design and implementation. What is important here is that students should be encouraged to join the modification or re-design process (Colpaert, 2006), so that the updated course design is firmly based on their needs and interests (Chapelle & Colpaert, 2006; Hegelheimer, 2003; Laurillard, 1993; Laurillard, 2002). However, if a teacher selects a ready-made digital writing platform, such as in the case of this study, modification or re-design is not an option, thus other options should be looked into for the next instruction.

In summary, developing a language course design is a pedagogy-driven and unceasingly reflective process (Chapelle & Hegelheimer, 2003; Colpaert, 2006; Laurillard, 1993; Laurillard, 2002). Therefore, the reiterative and adaptive cycle of designing a writing course is more likely to improve students' in-process writing performances with self-regulation and writing skills enhanced, which can be facilitated by personalised learning and timely support during their writing process (Chen & Cheng, 2008; Gikandi et al., 2011; Kellogg & Raulerson, 2007; Roscoe et al., 2011; Roscoe et al., 2013; Roscoe & McNamara, 2013; Wijekumar et al., 2016).

Chapter 7 Conclusions

7.1 Conclusion on the Findings

This study was developed to suggest instructional design principles for an online English argumentative writing course combining the Toulmin model with the process writing approach in the South Korean e-learning environment. The main research question was: 'What are the reported effects of digital materials development for instruction in English argumentative writing for university students in South Korea?' To answer this question, subsidiary questions were generated and investigated as follows: 'What are the effects of e-learning intervention on argumentation for learners?,' 'What are the effects of e-learning intervention on learners' retention for argumentation?,' 'What are the learners' attitudes towards and opinions of the used instructional design and e-learning environments for argumentation improvement?' and 'What are the views of specialists in English education on argumentation and/or on the instructional design of existing issues and further modification?'

With regard to the question, 'What are the effects of e-learning intervention on argumentation for learners?', the quantitative findings show that the writing course for argumentative writing created for this study is effective for students in improving argumentation regardless of whether it was online or offline. Both the online and the offline classes had a positive effect on students' argumentation writing and, despite an indication that the online class had higher learning gains than the offline one, is not supported by a significantly different statistical result. This could, of course, be due to random variability and is not indicative of a promising result. But, in combination with the qualitative findings, it seems that the research question warrants further study. For example, further studies with bigger cohorts could be pursued to verify the impact of online-based writing classes on argumentation development and what these new results would imply if they were found to be statistically significant. The findings of the qualitative research indicate that the difference between the two groups may result from the different nature of the classroom environments. In particular, it was noted that the online class allowed students to spend more time reading peers' essays and reviewing comments thoroughly, so that they felt less pressure around socio-linguistic conventions. Therefore, it provided more critical and

illustrative feedback. The findings of this study specifically support the literature on the positive effect of online peer feedback for EFL students who come from harmony-oriented cultural backgrounds (Choi & Rhee, 2013; DeWaelsche, 2015; MacLeod, 1999; Nelson and Murphy, 1993; Tuzi; 2004, Wang, 2014), also facilitating increased participatory feedback work (Lin et al., 2001; Nobles & Paganucci; 2015; Patchan et al., 2018; Topping, 2009; Schunn et al., 2016). Of course, having more time available for feedback tasks did not guarantee an increased level of engagement in feedback all the time, but the intervention group generally tended to provide richer feedback than the control group in terms of quality and quantity. The relevant findings in qualitative analysis indicate that students tried to refer to and iterate the first rubric whenever they provided feedback on argumentation. This implies that active engagement in feedback tasks may result in increased engagement time in argumentation elements (Wu & Schunn, 2021), which can contribute to developing familiarity, awareness and understanding of argumentation.

Regarding the next question, 'What are the effects of e-learning intervention on learners' retention for argumentation?', the findings, based on the quantitative analysis, also show that the writing course for argumentative writing helps retention for argumentation regardless of whether it is online class-based or offline. Similar to the first research question, the online class and the offline class have a positive effect on students' retention of argumentation proficiency, but the small and identifiable difference between the two groups in terms of argumentative writing proficiency over a month was not statistically significant. However, the qualitative research findings suggest that the collaborative digital learning environment of the online class encourages students to have more freedom and flexibility for reading and reviewing both their own and others' essays in terms of the time and physical space for their task performances. The enriched and supportive setting for exchanging online feedback may motivate students to engage in providing more and detailed feedback with the *Annotation* tool. The qualitative and quantitatively enhanced peer feedback frees up students' attention for more reflective reading and revision. Despite a mixture of positive and negative reviews on the *Scholar* range of feedback tools, the qualitative research findings show that students' high level of willingness to use these feedback tools for exchanging feedback may have resulted in their advanced involvement in feedback tasks overall. The finding can be interpreted in line with the literature on the

positive effect of online feedback on students' reflective and self-regulated writing (Whipp & Chiarelli, 2004; Quinton & Smallbone, 2010). Therefore, the digitally collaborative setting for learning is likely to increase the time spent on feedback (Wu & Schunn, 2021), which can sequentially promote understanding of, the practical application of, and reflection on argumentation, thereby, leading to an improvement in the retention of argumentation proficiency. Given these results, further studies with larger sample sizes and conducted for longer periods could possibly verify the effect of e-learning interventions on students' argumentation retention.

To address the third question, 'What are the learners' attitudes towards and opinions of the used instructional design and e-learning environments for argumentation improvement?', the qualitative findings from the students' interviews and reflections show that there were positive attitudes towards them in general. Firstly, their attitudes towards and opinions of the instructional design for the online English argumentative writing course combining the Toulmin model and a process-writing approach in a South Korean e-learning environment must be considered. The general sequence of the argumentative writing is that there were two draft stages and feedback following brainstorming. The first draft and feedback used a macro-level rubric based on Toulmin's argumentation elements. The second draft and feedback were based on a micro-level rubric. Up to the point of publication, these were considered effective for them to develop more logically coherent argumentative essays in English. In particular, the modified Toulmin model embedded in the first rubric became accepted as an effective means of enhancing their awareness of and sensitivity to the systematic structure of thoughts for writing and reading argumentative essays, using it as a practical and specific guide for evaluating the soundness of argumentation. However, the components for suggesting evidence such as *ground*, *warrant* and *data* were considered somewhat difficult to distinguish, requiring more argumentation-focused instruction in advance. Also, students felt compelled to apply every element, especially rebuttals, to their own writing and self- and peer reviews, which also needed clarified instruction to avoid forced compliance with the categorical elements.

Continuing to address the third question, two stages of drafting accompanied by each feedback stage were recognised as effective for them to move their focus from broader and

more significant aspects to more detailed and minor elements. In the focused movement, two differentiated rubrics, one for general organisation and logical structure and the other for linguistic accuracy, were regarded as helpful for a smoother transition of their focus of attention, both in writing and evaluation. More importantly, the first rubric for overall logical coherence based on Toulmin's argumentation elements was better received than the second rubric for specific revision points by students in terms of both individual writing and peer feedback tasks. This perception was found to be related to their recognition that the first-peer feedback was more helpful than the second-peer feedback. With regard to the effectiveness of peer feedback, the first-peer feedback was more highly regarded than the second-peer feedback for essay development. Simultaneously, their reliance on peer feedback, moving from the first-peer feedback to the second-peer feedback, was reduced significantly while their dependence on teacher feedback was greatly increased. The change in their reliance was attributed to the general recognition that students as non-native writers of English had often a lack of English proficiency and, therefore, the accuracy of their feedback could not be guaranteed. In addition, the generally negative evaluation of the second-peer feedback resulted in a lack of need for the second-peer feedback.

Moreover, in terms of the third question, it was found that students preferred more flexibility across the digital instructional writing course design in this study in terms of more writing options and supports. The broader options for their writing practices include an extra drafting and feedback stage, additional techniques for brainstorming and the final publication of their written work. The findings indicate that students expect more options to choose from so that they will be able to develop their essays according to their own style and degree of English writing proficiency. The request to expand choices might not only mean consideration of tailored educational support for an individual student. It also implies that argumentative writing in English itself weighed heavy on students' minds. There appears to be two elements that students were paying attention to generating ideas and writing these ideas in English. As non-native writers of English, students were under increasing and intense pressure to deliver their ideas in English, which means that they were encountering a double difficulty. As a more effective way to facilitate their wiring tasks, the findings suggest that EFL students with a lower level of English knowledge need longer stages at a relatively slower pace than their peers, reducing their cognitive load. In addition

to the delayed writing procedure for less-competent EFL student writers, teachers may need to focus more on macro-level feedback rather than micro-level feedback, and strategy-focused feedback for the target writing genre rather than accuracy-focused feedback. The point addressed above – providing additional support for students – does not simply mean increased teacher feedback (Hattie & Timperley, 2007; Wu & Schunn, 2020), but stresses more effective and efficient feedback for their development in targeted writing strategies, which is English argumentation. To provide strategy-focused instruction for them, teachers can consider providing an extra stage for macro-level feedback or allowing for an opportunity to receive some additional macro-level feedback in the second feedback stage, so that students can be encouraged to value overall logical coherence improvement rather than lexical/grammatical error correction in their final written outcome. Or, as a level-specific instructional strategy, teacher can provide even explicit instruction rather than feedback for the students that require teacher's direct and clear intervention to fill the gap in understanding (Hattie & Timperley, 2007).

In responding to the third question, the anonymity of the digital-based writing interface is considered one of the best advantages for exchanging peer feedback with each other, having a positive effect on students' argumentation development in English. The hidden identity of EFL student writers in a specific social context may have a big impact on both the quantity and quality of peer feedback and is not just a matter of honesty or clarity in their review performances. The qualitative findings of this study strongly suggest that South Korean students have more emotional freedom and confidence when they work as anonymous participants when conducting peer feedback, ultimately leading to enhanced agreement and consistency between numerical grading and commentary reviews. Moreover, anonymity is more likely to enhance the level of students' participation, encouraging them to give more specific, indicative and revisionary feedback (Lin et al., 2001; Patchan et al., 2018; Topping, 2009; Schunn et al., 2016). Therefore, enriched peer feedback in quantity and quality tends to motivate students to read and reflect on peer comments for improving their essays, subsequently increasing students' responsibility for participation in peer feedback tasks. This situation is based on their reluctance to criticise but instead to have respect for harmony in a writing community (Choi & Rhee, 2013; DeWaelsche, 2015; MacLeod, 1999; Nelson and Murphy, 1993; Tuzi; 2004, Wang, 2014), often watering down

explicit and concrete written comments and, thereby, the total number of written reviews. All in all, anonymity which establishes more actively dialogic learning environments in the South Korean context may facilitate the level of students' engagement in peer feedback and maximise the total amount of time spent engaging in peer feedback (Wu, & Schunn, 2021), thereby promoting improvement in argumentation proficiency in English writing.

Additionally, in answering the third question, the lowered constraints of time and space for students' writing practices indicate that the digital writing platform in this study also improved students' engagement in peer feedback overall, which had a positive effect on their argumentation development. The qualitative findings suggest that the online group is more likely to provide more substantive, illustrative and explanatory comments for peer feedback than the offline group, thereby increasing overall quantity and quality in peer feedback. On the other hand, the offline group tended to provide brief, minor error-focused and scoring-focused feedback within a one-hour class. In terms of easiness, convenience and time flexibility in the course engagement, the qualitative findings also show students prefer online-based writing courses much more than offline-based writing courses. The findings indicate that the enhanced flexibility in access to others' drafts for peer feedback within a specific deadline is more likely to allow students to spend more time in reading peers' drafts and providing peers with more enriched feedback. The more intensive and generous use of time for peer feedback is considered to increase the total amount of time in reading and evaluating English argumentative essays, which means they might have increased opportunities to contemplate argumentation features and apply rubric criteria in peer reviews. The extended exposure to the written discourse of the targeted genre might help to overcome the disadvantage of time pressure in collaborative writing tasks, which traditional face-to-face writing classrooms have had. The enhanced flexibility in students' time management is more effective for increasing students' engagement in EFL environments, where students often have limited opportunities to be exposed to English and have a small amount of time to pursue writing tasks in English classes, especially in South Korean higher education writing courses. In addition to providing the advantage of flexible working, the findings from student interviews suggest that the *Scholar*'s annotation tool is an interesting operational function that motivates students to provide second-peer feedback, which implies that technically attractive features embedded in the digital writing

courses can facilitate students' engagement in writing tasks. In contrast to their view of the annotation tool, students generally considered *Almind*, the graphic organiser for brainstorming, to be less novel and effective, and therefore, reduced their usage of it.

With regard to the fourth question, 'What are the views of specialists in English education on argumentation and/or on the instructional design of existing issues and further modification?' their general views on argumentation-focused instructional design and the two digital writings tools, *Almind* and *Scholar*, were generally positive. The qualitative findings from the instructor/e-learning course developer interviews indicate that applying the Toulmin model and detailed rubrics can help students to understand and develop knowledge of and skills in argumentative writing in English. Most of them considered the Toulmin model to be a fresh, practical and specific way in which to teach the logical structure. However, the findings suggest that the first rubric based on the Toulmin model should be simplified because sub-divided argumentation elements might cause confusion in distinguishing between them. Furthermore, their overall evaluation was that the writing course targeted at English argumentative writing highlighted a lack of argumentation-specific writing courses in South Korea. This finding indicates that the current state of South Korean writing courses may result in an increase in the demand and the importance of studies on and course development of English argumentative writing. In terms of peer feedback, the findings generally suggest that peer feedback can have a positive effect on students despite their over-dependence on teacher feedback. Specifically, their perception is that the second-peer feedback is less effective than the first-peer feedback for students. As indicated in the findings from the qualitative data, the findings from the teacher/e-developer interviews also suggest the need for delayed teacher feedback after peer feedback. Additionally, teachers and e-developers suggested the need for minimising the level of teachers' intervention in the early stages to increase students' participation in collaboration as well as to reduce reliance on teachers. Moreover, in terms of usability of *Scholar* as a collaborative writing interface, e-developers considered its *Annotation* tool creative and effective for students' feedback tasks.

For better modification, the findings from the teacher/e-developer interviews show the need for more explicit and strategy-focused instruction with enhanced instructional support

in the orientation stage, which upholds the findings of the student qualitative data. They mainly suggest pattern practices focusing on the Toulmin argumentation components. E-developers specifically recommended optional user guidelines for digital writing courses. In addition, e-developers are more likely to focus on pre-courses than teaching staff in order to provide rich opportunities for students to develop the necessary skills for task completion prior to actual writing. The general tendency of e-developers implies that reduced possibilities for instructors to control students' performances in digital-based instructional settings should be a consideration. It can result in students' selective participation or passive engagement during a course. This finding also indicates that proactive and supportive educational materials should be developed to prepare for more various scenarios in digital classrooms for English writing, encouraging students to work as more independent and active writers throughout a digital writing course.

Based on the findings of this study, points for consideration in a digital-based English argumentative writing course can be summarised as follows:

- Pre-sessions for strategy-focused instruction, such as learning logical coherence with argumentation elements and practising how to use an argumentation-focused rubric, can facilitate students' readiness for writing and evaluating argumentative essays so that they can perform as active writers and constructive reviewers throughout the writing process.

- Argumentation-focused rubrics can help students to write and evaluate argumentative essays based on their explicit criteria for argumentation. This develops their knowledge of and skills for argumentative writing and encourages consistency and reliability in peer evaluation.

- Descriptive and detailed analytic rubrics can encourage students to clarify and fortify their understanding of important writing strategies that are included as criteria.

- Teachers' interventions, including teacher feedback, should be provided after peer feedback to increase students' autonomy and participation.

- An incorporated writing platform, which supports pre-writing, while-writing and post-writing, can enhance students' access to writing tasks, reducing time and effort to move between different digital tools throughout the writing process.

- Options that allow students to choose favourite or familiar styles for writing practices can help them to focus on writing itself, reducing their cognitive load in writing.

- Digital annotation tools can motive students to provide corrective feedback with peers and read through given feedback for improving their current drafts.

- Flexibility in time and space can enhance the level of engagement of students, especially in peer feedback, and, therefore, increase exposure to the written texts of the target language.

- In a specific social context, anonymity can encourage students to provide enriched feedback to others and motivate them to participate in peer feedback tasks, thereby increasing collaboration and contribution as a member of a written community.

- However, flexibility in time for task completion and anonymity in feedback provision can discourage the responsibility and punctuality of students, consequently decreasing their contribution to collaboration.

- Digital-based courses for writing can require more supporting resources for instruction, such as user guides, exercises and examples, because the remote learning environments allow students to work as independent writers with a lack of direct supervision of a teacher.

Considering the pedagogical suggestions, Figure 20 below represents an example of a digital writing course design based on the process-based writing approach, the Toulmin argumentative framework and a collaborative digital writing platform. Considering the items suggested above, an initial course design for English argumentative writing should undergo a cycle of planning, implementation, reflection and modification for instructional improvement. Specifically, the findings suggest that the first rubric based on the Toulmin model should be modified in accordance with the level of the student's writing proficiency

in English, including their level of argumentation skills. The adjustment of the Toulmin model often refers to a combination of sub-categories to generate a single and inclusive category of argumentation. The issue of how to modify the Toulmin model ranges from what to include in the argumentation-focused rubric to what activities should be developed for the strategy-focused instruction in the orientation stage. While teachers can go back to the design stage for small modifications, they might need to go further back to the pre-design stage for large modifications of their instruction overall. Considering this issue, Figure 20 below shows that a course designed for English argumentative writing can be adjusted to a specific writing context, returning to the pre-design design phase as well as the development phase.

Figure 19: Digital writing design with the Toulmin model
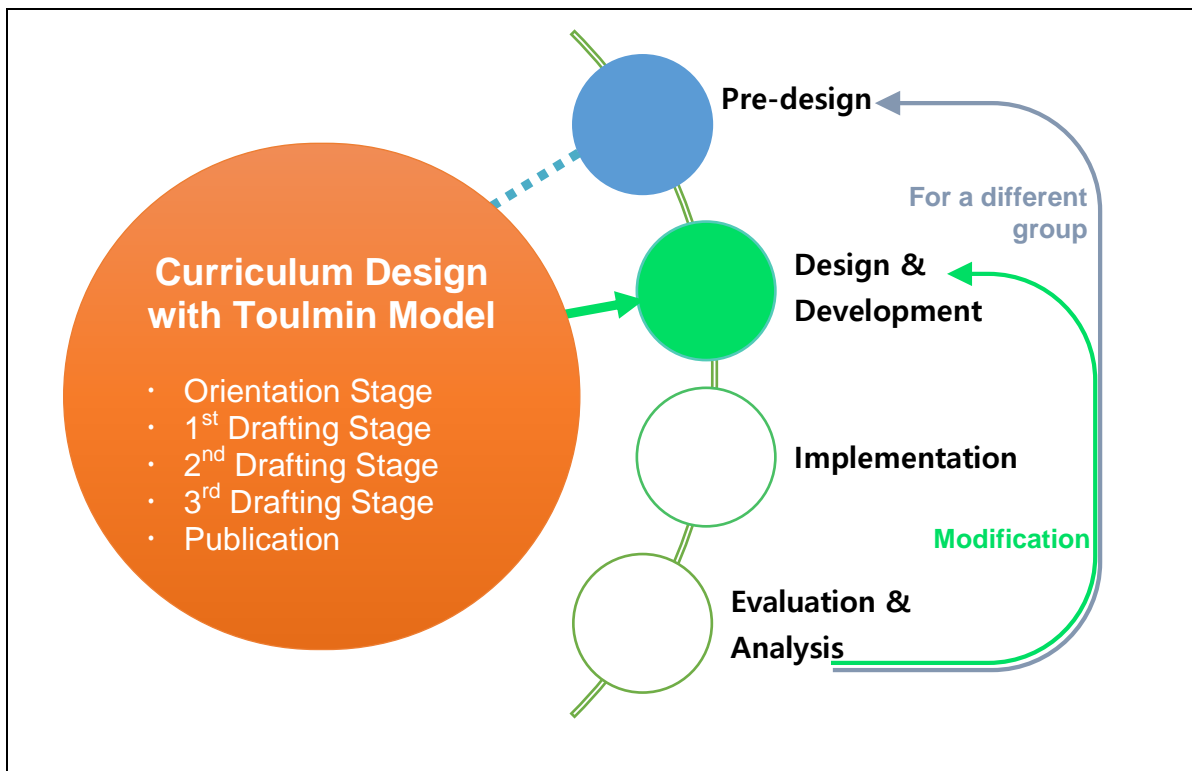
In addition to the argumentation aspect, the digital writing platform, the technical aspect, should also undergo a cycle of modification, which is also discussed in detail in 6.4 Digital Argumentative Writing Course Design. Although *Scholar* was used for a digital writing platform in this study, teachers can participate in creating their own digital-based platform for a specific writing course, based on the needs analysis of the target students. Actually, it

seems ideal to fit the need of each class to a different digital writing instructional design, although a tailored digital course often costs a great deal of money and time. No more than when using *Scholar*, teachers have some free options for digitalised interactive writing tools, for example, Google Doc or Moodle, to apply to their writing courses. When they choose to use a ready-made writing tool in the pre-design phase, they need to examine how to use it based on its affordances, including training sessions or user guides for the enhanced readiness of students. In this sense, utilising a specific learning tool should undergo a pre-design or a design phase as well as shown in Figure 21. This figure is finally derived from the research findings of this study, incorporating key points of designing digital-based courses that were explored in the section 6.4.

Figure 20: Design principles for argumentation-focused digital writing courses

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2nd DRAFT

Pre-writing 2
- Access to and read feedback on their 1st draft
- If necessary, amend the current mind-map (or the outline) to re-develop new ideas
- If necessary, ask questions about the given feedback of peers or teacher for clarification
- If necessary, refer to the 1st rubric

While-writing 2
- Based on the 1st feedback, proofread the 1st draft
- Directly change the 1st draft into or write down the 2nd draft on the digital platform
- Focus on language use such as vocabulary, grammar and punctuation
- Refer to the 2nd rubric, which is mainly based on linguistic and mechanical features
- Save and submit the completed 2nd draft

Post-writing 2
- Access to and read the 2nd draft of the group members through the digital platform
- Based on the 2nd rubric, provide comments on the 2nd draft of the group members only based on vocabulary, grammar and punctuation (Micro-level peer feedback)
- Write down annotations and comments on the feedback panel of the digital platform (Peer feedback → Teacher feedback)
- Save and submit the 2nd peer feedback

3rd DRAFT

Pre-writing 3
- Access to and read feedback on their 2nd draft
- If necessary, amend the current mind-map (or the outline) to re-develop part of paragraphs
- If necessary, ask questions about the given feedback of peers or teacher for clarification
- If necessary, refer to the 2nd rubric

While-writing 3
- Based on the 2nd feedback, revise and edit the 2nd draft
- Directly change the 2nd draft into or write down the 3rd draft on the digital platform
- Focus on language use such as vocabulary, grammar and punctuation
- Refer to the 2nd rubric, which is mainly based on linguistic and mechanical features
- Save and submit the completed 3rd (final) draft

Post-writing 3 (optional)
- Access to and read the final draft of the group members through the digital platform
- Based on the 1st and the 2nd rubric, provide general comments on the final draft of the group members based on every element
- Write down comments on the feedback panel of the digital platform (Peer feedback → Teacher feedback)
- Save and submit the final peer feedback

Publication (optional)
- Collect essays from the 1st to the final draft and create a portfolio
- Have options to publish sequential essays of a given topic (pdf file or web-page style)
- If possible, share and review portfolios, and then provide comments each other
- If possible, do a self-review, looking at the completed portfolio on their own

7.2 Limitations of this study

7.2.1 Research Limits

This study may have some limitations related to methodology and the research process. Firstly, this study failed to recruit a large number of participants to increase generalisability. This study underwent multiple phases of losing registered participants before and after the study started. As a result, the small number of student participants in this study decreased the statistical credibility and its significance for the quantitative analysis of pre-post

comparisons that was originally planned. Considering the fundamental reasons for the non-attendance and the drop-out rate of the initial participants, informal conversations with the participants revealed that many of them felt that participation in this writing course needed more time and effort than they had expected. It was noticeable that individual and collaborative tasks needed students' active engagement in reading and reviewing essays. In this regard, the participants confessed to how challenging it was to carry on the required tasks within a specified time; specifically, the peer-feedback tasks were time-consuming. Some participants were late completing a given task for each stage, causing their peers to wait longer for their commentary reviews. Or some participants ultimately decided not to continue taking part in this study due to their busy academic schedules.

Furthermore, the length of a semester may be too short to show statistically significant results for improvement in argumentation. In terms of the students who fell away, regardless of whether a course is online or offline based, collaborative writing courses such as the one in this study presupposed their full participation in each task. The data in the qualitative findings indicate that students were more likely to stay and complete all the tasks when they perceived the clear benefits of this study. This point shows a possible direction for future studies in this area. Researchers should consider how to motivate students and maintain their participation throughout a course in a way that meets their needs and expectations. Also, larger-scale studies with more participants should be conducted to investigate the effectiveness of argumentation-focused digitalised writing designs for developing English argumentative writing in order to collect more rigorous findings on this topic.

In addition, the minimum length of the essays for the pre- and post-tests was 300 words, and the participants only had 30 minutes for these tests. This was not long enough to evaluate the levels the students were at and how they had improved. Even though there was no specific time limit in the essay writing for in-course writing tasks, it was inevitable that a specific test time had to be set up for controlling any other possible variations other than their general writing or argumentation proficiency in English. Also, most of the students were generally familiar and expected to have some opportunities for commercialised and standardised tests for English proficiency, such as TOEFL and IELTS,

which often require a 300-word long English essay within 30 minutes. While 30-minute essays show snapshots of participants' English proficiency, it discourages them to be physically and mentally relaxed. As such, they might not allow students to display their actual skills for argumentation development or allow teachers to assess the limited level of differences in students' essays. For a full evaluation of the writing aspects of course argumentation, students must have more time to develop longer and more elaborate essays.

At the same time, the issue of in-depth evaluation in argumentation between writing tests is also relevant to the elaborated rubric, which is a list of assessment criteria for pre- and post-tests. During this study, the rubric for pre- and post-tests was based on a relatively simplified version of Toulmin's argumentation components, not including detailed categories such as *warrant* and *backing,* but mainly focusing on *claim*, *grounds*, and *rebuttal* in general. A more detailed rubric for argumentation could be used for the first-draft stages to encourage students to use the full range of logical components of the Toulmin model. With this rubric, they could develop more logically-elaborated essays with the less condensed categories of argumentation components. Since detailed evaluation categories can allow evaluators to implement increased sensitivity in differentiating small improvement in writing, detailed argumentation criteria for assessment could enhance the argumentation development of each student.

7.2.2 Pedagogical Limits

Along with limitations directly relevant to methodology and the research process, this study might have pedagogical limitations, too. In addition to the difficulties in class participation, which was mentioned above, due to a lack of class hours, the participants did not have enough time to be prepared and get ready to write up arguments and use the *Almind* and *Scholar* online writing tools. Short instructions on the Toulmin model and argumentative writing structure, and a brief showcase of how to use *Almind* and *Scholar,* were provided in the orientation stage and the relevant guides and writing rubrics were distributed and shared throughout the course. However, students felt that the orientation did not prepare them enough to move into the actual and smooth performance of tasks, highlighting the need for more exercises and hands-on practice for the feedback task, with rubrics based on

the Toulmin model and web-based tools. Considering the barrier of the limited number of class hours, it might be beneficial for teachers to divide activities into two categories: in-class activities and compulsory homework. This would be a way to manage as much necessary content as possible. Of course, the required activities as assignments would necessitate the participation of the students in class progress so that teachers should take measures to encourage students to take out-of-class tasks into account. It was suggested that students could carry out given tasks more effectively and actively if they are well prepared in advance. Thus, how one deals with time limitations in a course and manages necessary pre-tasks effectively could be seriously considered in future studies.

Furthermore, considering that each student comes from different background, each learning setting, including the writing proficiency of students from the beginning to advanced level, could be studied in the future. In this study, students from all kinds of background were tested and then randomly allocated to a group based on English writing proficiency, which led to the same average among groups. This was to allow every student group to include the English writing proficiency of the students so that the group members could help each other with collaborative learning based on ZPD. However, it is noticeable that a relatively higher number of students in English writing contributed more to feedback exchange both quantity and quality-wise. This means that many of them tried to have as much experience practising English as possible. On the other hand, some of the higher-level students stated that they had tried to rely more on teacher feedback than peer feedback when proofreading, revising and editing their essays. In sum, this signals that students with an advanced level of English writing proficiency can be more encouraged and engaged in writing tasks when they are working with other students with the same level of proficiency in a group, which can lead to more mutual development in their argumentation as well as quality writing outcomes. The way the group forms in terms of the quality and effectiveness of peer feedback could be a research limitation at the same time. Thus, future studies on students with the same level of writing proficiency should be performed to address which group formation would be more beneficial for a specific level of ability for argumentative writing development.

7.3   Future Directions

While the Toulmin model in 2.2 and the rubric for student writing in 2.3 were discussed, more argumentation-focused writing models and their specific rubrics have relatively little academic attention for developments in argumentative writing. Although the need for academic writing in English have increased beyond that of basic English proficiency in the secondary education area, student writers often struggle with academic writing development, tackling it on their own with a lack of necessary, appropriate and effective help from English teachers. These kinds of trends were revealed in the interviews of students and experts, which means that they said they had not seen the Toulmin model or any kind of detailed argumentation model so far.

In Korea, students generally go to writing classes run by private institutions for English in order to improve their academic English proficiency. In fact, these writing courses in English are fit for tests for a short period. Students learn how to score well rather than develop a foundation in writing strong arguments. Without building up essential knowledge of the process of reasoning in writing, student writers often tend to fall into logical leaps, providing simple and piecemeal connections between claims and reasons, and not putting up the necessary bridges between fragments of information. This low level of argumentation skills cannot be ascribed just to a lack of linguistic proficiency in English itself. This means that student writers possibly produce logically weak argumentative essays, which do not represent their actual English proficiency. Also, writing on arguments as academic writing has been recognised as one of the later stages of English education for a small number of students who are learning English in non-English speaking countries such as Korea. This is of the reasons why argumentative writing has drawn less attention than other areas of English learning and teaching. The specific situations in EFL might result in students' being less aware of the sound process of argumentation in English writing, making students confused between argumentation knowledge and grammatical knowledge.

Therefore, it might be necessary for students to take the opportunity to learn more detailed models for argumentation so that they can clearly and explicitly recognise how to lay out the logical basis for a claim. The Toulmin model, which was chosen and applied in this study as a guide for sound structure, should be researched more to discover effective ways to teach and learn in the argumentative writing field, which is fit for each target, such as

students' age, English level and cultural differences in writing. In this sense, variations in the application of the Toulmin model to actual classes for academic writing could be generated and discussed. This would include how to adjust each logical component of the model to the conditions of the target students. In this study, the Toulmin model was used for the students in higher education, implying that the students were equipped with some level of familiarity with academic texts and understanding of academic conventions. However, whether this model is also effective for secondary school students has not been investigated. Furthermore, it is possible that students who have not yet reached higher education need more modification in the Toulmin model and extra help in understanding it. Cultural differences within the same writing genre between English and Korean can potentially act as a barrier in developing English argumentation proficiency. So, consideration needs to be given to how to adjust the Toulmin model to English writing courses and what more to do to better understand Korean students. Of course, the Toulmin model is not the only option for logical development in English writing. Other models could be investigated to find out when and how they would be beneficial to improving argumentation skills.

Along with the issues of the modification of the Toulmin model so that it is a good fit for the target students, how to design synchronized writing rubrics and when and how to provide students with them are also important questions to be discussed and investigated further. In addition, the use of rubrics is relevant to the necessity of orientation or preparatory sessions before the actual writing stages. The participants in this study mentioned the need for intensive pre-sessions for students to get familiar with the Toulmin model, rubrics and feedback. Therefore, the preparedness of students is a critical element that would allow them to focus on tasks for argumentation development in the writing stages. These, then, are all closely connected with teaching and learning material development for argumentative writing, and cannot be left solely in teachers' hands. Suggestions on designing teaching and learning materials and research on their effectiveness could ultimately provide useful guidelines for teachers and writing course designers.

In the process of material design and course planning, digital environments can produce a variety of benefits for more effective delivery of teaching and learning, including presenting tasks and their supporting materials, and implementing ways in which students and

teachers can share rubrics and take part in feedback. Also, running online warm-up stages would be an additional advantage. In this study, an online mind mapping tool as a pre-writing task for each writing topic was separately used as a cost-reducing factor, and was not included in the digital platform for the while- and post-writing tasks. As more improved convenience and cooperation can be anticipated in a unitary, integrated learning platform for all writing stages, one single digital environment for a writing course could be developed and tested in a further study. In this kind of digital environment, more diverse options for pre-writing tasks other than mind-mapping like outlining, which was suggested in the interviews, could be applied and researched to investigate their effectiveness for writing development.

Furthermore, although online anonymity was set as the default condition for the student participants in the online group and this factor was generally welcomed by students, students sharing a high responsibility was pointed out as an important element for their task progress and feedback quality. Considering this point, restricted openness between group members could be a potential factor for students to participate more actively and regularly in interactive tasks. Again, further studies would be needed to illustrate this. Also, there is still a need for more interactive, user-friendly, digitally optimised designs to be created. These would enable users to save time getting used to the system, exchange and share their products for feedback, mark their essays and receive feedback through the various interfaces.

7.2 Limitations of this study

7.2.1 Research Limitations

In addition to there being a smaller number of students who began participating in the study than the number of initially registered students, a number of participants also dropped out during the study. This resulted in an overall smaller number of participants who undertook each task until the end than expected. As a result, the small number of participants in this study led to decreased statistical credibility and its significance for quantitative analysis than was originally planned. In considering the reasons for the non-attendance and the drop-out rate of the initial participants, informal conversations with the

participants disclosed that many of them felt that participation in this writing course needed more time and effort than they had expected. It was noticeable that participation in peer-feedback demands that student participants actively engage in reading and reviewing essays written by themselves and others. Students noted how challenging it was to carry on the requested tasks at each stage within a specified time and that providing feedback was time-consuming. Some of the participants were late at completing their task for each stage, resulting in their peers having to wait longer for their commentary reviews. Furthermore, the semesters appear to be too short to show significant results for improvement in argumentation. In terms of the students who fell away, regardless of whether a course is online or offline based, collaborative writing courses such as this study presuppose that all the students fully take part in each task. This shows the possible direction of future studies in this area, meaning researchers should take motivating students and increasing their participation in class into account. Also, larger-scale studies with more participants should be conducted to investigate the effectiveness of digitalised writing designs based on the process-based approach and the Toulmin model for argumentative writing development in order to collect more rigorous findings on this topic.

In addition, a minimum of 300-word tests conducted within 30 minutes is not long enough to evaluate the students' English level or how much they have improved. When there was no specific time limit in the essay writing for the in-course writing tasks, it meant that they were able to spend as much time as they wanted. However, it was inevitable that a specific test time had to be set up to control any other possible variations other than their writing or argumentation proficiency. Also, most of the students were generally familiar and expected to have practice in commercial, formulated tests for English proficiency such as TOEFL and IELTS, which often require a 300-word long English essay within 30 minutes. While 30-minute essays give a snapshot of English proficiency, it discourages students to be physically and mentally relaxed and waste time. It may not give them enough room to display their various and elaborate skills for argumentation development (Ma, 2016) and for a teacher to assess even small levels of differences between writing tests. For a full evaluation of the writing aspects of argumentation, students must have more time to develop longer and more elaborate essays.

At the same time, the issue of a full evaluation of argumentation between writing tests is also relevant to the elaborated rubric, which is a list of assessment criteria for pre- and post-tests. During this study, the rubric for pre- and post-tests was based on a relatively simplified version of Toulmin's argumentation components. It did not include detailed categories such as *warrant* and *backing,* but mainly focused on *claim*, *grounds* and *rebuttal* in general. A more detailed rubric for argumentation could be used for all the first draft stages to encourage students to use the full range of the logical components of the Toulmin model. With this rubric, they could develop more logically elaborated essays, with relatively condensed argumentation components. At the same time, they could use the rubric as an evaluation criterion for clarity and the conciseness of evaluation for subtle differences between the argumentation components, which could be subjectively categorised and judged. In the sense that detailed evaluation categories can lead to a more sensitive detection of improvement, detailed evaluation criteria with supporting details would possibly enhance the argumentation development of each student.

7.2.2 Pedagogical Limitations

In addition to the difficulties in class participation, which was mentioned above, due to a lack of class hours (Kim, 2018; Ma, 2016), the participants did not have enough time to fully write up arguments and get familiar with the *Almind* and *Scholar* writing tools. A digest of preparation, including short instructions on the Toulmin model and argumentative writing structure, and a brief showcase of how to use the digital tools, was provided in the orientation stage. However, since students felt that the orientation was not enough for them to be ready to undertake actual tasks, they highlighted they should have had more exercises for evaluating essay samples against target rubrics and hands-on practices in the digital tools. The findings suggest that students could carry out allocated tasks more effectively and actively if they were well trained in advance. Considering the barrier of the length of the total class hours, it might be beneficial for teachers to divide activities into two categories: in-class activities and compulsory homework. This would be a way to manage as much necessary content as possible. Of course, activities such as assignments necessitate the full participation of the students for class progress overall, so that teachers should consider how to encourage all students to complete out-of-class tasks. Thus, within a limited

course schedule, how to select and embed the necessary pre-tasks in a writing course could be seriously considered in future studies. This point also includes the effect of feedback training on the level of peer feedback performance, which could be a separate research topic.

Furthermore, given that each student comes from a different background, each setting for learning, including the writing proficiency of students from the beginning to the advanced level, could be studied in the future. In this study, students were divided into groups based on their English writing proficiency to avoid any statistical significance between groups. Moreover, every writing group was composed of students at different levels of English writing, so that all group members could help each other with collaborative learning. This is supported by ZPD. However, it is noteworthy that higher-level students in English writing contributed more to peer feedback provision in terms of both quantity and quality. This tendency was due to many of them trying to have more opportunities to practise English as much as possible. On the other hand, some of the higher-level students stated that they had tried to rely more on teacher feedback than peer feedback for developing their next draft. The findings imply that students with advanced English writing proficiency could be the most beneficial to each other in terms of collaborative writing tasks. In terms of peer feedback, heterogeneous group formation based on English writing proficiency may be less beneficial for higher-level students, which is a limitation in this study. Thus, future studies could focus on students with the same writing proficiency to address which group formation would be more beneficial to a specific level of students for argumentative writing development.

Moreover, there was an imbalance in the opportunities for students to write and read feedback, especially with regard to peer feedback. Peers' non-participation or overdue participation resulted in some students being disadvantaged with peer feedback. Specifically, zero or late-peer feedback meant they had to rely on teacher feedback while late submission of peer drafts discouraged students to provide their feedback with them. Therefore, less responsible and less punctual students resulted in a lack of peer support or participatory opportunities, which might have negatively impacted engagement in collaborative tasks, and, therefore, personal improvement in argumentation skills (Cho &

Schunn, 2007; Patchan et al., 2018; Schunn et al., 2016; Topping, 2009; Wu & Schunn, 2021). Teachers are likely to have less control over students in the digital learning environment than in traditional face-to-face classrooms. Therefore, it is necessary to consider how to encourage, supervise and support the participation of each student (Hansen & Liu, 2005; Hattie & Timperley, 2007; Penn & Lim, 2016; Pearce et al., 2009; Sadler & Good, 2006; Wichmann, 2018; Wu & Schunn, 2021). This could be an important issue in terms of teachers' effective classroom management strategies (Hansen & Liu, 2005; Hattie & Timperley, 2007). While the writing course of this study was a non-credited, voluntary one, mainly relying on students' intrinsic motivation, regular credited courses could encounter fewer difficulties with students' participation or lead to more practical options for enhancing their motivation, such as reward and penalty systems.

7.3 Future Directions

As the Toulmin model in 2.3.3.1 and the rubric for student writing in 2.4.2 and 2.4.3 were discussed, more argumentation-focused course design and argumentation-specific rubrics have received relatively little academic attention for development in argumentative writing. Although the need for academic writing in English has increased in South Korean higher education, student writers often struggle with this form of writing development (Choi, 2008; Kim, 2018; Ma, 2018; Shim, 2016), tackling the issue on their own, with a lack of necessary, appropriate and effective help from English teachers (Choi, 2008; Kim, 2018; Ma, 2018; Shim, 2016; Shin, 2018; Tak, 2012; Yu, 2019). This trend was revealed in interviews with students and lecturers and/or e-developers, and is relevant to the response that they had not seen the Toulmin model or any other type of detailed argumentation models so far.

In South Korea, students generally go to writing classes run by private institutions for English to improve their academic English proficiency (Choi, 2008). These writing courses for English are commonly used as fit-for tests for a short period (Choi, 2008; Ma, 2018; Shin, 2018), teaching students how to score well rather than develop a foundation in writing on arguments. Without developing the essential knowledge of the reasoning process in writing (Ahn & Park, 2019; Chung, 2012; Kim, 2007) student writers tend to fall into logical leaps with over-simplified and stereotypical connections between claims and reasons, not laying

out sound bridges between fragments of supporting information. This low level of argumentation skills cannot be over-generalised just because of a lack of linguistic proficiency in English itself, which means that student writers possibly produce logically weak argumentative essays which do not represent their actual English proficiency (Ahn & Park, 2019; Choi, 2008; Chung, 2012; Kim, 2007). Also, writing on arguments in academic writing has been recognised as one of the later stages of English education for a small number of students who are learning academic English in non-English speaking countries such as South Korea (Shim, 2016). This is one of the reasons why argumentative writing has drawn less attention than other areas of English learning and teaching. Specific situations within EFL might result in students' having less awareness of the process of argumentation in English writing, making them confused about argumentation knowledge and linguistic knowledge.

Therefore, it might be necessary for students to get the opportunity to learn more detailed models for argumentation so that they could clearly and explicitly recognise how to develop logical coherence in writing. The Toulmin model, which was chosen and applied in this study as a reflective and evaluative guide for developing a structure, should be more researched to find out effective ways of teaching and learning in argumentative writing, so that it would fit particular features, such as students' age, their English level, and cultural differences in writing. In this sense, various applications of the Toulmin model to actual classes for argumentative writing could be generated and discussed. This includes how to adjust each logical component of the model to the target instructional setting. In this study, the Toulmin model was used for students in higher education, implying that the students were equipped with some level of knowledge of academic texts and understanding of academic conventions. However, whether this model is also effective for pre-university level students, such as secondary school students, has not been investigated. Furthermore, students at a pre-higher education stage might need more modification of the Toulmin model and extra help for understanding it. In the sense that there are cultural differences in the same writing genre between English and Korean, which could potentially act as a barrier to developing English argumentation proficiency, how to adjust the Toulmin model to English writing courses and what more to do for a better understanding of South Korean students should be seriously considered. Of course, it is also possible that the Toulmin model is not the only

option for the logical development of English writing, and other models could be applied to investigate when and how they are beneficial for improvements in argumentation (Ahn & Park, 2019).

Along with the issues of the modification of the Toulmin model, which could be a fit for the target students, how to design writing rubrics which are synchronised with the modified model and when and how to provide students with them are also important questions to be discussed and investigated further. In addition, the use of rubrics is relevant to the necessity of orientation or any preparatory sessions before the actual writing stages. As the participants in this study mentioned the need for intensive pre-sessions for students to get familiar with the Toulmin model, rubrics, feedback and so on, the cognitive and practical readiness of students is a critical element that lets them focus on tasks for argumentation development in writing stages. Suggestions on designing teaching and learning materials and research according to their effectiveness could ultimately act as potentially useful guidelines for teachers and writing course designers.

In the process of material design and course planning, digital environments could produce a variety of benefits for a more effective delivery of instruction, including presenting tasks and their supporting materials, and implementing ways in which students and teachers could share rubrics and take part in feedback. Also, the possibility of running online warm-up stages is an additional advantage. In this study, an online mind mapping tool as a pre-writing task for each writing topic was used separately as a cost-reducing factor, which was not included in the digital platform for while- and post-writing tasks. As more improved convenience and cooperation can be anticipated in a unitary, integrated learning platform for all writing stages, one single digital environment for a writing course could be developed and tested in a further study. In this kind of digital environment, more diverse options for pre-writing tasks other than mind-mapping like outlining, which was suggested in the interviews, could be applied and researched to investigate their effectiveness for writing development.

Furthermore, although online anonymity was set as the default condition for the student participants in the online group and this factor was generally welcomed by students, the

high responsibility shared by students was pointed out as an important element for their task progress and feedback quality. Considering this point, restricted openness between group members could be a potential factor for them to participate more actively and regularly in interactive tasks. Again, further studies are needed to show this. Also, there is still a need for more interactive, user-friendly, digitally optimised designs to be created. These would enable users to save time getting used to their system, exchanging and sharing their products for feedback, marking their essays and receiving feedback through the interface.

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Appendices

Appendix 1 Gunawardena et al.'s (1997) model

The following table refers to Gunawardena et al.'s (1997) interaction analysis model.

Ph I	Sharing and comparing of information	A. A statement of observation or opinion B. A statement of agreement from one or more participants C. Corroborating examples provided by one or more participants D. Asking and answering questions to clarify details of statements E. Definition, description, or identification of a problem
Ph II	The discovery and exploration of dissonance or inconsistency among ideas, concepts or statements	A. Identifying and stating areas of disagreement B. Asking and answering questions to clarify the source and extent of disagreement C. Restating the participant's position and possibly advancing arguments or considerations in its support by references to the participant's experience, literature, formal data collected, or proposal of relevant metaphor or analogy to illustrate point of view
Ph III	Negotiation of meaning/co-construction of knowledge	A. Negotiation or clarification of terms B. Negotiation of the relative weight to be assigned to types of argument C. Identification of areas of agreement or overlap among conflicting concepts D. Proposal and negotiation of new statements embodying compromise and co-construction E. Proposal of integrating or accommodating metaphors or analogies
Ph IV	Testing and modification of proposed synthesis or co-construction	A. Testing proposed synthesis against 'received facts' as shared by the participants or their culture B. Testing against cognitive schema C. Testing against personal experience D. Testing against formal data collected E. Testing against contradictory testimony in literature
Ph V	Agreement statement(s)/applications of newly constructed meaning	A. Summarisation of agreement(s) B. Applications of new knowledge C. Metacognitive statements by participants illustrating their understanding that their knowledge or way of thinking (cognitive schema) has changed as a result of the conference interaction

Appendix 2 Digital Tools for Writing Instruction

2.1 Tools for Mind Mapping

2.1.1 Xmind

Xmind is mind-mapping software, which enables users to create a variety of elaborated mind maps. After installing this setup file on a computer, users can start their map from a root in the centre of the screen and then add up branches, content boxes, sub-branches and notes. It is easy for users to decorate or align necessary key words or contents with existing templates of maps such as Org-chart components, Tree-chart, Logic-chart and so on. For organisation of key words, users can make changes in visual representation between a range of various thematic charts even after they made their own map, which provides them with a lot of options to choose.

Screenshots of mind maps created with *Xmind*
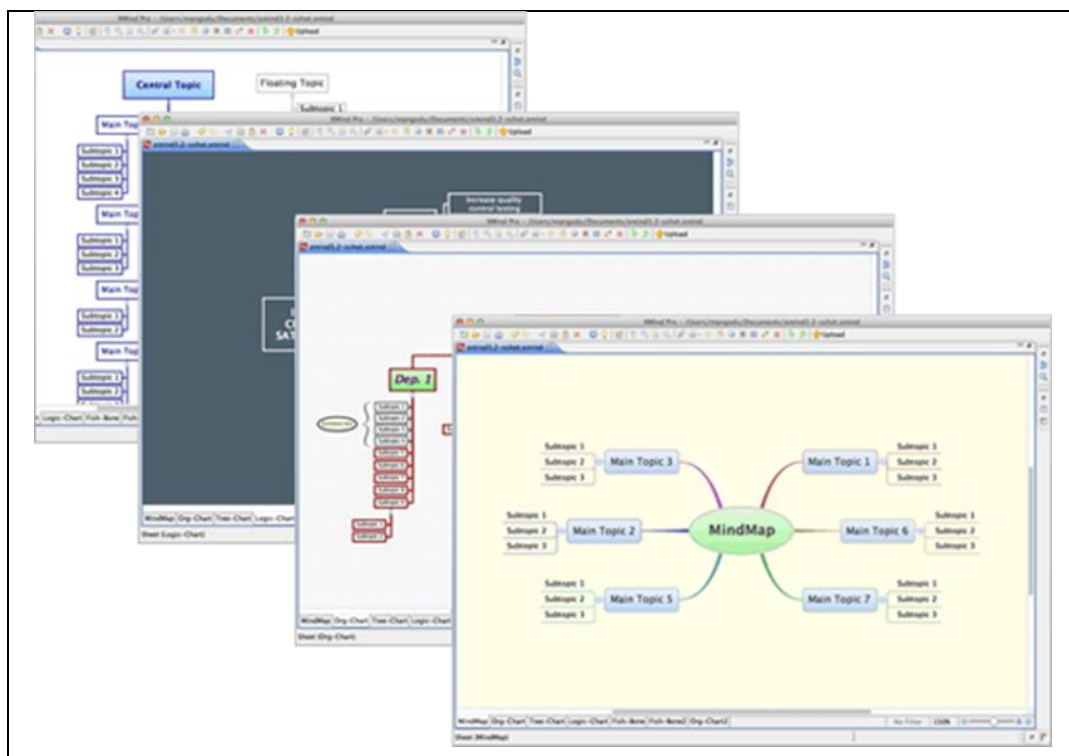
Moreover, this software allows users to manage detailed presentation features such as colours, sizes, shapes, icons and the like, and insert various kinds of text files such as MS word files, PDF files, and audio-notes with audio-files, which let them go into the details of

their map. Furthermore, this device allows users to save their maps as various types of files like MS word, PDF and images. Also, if users save their maps as the default file type, then they can retrieve and modify them later with the files saved already. Despite of elaborated creation and presentation features, the free version of the *Xmind* only allows all kinds of diagrams without detailed options such as various saving options, customizable themes, audio-notes and so on, which is one of the greatest downside of it. Of course, this might be sufficient for users who want to create basic maps only. Another weakness of this software is that it only operates on desktops, not tablet PCs.

2.1.2 Inspiration

Inspiration software is a kind of graphic organiser as a mind-mapping device. After installation, this software gives various thematic templates which users can apply into their own mind maps. Users can select one template and then develop their own map, starting from a topic in the centre with lines, branches, boxes and picture icons. It is outstanding that this software provides a variety of thematic picture icons, which can comprise visual components in the map.

For this visual option of pictures, this application can be applied to young learners and adult learners for visual and logical organization of thoughts and ideas. Every template allows visual changes such as font sizes, colours, shapes and so on. Most of all, the greatest advantage of Inspiration is that it allows users to interchange their map between a map in the diagram view and an outline in the outline view. Thus, it gives options of visual representation of idea arrangement to users, although every element like pictures and icons in the created mind map cannot be automatically transformed into relevant texts in an outline. Both of the two versions of the organised contents can be saved and printed out as well. Also, this software offers a mode of presentation, which is automatically transformed into PPT slides with snapshot graphics and allows users to separately modify contents and formats inside the slides. Moreover, users can print out every piece of their work including diagram, map, outline and presentation slides and save their original work as PDF files, HTML web sites and various image files. Inspiration can be operated on desktops as well as

iPad and iPhone but it is not free of charge although a free trial version allows users to use almost all the tools for 30 days.

Screenshot of a mind map and an outline created with *Inspiration*
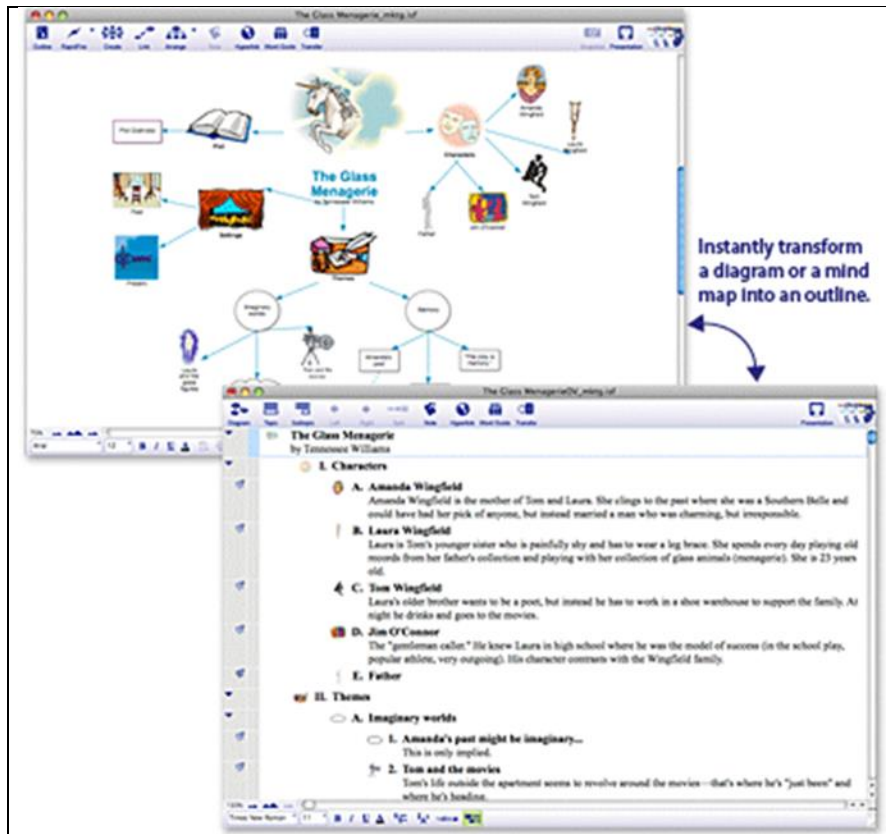
2.2 Tools for Writing Platform

2.2.1 Virtual Learning Environments (VLEs)

As online learning started to widespread, a variety of virtual learning environments such as online discussion boards or online discussion forums have been developed. Meyer (2003) compared two types of discussions based on the experiences of students in graduate-level classes: face-to-face discussions held in class and threaded discussions. In this study, students reported that threaded discussions increased the amount of time they spent in class objectives while they highly considered face-to-face discussions in terms of immediacy and energy. Specially, in terms of the quality of the discussions, students found it difficult to ask for clarification or research evidence during face-to-face discussions whereas online discussions allowed them to take more fully part in discussions, resulting in more

contributions between students. Also, the findings of this study show that online discussions gave them time to reflect, leading to better contributions. While each form of discussions was valued by students, some students preferred just one form of discussion as a fit-form. Importantly, this study shows that online discussions facilitated higher-lever thinking with asking questions, searching for and offering information, constructing possible solutions, critically assessing the solutions, and so on.

Im and Lee (2003) investigated pedagogical implications on online discussion for preservice teacher training by comparing synchronous and asynchronous discussions. Based on postings from synchronous and asynchronous discussions carried out by students, this study suggested that while synchronous discussions were more useful to promote social interaction in the online class, asynchronous discussion was more effective in task-oriented communication. Also, in this study, female students were more active than male students in online discussions. In addition, the findings of this study show that synchronous online discussions did not develop into more meaningful learning stage, not going beyond socialisation. For pedagogical implications, this study suggested that instructors should encourage students to participate more actively by guiding them in the online discussion, providing prompt input and feedback resources. Moreover, it was recommended that instructors should reduce risks in online discussion via stable online learning system and technical support.

2.2.2 AGORA-net

Agora-net is a free Computer-aided argument mapping tool based on collaborative virtual environment. Users can log into its home page (http://agora.gatech.edu/) and create an account to develop and save their own visualised maps on argument. The web-based interface is to create a new argument map on a specific topic with component boxes of claim, reason, objection, reference and so on. The structure of an argument starts from a claim box, which enables users to type in necessary texts, and develops adding reasons in blue boxes and objections in orange boxes with a click of 'Add' button beneath the previous box. When a new box comes up, an adjacent support box in yellow, containing relevant explanations and suggestions on argumentative features, simultaneously appears, which
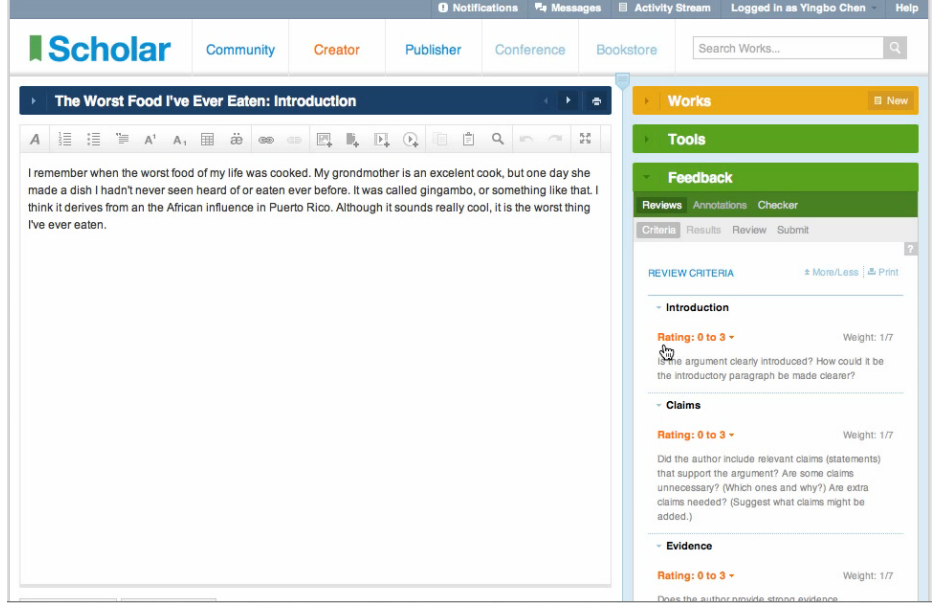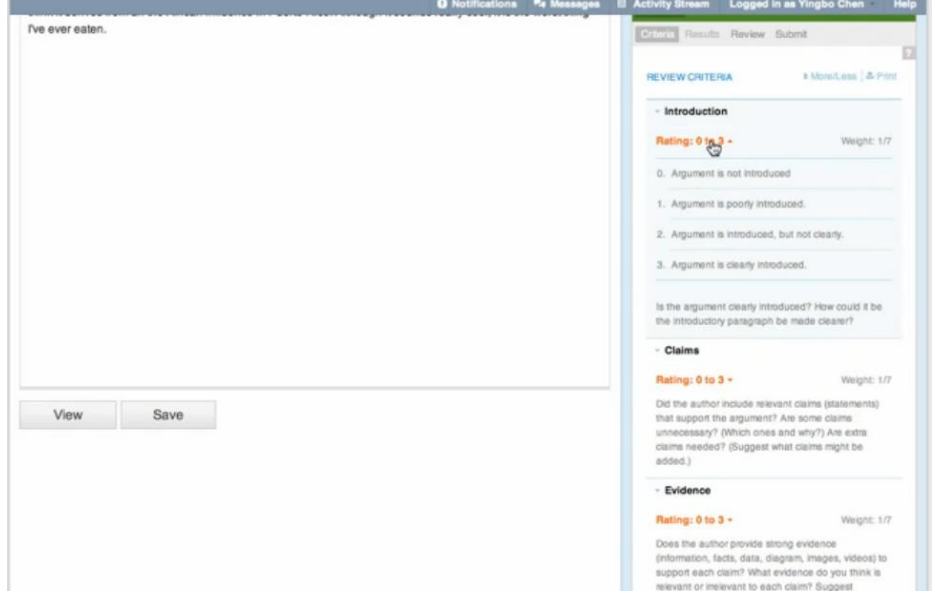
can be intentionally removed by a user. Location of each box can be easily dragged and moved, and unnecessary boxes can be erased by clicking 'Delete' button below. Automatically created arrows and nodes represent logical sequences between component boxes and a user can select a range of options to describe the logical relationship between them. In general, the design of this visualised argumentation mapping environment is created well for intuitive grasps of novice users, which helps them easily master how to operate main functions on the interface. On the right side of a task page, a chat window is shown to provide synchronous communications between users. Also, users can freely borrow samples of previously created maps and manipulate them on their own logical understanding, adding up or getting rid of a specific text box. Otherwise, multi-users can participate in developing a specific mapping activity at the same time. In this case, the creator of each box can be distinguished by the name at the right top of the box to represent the original creator of a specific argumentative component. Each work of argument mapping can be simultaneously saved in pressing 'Enter' key or clicking 'Done' button, and saved as a pdf file or printed out.

Screenshot of argument mapping at *AGORA-net*
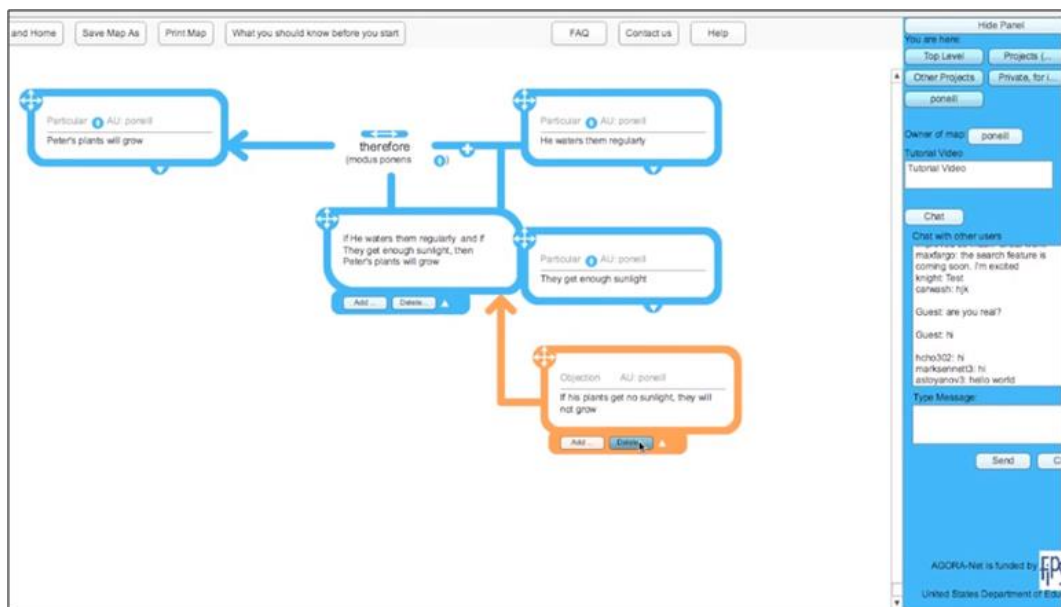
Appendix 3 Scholar Interface

This section provides information on Scholar's interface for writing instruction, focusing on its tools for feedback located on the right panel of user's writing page.

Scholar > Tools> Feedback> Review Criteria & Scoring Scale	
Scholar > Tools> Review Criteria (in detail)	

Scholar > Tools> Feedback> Reviews

(Scores & Comments)

Appendix 4 Personal Background of This Study

My experience of action research traces back to 2007 when I took up a position as a teaching assistant in an ESL/EFL writing course at a university in the United States, which was actually a lecturer teaching undergraduate courses for non-native speakers of English language. The courses that I was in charge of at that moment were argumentative writing in English, and most of the courses were already established with a sequenced curriculum plan and a range of the relevant teaching resource to support teaching. While I taught my students there, following the already-established curriculum, I found that students had often difficulties in understanding logical coherence and representing it into their actual writing, only developing a vague knowledge of the general organisation of the target genre. My interest grew in argumentation model, and this experience influenced my subsequent pedagogical practice as the 1st stage of the cycle (observation). Although the next stage was not directly connected to the 1st stage, my interest in the pedagogical implications of the studies on the argumentation in English writing grew, and I embarked on a PhD and began to ask myself questions of how to help student improve understanding and implementation of argumentation. As I looked at the topic, it became evident that the lack of an extensive body of studies on English argumentative writing in the EFL context of South Korea limited the extent of my literature which I was able to refer to. Along the way of my inquiry, I came across Toulmin model, and a further question about how to apply this model into South Korean instructional context arose. I decided to conduct my study with my own students at a university in South Korea which I came from, and stared finding an opportunity to teach my own curriculum in class and undertake a quasi-experimental design, followed by student interviews and teacher/e-learning developer interviews as a qualitative study.

Appendix 5 Modified ESL Composition Profile

The following table suggests a modified scoring rubric of Jacobs et al.'s (1981) 'ESL Composition Profile.' This analytic scoring scheme was used for pre-test writing scoring, which was used for group allocation before the writing course of this study begun, not for quantitative analysis.

Criteria	Score	Level
Content	30-27	EXCELLENT TO VERY GOOD: knowledgeable, substantive, thorough development of thesis, relevant to assigned topic, strong connection between a claim and supporting details
	26-22	GOOD TO AVERAGE: some knowledge of the subject, adequate range, limited development of thesis, mostly relevant to topic, but lacks detail, generally understandable connection between a claim and supporting details
	21-17	FAIR TO POOR: limited knowledge of the subject, little substance, inadequate development of topic, strong connection between a claim and supporting details, loose connection between a claim and supporting details
	16-13	VERY POOR: does not show knowledge of the subject, non-substantive, not pertinent OR not enough to evaluate, no OR very weak connection between a claim and supporting details
Organisation & Coherence	20-18	EXCELLENT TO VERY GOOD: fluent expression, ideas clearly stated/supported, succinct, well-organised, logical sequencing, cohesive
	17-14	GOOD TO AVERAGE: somewhat choppy, loosely organised but main ideas stand out, limited support, logical but incomplete sequencing
	13-10	FAIR TO POOR: non-fluent, ideas confused or disconnected, lacks logical sequencing and developing
	9-7	VERY POOR: does not communicate, no organisation, OR not enough to evaluate
Vocabulary	20-18	EXCELLENT TO VERY GOOD: sophisticated range, effective word/idiom choice and usage, word form mastery, appropriate resister
	17-14	GOOD TO AVERAGE: adequate range, occasional errors of word/idiom form/choice/usage but meaning not obscured
	13-10	FAIR TO POOR: limited range, frequent errors of word/idiom form/choice/usage, meaning confused or obscured
	9-7	VERY POOR: essentially translation, little knowledge of English vocabulary/idioms/word form, Or not enough to evaluate
Language Use	25-22	EXCELLENT TO VERY GOOD: effective complex constructions, few errors of agreement/tense, number/word order & function/articles/pronouns /prepositions

	21-18	GOOD TO AVERAGE: effective but simple constructions, minor problems in complex constructions, several errors of agreement/tense, number/word order & function/articles/ pronouns/prepositions but meaning seldom obscured
	17-11	FAIR TO POOR: major problems in simple constructions, frequent errors of negotiation agreement/tense, number/word order & function/articles/pronouns/ prepositions/ fragments/run-ons/deletions meaning confused or obscured
	10-5	VERY POOR: virtually no mastery of sentence construction rules, dominated by errors, does not communicate, OR not enough to evaluate
Mechanics	5	EXCELLENT TO VERY GOOD: demonstrates mastery of conventions, few errors of spelling/punctuation /capitalisation/paragraphing
	4	GOOD TO AVERAGE: occasional errors of spelling/punctuation /capitalisation/paragraphing but meaning not obscured
	3	FAIR TO POOR: frequent errors of spelling/punctuation /capitalisation/paragraphing, poor handwriting, meaning confused or obscured
	2	VERY POOR: no mastery of convention, dominated by errors of spelling/punctuation/capitalisation/paragraphing, handwriting illegible, OR not enough to evaluate
Volume Completion	-3	Total number of words between 0 to 100
	-2	Total number of words between 101 to 199
	-1	Total number of words between 200 to 299
	0	Total number of words over 300
Total Score		**_____/100**

Appendix 6 Rubrics

This section suggests two rubrics that were used for the feedback stages in the writing course of this study.

6.1 The 1st Rubric

Writing Rubrics for Peer Feedback: 1st Draft

General Organization

Is this essay well organized and well developed?
Every part of an essay should work to support and develop a thesis (purpose/direction and organizing should give writer's ideas a structure that you as a reader can follow as the writer develops his/her draft. Evidence of planning and logical order allows readers to easily move through the composition. Also, clear beginning, middle, and ending contribute sense of wholeness with effective transitions.

0.	No organization
1.	Serious disorganization or underdevelopment
2.	Inadequate organization or connection of ideas
3.	Adequately organized and developed, displaying unity, progression, and coherence although connection of ideas may be occasionally obscured
4.	Generally well organized and well developed, displaying unity, progression, and coherence although it may contain occasional redundancy, digression, or unclear connections
5.	Well organized and well developed, displaying unity, progression, and coherence

Comments:

General Contents

Does this essay effectively address a given topic through development of thesis with appropriate explanations, exemplifications and/or details?
Contents of an essay should be knowledgeable, substantive and relevant to assigned topic. It means contents include ample, well-chosen evidence from the passage to support central idea. Evidence and ideas are developed thoroughly, and details are specific, relevant, and accurate.

0.	Merely copies words from the topic, rejects the topic, or is otherwise not connected to the topic
1.	May be incoherent with little or no detail, or irrelevant specifics with limited knowledge of the topic
2.	Partially addresses the topic using somewhat developed explanations, exemplifications, and/or details but generally shows limited development in response to the topic with poor choice of details or does not provide enough details to support or illustrate
3.	Generally addresses the writing topic adequately, using some details to support a thesis or illustrate an idea but still shows inappropriate or insufficient exemplifications, explanations, or details to support or illustrate generalizations
4.	Addresses the topic well using details to support a thesis or illustrate an idea, but some points may not be fully elaborated
5.	Uses details clearly and properly to support a thesis or illustrate ideas

Comments:

339

Details on Argumentation: CLAIM

Is the claim(주장) clearly understood?
CLAIM(주장) (≒main point, conclusion): a statement that you are asking the other person to accept

0.	No claims
1.	Not clearly stated and hard to recognize
2.	May be stated but confusing to understand
3.	Stands out but somewhat nclearly stated
4.	Clearly stated in general
5.	Clearly stated

Comments:

Details on Argumentation: GROUNDS

Are the grounds(근거) sufficient and relevant?
GROUNDS(근거): evidence to support your claim

0.	No evidence
1.	Little or very weak evidence to support the claim
2.	Not enough or somewhat irrelevant evidence to support the claim
3.	Uses some relevant evidence but still lacks evidence to support the claim
4.	Generally uses relevant and rich evidence to support the claim
5.	Uses strong and rich evidence to fully support the claim

Comments:

Details on argumentation: WARRANT

Is the warrant(정당한 이유) solidly backed for supporting the grounds(근거)?
WARRANT(정당한 이유): link data to a claim, legitimizing the claim by showing the data to be relevant

0.	No warrants
1.	Restricted uses of the warrants with weak links between the claim and the grounds, leaving gaps between the claim and the grounds
2.	Uses limited uses of warrants, not enough to link grounds to the claim with limited descriptions
3.	Uses some warrants to support the grounds but still not sufficiently connect to the claim
4.	Generally links grounds to the claim by showing the grounds to be relevant
5.	Effectively links grounds to the claim by showing the grounds to be relevant

Comments:

Details on argumentation: REBUTTAL

Is the rebuttal(반론) effectively used to support the claim(주장)?
REBUTTAL(반론) (counter-argument, possible objection): establish what is wrong, invalid, or unacceptable about an argument/present counterarguments, or new arguments that represent entirely different perspectives or points of view on the issue

0.	No rebuttals
1.	May be considered but not fully discussed
2.	Established but loosely organized and developed to strengthen the claim from different points of view
3.	Considers some possible objections but not use them effectively to make the claim clear
4.	Generally uses rebuttals effectively to make the claim clear and persuasive but partially needs to be fully illustrated or integrated into the claim
5.	Deals with rebuttals with details and connect them to the claim to make the point clear and persuasive complementarily

Comments:

6.2 The 2nd Rubric

Writing Rubrics for Peer Feedback: 2nd Draft

Vocabulary(어휘)

Does this essay show a wide range and the accurate use of vocabulary?

0.	is written in a foreign language or just consists of keystroke characters
1.	displays little knowledge of English vocabulary, idioms and word form with serious and frequent errors
2.	displays a noticeably inappropriate use or choice of word/idiom form with confused or obscured meaning
3.	may demonstrate an adequate but limited rage of language choice and usage with some errors that make the meaning confused and obscured
4.	displays an adequate range of language choice and usage with occasional noticeable minor errors of word/idiom form that do not interfere with meaning
5.	displays a sophisticated rage of or an effective choice of language in word/idiom form with appropriate register

Comments:

Language Use(문법)

Does this essay show a wide range and the accurate use of syntactic structures?

0.	is dominate by errors with virtually no mastery of sentence structure rules
1.	displays serious and frequent errors in sentence structure that make the meaning confused and obscured
2.	displays numerous errors in sentence structure and/or usage
3.	may demonstrate an accurate but limited range of sentence structure with some errors that make the meaning confused and obscured
4.	displays a variety of sentence structure and/or usage with occasional noticeable minor errors that do not interfere with meaning
5.	displays a variety of sentence structure with effective complex constructions, though it may have minor errors

Comments:

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Mechanics(관용적 규칙)

Does this essay show the accurate use of English writing conventions?

0.	is dominated by errors of spelling, punctuation, capitalization and paragraphing with no mastery of conventions
1.	displays serious and frequent errors of spelling, punctuation, capitalization and paragraphing, which make the meaning confused or obscured
2.	displays numerous noticeable errors of spelling, punctuation, capitalization and paragraphing that make the meaning confused or obscured
3.	may demonstrate some errors of spelling, punctuation, capitalization and paragraphing that may make the meaning confused or obscured sometimes
4.	displays occasional errors of spelling, punctuation, capitalization and paragraphing that do not interfere with meaning
5.	displays mastery of conventions with few errors of spelling, punctuation, capitalization and paragraphing

Comments:

Appendix 7 Interview Questions

This selection suggests interview questions that were used in the student interview I and II.

7.1 Student Interview I

The following is the questions that were suggested in the student interview I.

Questions for each stage:

I.   Learning Contents:
- What do you think about this stage? Do you think it's necessary and helpful for you to develop your argumentative writing? Why do you think so? How did it help you to write your own essay?
- Then how can it be modified for your better writing?
- What type of assistance would you like to have in this stage?
- What other types of activities would you like to do in this stage?
- What do you think about _____ (stages not included)? Do you think it will help you to develop your argumentative writing? Does it look interesting?

II.   E-Learning Environment:
- What do you think about the design of this e-learning web page? Was it easy to use in terms of movement between pages, finding out each button and page layouts?
- Was there anything causing your eyestrain or distraction?
- Then how can it be modified for use of convenience?
- What type of technical assistance such as specific function buttons or operational environment would you like to have in this web page?
- What type of technical assistance would you like to have in _____ (stages not included)? Why do you think so?
- Is there too much text in this page, or too little - or is it about right?

   General Questions:
- Do you think this writing process is helpful? Why do you think so?
- How much can this writing process help you to develop your own argumentative writing?
- Which activities do you like and dislike the most? Why do you think so?
- Which stages should be included or excluded? Why do you think so? If you want to add another stage, which activities would you like to do for that stage?
- What do you think are the strengths or weaknesses in this writing model?
- What do you think about the general construction and design of a series of e-learning web pages? Is it anything necessary to change or modify?
- What do you think about the sequence of writing stages?

7.2 Student Interview II

The following is the themes that were generated from the group interview I for the group interview II.

General Contents:

Orientation
- Each writing session should be longer and focus more on the structure, the frequent expressions and the considerations of argumentative writing.
- Exercises of writing short paragraphs or sentences about a claim and its supporting details on a specific topic.
- The ways of developing introductory paragraphs and their relevant typical expressions should be taught.
- How to use rebuttals should be taught.
- Good examples of argumentative writing should be introduced.
- How to offer feedback to peers should be trained.
- Clearer explanations on rubrics used in the writing process should be necessary.
- Exercises on how to do brainstorming on sample topics should be necessary.
- Full familiarization with every function of Scholar should be necessary in advance.
- The models on argumentation were more considered and useful in assessing others' essays rather than writing one's own essay.
- The pre-session for each topic, which can be a chance to receive feedback on whether my brainstorming or outline can be actually used for the atopic, should be necessary.

Brainstorming
- Brainstorming was effective not to forget key words of each paragraph.
- It is better to make brainstorming optional, which can be developed by pictorial drawing or fee note-taking.
- It was felt that brainstorming itself was an obligatory assessment because it took a fair amount of time.
- In revision, re-development or amendment of my current brainstorming has not been done.
- Contents which were not included in brainstorming were used in actual writing.

1st Drafting
- It is better to choose complex topics which make it difficult to take a clear stance on one side. Otherwise it is better to choose simple ones which make it easy to do so.
- It will be better to have an optional setting to write with time constraints.
- A relevant list of vocabulary or exemplary ideas on a topic could be necessary before writing. Otherwise it is better to be provided after completing a first draft of a topic because it is likely to write with others' ideas, not with their own ideas.
- Our frequent mistakes in logical development or grammar during writing should be categorised, collected and shared by files, discouraging to repeat them later.

1st Peer Feedback

- It was helpful to remind me of the focus of a topic or get detailed feedback from group members. Or it was not helpful due to insincerely rough, ambiguous, or aggressive feedback from them.
- Giving scores was not that necessary. Giving comments will be just enough.
- All the essays of my peers on the same drafting stage should appear on the same screen for relative evaluation.
- Feedback should be optional, so that if I have nothing to say, I can skip it.
- Rubrics should be more simplified.
- Rubrics should be provided in Korean for easier understanding.
- The experiences in evaluating others' essays based on rubrics encouraged me to consider the rubrics in my own writing as well.
- I relied more on teacher feedback than peer feedback.
- Before the revision stage for minor errors, one to two additional cycles from the 1st drafting to the 1st peer feedback for the general structure and contents should be necessary. Or the current organizational sequence of stages is satisfactory enough to develop a topic.

2nd Drafting
- For the people who need to re-write their 1st draft before moving to the 2nd drafting stage, another chance to repeat the 1st drafting stage should be give as an option, which can let peers provide their feedback on the re-written 1st draft again.

2nd Peer Feedback
- Because general comments on each category of the rubrics were not necessary, annotations will be just enough.
- It is necessary to give scores on the level of improvement compared with the previous draft.
- I often lost the cohesion in my draft in the end because I was likely to focus only on the commented elements.
- Regarding the 2nd feedback, teacher feedback was more helpful than peer feedback. Because I was not that confident in error correction or lacked of knowledge of it, it is better to have teacher feedback only.

Final
- Giving an individual title to own essays would be better.
- Before submission, peer evaluation on the level of improvement from the 1st to the last draft should be necessary.
- Good essays of others should be shared to learn something from them.
- Before submission, one more chance to polish up should be necessary. Or it is not good to have a long period of essay development in one topic, losing concentration.

Publication
- It was motivating and encouraging to show my essay to others, raising my sense of responsibility as well. Or it was good to save my essays as a portfolio, easy to print or look up to. Or I wanted to read good essays of others.
- It was possible to recognise my state of development and helpful to understand mistakes which had been made in the process of the essay development.

- I did not want to publish by Scholar because I could save all my essays with a word processor. Or I did not want to open my essays to others.

Appendix 8 Scoring Rubric for Argumentation

This rubric was used for quantitative analysis on students' essay data. For pre-post comparison, this writing rubric was used to score students' essays completed in pre-test and post-tests.

Criteria			Score	Level	Sub-total (Weighted Scoring)
GENARAL ORGANISATION			0	No organization	____x2
			1	Disorganisation or underdevelopment with inadequate connection of ideas	
			2	Adequately organized and developed, displaying unity, progression, and coherence although connection of ideas may be occasionally obscured	
			3	Well organized and well developed, displaying unity, progression, and coherence	
C O N T E N T S	**A R G U M E N T A T I O N**	**Claim**	0	No claims	____x3
			1	Not clearly stated and confusing to understand	
			2	Stands out but somewhat unclearly stated	
			3	Clearly stated	
		Grounds & Warrant	0	No evidence and links	____x3
			1	Little or very weak evidence and links to support the claim	
			2	Uses some relevant evidence and links but still lacks them to support them	
			3	Uses strong and rich evidence and links to fully support the claim	
		Rebuttal	0	No rebuttals	____x2
			1	May be considered but not fully discussed and developed to strengthen the claim from different points of view	
			2	Considers some possible objections but not use them effectively to make the claim clear and partially needs to be fully illustrated or integrated into the claim	
			3	Deals with rebuttals with details and connect them to the claim to make the point clear and persuasive complementarily	

Sub-total Score			**_____/30**
			(x 3.3)
Multiplied Sub-total Score (x 3.3)			**_____/99**
Volume Satisfaction	**-1**	Fails to meet the minimum limit of the required number of words	
	1	Meet the minimum limit of the required number of words	
Total Score	**_____/100**		

Appendix 9 Thematic Codes

The following is the thematic code scheme that was used for qualitative analysis.

- Category: orientation (including any pre-sessions for readiness)
  - Code: writing skills training
  - Code: hands-on practice
- Category: process-based writing
  - Code: brainstorming
  - Code: drafting stage
  - Code: feedback stage
  - Code: submission stage
  - Code: publication stage
- Category: Toulmin model
  - Code: argumentation components
- Category: Rubric
  - Code: 1st rubric
  - Code: 2nd rubric
  - Code: scoring (for reviews)
- Category: writing activities and materials
  - Code: designed (in place)
  - Code: to be designed (in the future)
- Category: feedback
  - Code: peer feedback
    - Subcode: 1st peer feedback
    - Subcode: 2nd peer feedback (including language proficiency)
  - Code: teacher feedback
    - Subcode: 1st teacher feedback
    - Subcode: 2nd teacher feedback
  - Code: anonymity (including honesty)
  - Code: responsibility (including punctuality)
- Category: writing environment
  - Code: classroom-based writing
  - Code: digital writing
- Category: Almind
  - Code: Almind (reviews)
  - Code: other tools
- Category: Scholar
  - Code: general platform design
  - Code: feedback tool
  - Code: annotation tool
  - Code: other specific tools
  - Code: operation environment

Appendix 10 Student Writing Samples

10.1 Sample Essays

The following is a collection of pre-test writing, in-course writing (3 draft essays on topic 1) and post-test 1 & 2 writing created by Student A in the intervention group.

<u>Pre-test Topic:</u>

Some people say that the Internet provides people with a lot of valuable information.
Others think access to so much information creates problems.
Which view do you agree with? Use specific reasons and examples to support your opinion.

These days, we are so naturally surrounded machinery making our life convenient that we even are unaware of this in daily life. As far as I concerned, I think this prevalent technology lets us lead a better life.

Firstly, we should consider smartphone, which we always use being in our hands. when we look around subway, we can definitely feel smartphone has became a big part of our life, Although people often are annoyed about the fact we are so addicted to this machine that we sometimes do not take away and play with this all the times rather than being together and talk with other people. But, from my view point, we need to admit that this smartphone makes out life more convenient. When we go outside, which there is no computers or references, this machine help us find any information we want to get in that moment. It is easy to access and useful. It is like we have all information from the worlds in our hands

On top of that, technology is also beneficial not only healthy people with every day of our life but also people who really need help in health. Over the time, there are many people who have disease which is really hard to deal with to doctors and there is few solutions to get them better. But thanks to development in medical technology, gradually people who suffered from these kinds of disease have become to have hopes that they can get well..

In conclusion, Technology is extremely playing tremendously important parts in our lives. It have made our life more beneficial.place to live in..   ,

Do you agree or disagree with the following statement?

Working alone at home with a computer or a telephone is better than working with coworkers in a company.

Use specific reasons and examples to support your answer.

The 1st draft submitted by "Student A"

Nowadays, due to the development of the technology of telecommunication, there are more and more people working alone at home with a computer or a telephone. Supporters about working at home insist that working alone at home is better than working with coworkers in a company because they don't need to commute to work, so they can save time. They also say that they can completely focus on work because there is no one who can interrupt them, so they can complete their work without any mistakes. Even though there is agreement about working alone, I can surely say that working with coworkers in a company is more beneficial than working alone at home with a computer or a telephone in the aspect of 'efficiency' and 'accuracy.' Let me explain by giving specific reasons and examples.

To begin with, some people working at home might insist that they don't need to commute to work, so they can save time. However, as we experienced, working at home rather wasted our time. In my case, when there were some problems while working at home, I had to call to my co-workers or send an e-mail to explain what the problems were and to ask what I had to do to solve them. It took less time and was easier to talk in face to face communication than to talk on the phone or through e-mails because I couldn exactly show them what the problems were. It is also easier and faster working together in one place because they can easily solve some problems by getting ideas from others as soon as possible whenever they want. In short, face to face communication is the most efficient and accurate way for work.

In addition, people who like working at home might say that they can better focus on work because there is no one who could interrupt them, so they can complete their work without mistakes in their home. However, we would be interrupted more often when we

work at home than when we work at a office because they have more possibilities can get some private calls and visits. Plus, in business, sharing ideas is vital to successfully complete a project. To get a good idea and make a better product, people have to have a discussion. When they talk on the phone or through e-mails, there would be more misunderstandings than talking in face to face communication because they can't read each other's body language. As we know, a small misunderstanding can cause a big problem in business. In short, face to face communication is the most efficient and accurate way for work.

To sum up, there are some agreement that working alone is better than working with others. They insist that they can save time because they don't need to commute to work and they can better focus on work because there is no one who can interrupt them when they work. However, I disagree with their opinions because I am sure that people can easily solve some problems and get ideas as soon as possible whenever they want in face to face communication. Plus, face to face communication can more reduce some possibilities of misunderstandings than telecommunicatons like talking on the phones or through e-mails because they can read each other's body language. In short, face to face communication is the best way of 'efficiency' and 'accuracy' for work, so I prefer working with co-workers in a company to working alone at home with a computer or a telephone.

The 2nd draft submitted by "Student A"

Nowadays, due to the development of the technology of telecommunication, there are more and more people working alone at home with a computer or a telephone. Supporters of working at home insist that working alone at home is better than working with coworkers in a company. However, I can surely say that working with coworkers in a company is more beneficial than working alone at home with a computer or a telephone in the aspect of 'efficiency' and 'accuracy.'

To begin with, some people working at home might insist that they don't need to commute to work, so they can save time. However, as we experience, working at home rather wastes our time. In my friend's case, when there were some problems while working at home, she had to call to her co-workers or send an e-mail to explain what the

problems were and to ask what she had to do to solve them. It took a lot of time and effort to share the problem. After this experience, she prefers working at a office to working at home. She says that it is easier and takes less time to talk in face to face communication than to talk on the phone or through e-mails because I can't exactly show them what the problems are. She also says that it is much more easier and faster working together in one place because I can easily solve some problems by getting ideas from others as soon as possible whenever I want. In short, working together in a company is the most efficient way of work.

In addition, people who like working at home might say that they can better focus on work because there is no one who could interrupt them, so they can complete their work without mistakes in their home. However, there is a report of KBS research that people are more interrupted when they work at home than when they work at an office because they have more possibilities to get some private calls and visits. Plus, the report says that when people talk on the phone or through e-mails, there will be more misunderstandings than talking in face to face communication because they can't read each other's body language. As we know, a small misunderstanding can cause a big problem in business. In short, working together in a company is the most accurate way of work.

To sum up, even thogh some people might say that they can save time and better focus on work when they work at home, I have no doubt that people working with co-workers in a company do work in the most efficient and accurate way.

The final draft submitted by "Student A"

Nowadays, due to the development of the technology of telecommunication, there are more and more people working alone at home with a computer or a telephone. Supporters of working at home insist that working alone at home is better than working with co-workers in a company. However, I can surely say that working with co-workers in a company is more beneficial than working alone at home with a computer or a telephone in the aspect of 'efficiency' and 'accuracy.'

To begin with, some people working at home might insist that they do not need to

commute to work, so they can save time. However, as we experience, working at home rather wastes our time. In my friend's case, when there were some problems while working at home, she had to call to her co-workers or send an e-mail to explain what the problems were and to ask what she had to do to solve them. It took a lot of time and effort to share the problems. After this experience, she began to prefer working at an office to working at home. She says that it is easier and takes less time to talk in face-to-face communication than to talk on the phone or through e-mails because she cannot exactly show them what the problems are. She also says that it is much easier and faster working together in one place because she can easily solve some problems by getting ideas from others as soon as possible whenever she wants. In short, working with co-workers is the most efficient way of work.

In addition, some people who like working at home might say that they can better focus on work because there is no one who could interrupt them, so they can complete their work without mistakes in their home. However, I can surely say that working with people in a company is the most accurate way of work. For instance, there is a report of KBS research in February, 2014 that people are more interrupted when they work at home than when they work at an office because they have more possibilities to get some private calls and visits. Plus, the report says that when people talk on the phone or through e-mails, there will be more misunderstandings than talking in face-to-face communication because they cannot read each other's body language. As we know, a small misunderstanding can cause a big problem in business. In short, working together in a company is the most accurate way of work.

To sum up, even thogh some people might say that they can save time and better focus on work when they work at home, I have no doubt that people working with co-workers in a company do work in the most efficient and accurate way. In addition, people who work with co-workers can make good relationships with them, so they can enhance their social skills like co-operating with people. Therefore, working with co-workers in a company has much more benefits than working alone at home.

Post-test:

Some people say that computers have made life easier and more convenient.

Other people say that computers have made life more complex and stressful.

What is your opinion? Use specific reasons and examples to support your answer.

In modern days, almost of the every modern person has his or her own personal computer. In other words, a computer has become a standard machine that is used frequently by everyone having no regard to class or salary. Because of this wide use, sometimes, people get to have some problems related with a computer, which makes some people think a computer as a dangerous machine. However, in my opinion, a computer is a really convenient and certainly has made our lives far easier than before.

Firstly, in this wealth of information world, computer is dispensable. Today's modern worlds, there are endless of information about various subject. For example, even one area such as science, there are so many kinds of experiment and experts who think deeply about their own targeted subject to find out new knowledge, which creates countless idea and theory. Therefore, in this modern days, the crucial thing is to store and arrange overflowing information. At this point, computer is the most useful medium that make us find any information so easily. Just one click and searching, modern people can just earn any knowledge what they want to know. If there is no computer, people should go to library or others and should gather information they want one by one because there is few book or thing that contain all the combined knowledge.

Second, thanks to computer, modern people have some measure to play with. Even if it is true that machine cannot replace human contact, in this busy world,a computer is one of the best way to enjoy with. Because all people have other schedule they had to follow, it is not easy to hang out with friends even if a person has a spare time to relax.In this situation,a computer makes people enjoy and play alone because there are many television program and video which one person can see. Although sometime people say that a computer makes people addicted and there are less contacts due to this machine, it is deniable that to busy people, computer is a good way to play with so easily. In addition, if someone play with this computer, there is much less money than when somebody goes outside.

In conclusion, a computer has made people live in easier and more convenient way. Although it is true that there are increasing number of the people who has a trouble with computer addition , if people use this machine in moderation, this would be a great thing that people can use when they want to get various information and lightly play

These days, technology is not a privilege that experts can deal with. Actually, it is all around in people's daily lives. From my opinion, thank to technology that is prevalent to everybody, people can make their own life more convenient and let their life activities more simpler and easier.

Firstly, technology always pursue to be developed itself better, having life activities more easier. For example, computer has developed for many years. At early stage of computer, programs that was needed to work with computer were not embed in computer, which made an user spend several time installing programs until he or she really did their important tasks, However, thanks to developing technology, now people just put their computer on and then there is nothing more they have to do for making their computer work appropriately. In addition there are many kinds of computer that has been invented according to user's needs like laptop and palmtop. Because one of the purposes for inventing technology is making people live more simpler, people can handle their life better.

Secondly, developing technology has changed human's daily life into entirely comfortable one. For example, when a person needs to clean his house, he can pick up any cleaning machine that makes his job way more easy, which means he doesn't have to sweat and have a sense of tiredness because of the domestic work. In addition, using computer makes people save their time and energy. If people want to buy their stuff such as books

or clothes, they do not need to go outside and walk around to find their wants. Internet market is so broad that there is nothing that a person cannot buy in real market. Even more, using internet lets shoppers save their money. Like this, all little things that people have to face with in their everyday life have become so easier and simpler due to technology.

10.2 Analysis on Argumentative Essay

The following is a collection of analysed essays according to the level of argumentation: pre-test writing, in-course writing (3 draft essays on topic 1) and post-test 1 & 2 writing created by 'Student A' in the intervention group.

Pre-test Analysis on the essay of 'Student A'

These days, we are so naturally surrounded machinery making our life convenient that we even are unaware of this in daily life. As far as I concerned, I think this prevalent technology lets us lead a better life.

Firstly, we should consider smartphone, which we always use being in our hands. when we look around subway, we can definitely feel smartphone has became a big part of our life, Although people often are annoyed about the fact we are so addicted to this machine that we sometimes do not take away and play with this all the times rather than being together and talk with other people. But, from my view point, we need to admit that this smartphone makes out life more convenient. When we go outside, which there is no computers or references, this machine help us find any information we want to get in that moment. It is easy to access and useful. It is like we have all information from the worlds in our hands

On top of that, technology is also beneficial not only healthy people with every day of our life but also people who really need help in health. Over the time, there are many people who have disease which is really hard to deal with to doctors and there is few solutions to get them better. But thanks to development in medical technology, gradually people who suffered from these kinds of disease have become to have hopes that they can get well..

In conclusion, Technology is extremely playing tremendously important parts in our lives. It have made our life more beneficial.place to live in.. ,

GO 1x3=3
C 1x3=3
GW 1x3=3
RB 1x2=2

11x3.3=36.3/99

357

Nowadays, due to the development of the technology of telecommunication, there are more and more people working alone at home with a computer or a telephone. Supporters about working at home insist that working alone at home is better than working with coworkers in a company because they don't need to commute to work, so they can save time. They also say that they can completely focus on work because there is no one who can interrupt them, so they can complete their work without any mistakes. Even though there is agreement about working alone, I can surely say that working with coworkers in a company is more beneficial than working alone at home with a computer or a telephone in the aspect of 'efficiency' and 'accuracy.' Let me explain by giving specific reasons and examples.

To begin with, some people working at home might insist that they don't need to commute to work, so they can save time. However, as we experienced, working at home rather wasted our time. In my case, when there were some problems while working at home, I had to call to my co-workers or send an e-mail to explain what the problems were and to ask what I had to do to solve them. It took less time and was easier to talk in face to face communication than to talk on the phone or through e-mails because I couldn exactly show them what the problems were. It is also easier and faster working together in one place because they can easily solve some problems by getting ideas from others as soon as possible whenever they want. In short, face to face communication is the most efficient and accurate way for work.

In addition, people who like working at home might say that they can better focus on work because there is no one who could interrupt them, so they can complete their work without mistakes in their home. However, we would be interrupted more often when we work at home than when we work at a office because they have more possibilities can get some private calls and visits. Plus, in business, sharing ideas is vital to successfully complete a project. To get a good idea and make a better product, people have to have a discussion. When they talk on the phone or through e-mails, there would be more misunderstandings than talking in face to face communication because they can't read each other's body language. As we know, a small misunderstanding can cause a big problem in business. In short, face to face communication is the most efficient and accurate way for work.

To sum up, there are some agreement that working alone is better than working with others. They insist that they can save time because they don't need to commute to work and they can

better focus on work because there is no one who can interrupt them when they work. However, I disagree with their opinions because I am sure that people can easily solve some problems and get ideas as soon as possible whenever they want in face to face communication. Plus, face to face communication can more reduce some possibilities of misunderstandings than telecommunicatons like talking on the phones or through e-mails because they can read each other's body language. In short, face to face communication is the best way of 'efficiency' and 'accuracy' for work, so I prefer working with co-workers in a company to working alone at home with a computer or a telephone.

GO 2x3=6

C 3x3=9

GW 2x3=6

RB 2x2=4

25x3.3=82.5

General Organization

Rebuttal
Claim
Grounds & Warrant

Rebuttal
Claim
Grounds & Warrant
Cooking Density

Nowadays, due to the development of the technology of telecommunication, there are more and more people working alone at home with a computer or a telephone. Supporters of working at home insist that working alone at home is better than working with coworkers in a company. However, I can surely say that working with coworkers in a company is more beneficial than working alone at home with a computer or a telephone in the aspect of 'efficiency' and 'accuracy'.

To begin with, some people working at home might insist that they don't need to commute to work, so they can save time. However, as we experience, working at home rather wastes our time. In my friend's case, when there were some problems while working at home, she had to call to her co-workers or send an e-mail to explain what the problems were and to ask what she had to do to solve them. It took a lot of time and effort to share the problem. After this experience, she prefers working at a office to working at home. She says that it is easier and takes less time to talk in face to face communication than to talk on the phone or through e-mails because I can't exactly show them what the problems are. She also says that it is much more easier and faster working together in one place because I can easily solve some problems by getting ideas from others as soon as possible whenever I want. In short, working together in a company is the most efficient way of work.

In addition, people who like working at home might say that they can better focus on work because there is no one who could interrupt them, so they can complete their work without mistakes in their home. However, there is a report of KBS research that people are more interrupted when they work at home than when they work at an office because they have more

possibilities to get some private calls and visits. Plus, the report says that when people talk on the phone or through e-mails, there will be more misunderstandings than talking in face to face communication because they can't read each other's body language. As we know, a small misunderstanding can cause a big problem in business. In short, working together in a company is the most accurate way of work.

To sum up, even thogh some people might say that they can save time and better focus on work when they work at home, I have no doubt that people working with co-workers in a company do work in the most efficient and accurate way.

GO 2x3=6

C 3x3=9

GW 3x3=9

RB 3x2=6

30x3.3=99

General Organisation

Grounds & Warrant
Coding Density

General Organisation
Rebuttal
Claim

359

Nowadays, due to the development of the technology of telecommunication, there are more and more people working alone at home with a computer or a telephone. Supporters of working at home insist that working alone at home is better than working with co-workers in a company. However, I can surely say that working with co-workers in a company is more beneficial than working alone at home with a computer or a telephone in the aspect of 'efficiency' and 'accuracy.'

To begin with, some people working at home might insist that they do not need to commute to work, so they can save time. However, as we experience, working at home rather wastes our time. In my friend's case, when there were some problems while working at home, she had to call to her co-workers or send an e-mail to explain what the problems were and to ask what she had to do to solve them. It took a lot of time and effort to share the problems. After this experience, she began to prefer working at an office to working at home. She says that it is easier and takes less time to talk in face-to-face communication than to talk on the phone or through e-mails because she cannot exactly show them what the problems are. She also says that it is much easier and faster working together in one place because she can easily solve some problems by getting ideas from others as soon as possible whenever she wants. In short, working with co-workers is the most efficient way of work.

In addition, some people who like working at home might say that they can better focus on work because there is no one who could interrupt them, so they can complete their work without mistakes in their home. However, I can surely say that working with people in a company is the most accurate way of work. For instance, there is a report of KBS research in February, 2014 that people are more interrupted when they work at home than when they work at an office because they have more possibilities to get some private calls and visits. Plus, the report says that when people talk on the phone or through e-mails, there will be more misunderstandings than talking in face-to-face communication because they cannot read each other's body language. As we know, a small misunderstanding can cause a big problem in business. In short, working together in a company is the most accurate way of work.

To sum up, even thogh some people might say that they can save time and better focus on work when they work at home, I have no doubt that people working with co-workers in a company do work in the most efficient and accurate way. In addition, people who work with co-workers can make good relationships with them, so they can enhance their social skills like co-operating with people. Therefore, working with co-workers in a company has much more benefits than working alone at home.

GO 2x3=6

C 3x3=9

GW 3x3=9

RB 3x2=6

30x3.3=99
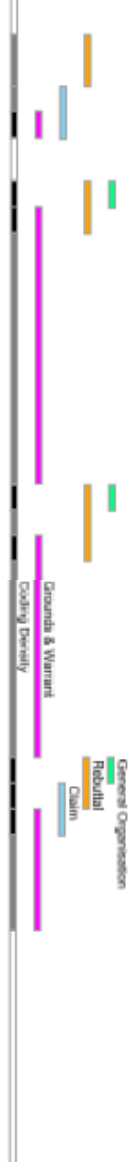
Post-test 1 Analysis on the essay of "Student A"

In modern days, almost of the every modern person has his or her own personal computer. In other words, a computer has become a standard machine that is used frequently by everyone having no regard to class or salary. Because of this wide use, sometimes, people get to have some problems related with a computer, which makes some people think a computer as a dangerous machine. However, in my opinion, a computer is a really convenient and certainly has made our lives far easier than before.

Firstly, in this wealth of information world, computer is dispensable. Today's modern worlds, there are endless of information about various subject. For example, even one area such as science, there are so many kinds of experiment and experts who think deeply about their own targeted subject to find out new knowledge, which creates countless idea and theory. Therefore, in this modern days, the crucial thing is to store and arrange overflowing information. At this point, computer is the most useful medium that make us find any information so easily. Just one click and searching, modern people can just earn any knowledge what they want to know. If there is no computer, people should go to library or others and should gather information they want one by one because there is few book or thing that contain all the combined knowledge.

Second, thanks to computer, modern people have some measure to play with. Even if it is true that machine cannot replace human contact, in this busy world, a computer is one of the best way to enjoy with. Because all people have other schedule they had to follow, it is not easy to hang out with friends even if a person has a spare time to relax. In this situation, a computer makes people enjoy and play alone because there are many television program and video which one person can see. Although sometime people say that a computer makes people addicted and there are less contacts due to this machine, it is deniable that to busy people, computer is a good way to play with so easily. In addition, if someone play with this computer, there is much less money than when somebody goes outside.

In conclusion, a computer has made people live in easier and more convenient way. Although it is true that there are increasing number of the people who has a trouble with computer addition , if people use this machine in moderation, this would be a great thing that people can use when they want to get various information and lightly play

GO 2x3=6
C 1x3=3
GW 2x3=6
RB 2x2=4

19x3.3=62.7/99

Post-test 2 Analysis on the essay of "Student A"

These days, technology is not a privilege that experts can deal with. Actually, it is all around in people's daily lives. From my opinion, thank to technology that is prevalent to everybody, people can make their own life more convenient and let their life activities more simpler and easier.

Firstly, technology always pursue to be developed itself better, having life activities more easier. For example, computer has developed for many years. At early stage of computer, programs that was needed to work with computer were not embed in computer, which made an user spend several time installing programs until he or she really did their important tasks, However, thanks to developing technology, now people just put their computer on and then there is nothing more they have to do for making their computer work appropriately. In addition there are many kinds of computer that has been invented according to user's needs like laptop and palmtop. Because one of the purposes for inventing technology is making people live more simpler, people can handle their life better.

Secondly, developing technology has changed human's daily life into entirely comfortable one. For example, when a person needs to clean his house, he can pick up any cleaning machine that makes his job way more easy, which means he doesn't have to sweat and have a sense of tiredness because of the domestic work. In addition, using computer makes people save their time and energy. If people want to buy their stuff such as books or clothes, they do not need to go outside and walk around to find their wants. Internet market is so broad that there is nothing that a person cannot buy in real market. Even more, using internet lets shoppers save their money. Like this, all little things that people have to face with in their everyday life have become so easier and simpler due to technology.

GO 2x3=6
C 3x3=9
GW 2x3=6
RB 0x2=0

21x3.3=69.3/99
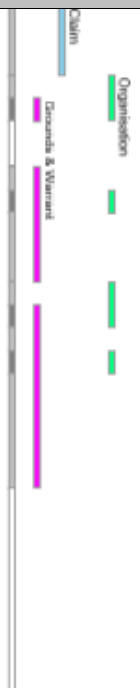
10.3 Analysis on Narrative Reflection Essay

The following is a sample of the narrative reflection submitted by 'Student A' in the intervention group, and this written data was coded according to the thematic code scheme that was developed in this study. This essay was originally written in Korean by the student and then translated into English by the researcher of this study to suggest here.

Korean original	English translation
알마인드 사용: 선제석인 내봉의 틀을 삽고자 사봉하였으나 결과석으론 한 부분에 집중하는 내용으로 전개가 되었던 점을 미루어 보면 Topic 1 을 작성할 땐 알마인드의 역할이 그렇게 크지 않았던 것으로 보여진다. 필자의 습관상 글을 쓸 때 미리 구상한 내용에 대한 세부 내용을 적어가면서 쓰던 성격이 아니고 작성하면서 계속해서 내용을 생각해내던 습관이 있어서 알마인드를 이용한 브레인스토밍에 대한 적용이 되지 않았었다.	The Use of Almind: I used Almind to frame the general contents, but in the sense that my actual essay was finally developed focused on one aspect, its role was not considered not significant when I wrote an essay on Topic 1. It's not my habit that I write down contents generated in my mind in detail prior to actual writing, and I actually have a habit of generating ideas and writing an essay at the same time. Therefore, it was difficult for me to get accustomed to doing brainstorming by making use of Almind.
자료 탐색: 지금 생각해보면 다른 주제와 다르게 Topic 1 은 재택 근무와 관련된 전문적인 논문을 주로 찾아봤었다. 그러다보니 글이 좀 더 객관적인 자료를 갖춘 것은 좋았으나 너무 앞서나간 것이 아닌가 하는 생각도 들었다. Topic 1 과정 전반적으로 이번 글쓰기 연구의 초점을 가늠해보는 하나의 과정이 아니었던가 싶었다. 그래서인지 다음 Topic 부터는 전문적인 자료보다는 쉽게 보고 이해할 수 있는 기사나 칼럼 위주로 찾아보게 되었다.	Data Searching: Now that I think about it, different from other topics, I searched for and read professional theses related to telecommuting. I think this made my essay developed with more objective data, but it was a step too far at the same time. Topic 1 development seems to be a general process of understanding the focus of this writing course. Thus, from the next topic, I mainly referred to news or columns that I could easily read and understand.
CG Scholar: 최적화가 덜 돼서 그런지 인터넷 익스플로러에서 구동하기 힘들고 크롬에서도 간혹 속도가 느려지는 등의 문제는 굳이 더 언급할 필요는 없을 것이다. 그리고 직관적이지 못한 인터페이스는 과정을 익히는데 많은 시간을 들이게 하였고 나중에는 그냥 Notification 과 몇몇 꼭 필요한 도구 외에는 건드리지 않는 자신을 보게 되었다.	CG Scholar : I guess its system was less optimised. Needless to say, this aspect made it difficult for me to operate it in Internet Explorer and its speed went down in Crome Browser sometimes as well. And the less intuitive interface of it made me spend a lot of time in familiarizing myself with how to use. As a result, I found myself not using functions or tools except from just the notification and some of essential tools.
피드백 과정: 익명이라고 하더라도 동료 피드백으론 굉장히 후한 내용을 봤었던 기억이 난다. 1 차 초안에서 너무 저출산 문제를 해결하는데 도움이 된다는 방식으로 지엽적으로 내용 전개를 했었음에도 불구하고, 물론 그 부분을 지적한 내용도 있었으나 전체적으로 박한 평가는 드물었다. 물론 그 후 교수 피드백에서 폭풍 지적을 받고 대폭 수정을 가해야 했다. 그러나 교수 피드백을 하나하나 ... 받았다.	Feedback Process: Even though it was based on anonymity, I remember receiving really positive comments in peer feedback. In my 1st draft, although I developed my essay with peripheral contents the way in which telecommuting can help to solve the problem of low fertility ... comments were quite rare in general. But later it was hugely pointed out by Teacher Feedback and I had to revise it drastically. However, I carefully read teacher feedback in detail and this served me as a momentum for considering my way to develop topics, which was greatly helpful for me.
2 차 피드백에선 서로간의 영어 실력이 차이가 크지 않기 때문에 딱히 쓸 내용이 없었다. 정말 눈에 띄는 명백한 단어 사용의 실수라면 하는 것은 지적 가능하나 문법이나 관용적 표현은 내가 제대로 알고 있는지에 대한 확신이 없었기에 크게 쓸 내용이 없었다.	In the 2nd Peer Feedback, the gap of English proficiency between peer reviewers was not that big, so I had nothing to write in particular. I could point out clearly outstanding errors like English word usage, but I was not sure of English grammar or idiomatic expressions. That's why I didn't have much to say.
그리고 이런 인터넷을 통한 서로간의 피드백의 장점으로 상대방에 대한 선입견을 가지지 않는다는 점도 눈에 띄었다. 얼굴을 맞대고, 누구의 것인지 아는 상태로 처음 피드백을 했으면 다음에 피드백을 할 때도 그 사람의 첫인상이나 선입견이 남아서 혹시나 생길지 모를 부작용이 생길 수 있을 것이다. 예를 들면 상대방의 영어 실력에 대한 선입견이나 작문 스타일 등에 대한 것 등이다. 즉석에서 피드백을 받는 신속함은 좋지만 그 질도 보장할 수 없다는 점도 있다. (물론 인터넷에서 한다고 그 질이 좋다는 보장을 할 수 없다는 것도 있지만.)	Also, as a merit of mutual feedback by this kind of use of the Internet, it was noticeable that we didn't have any prejudice again group members. If I had met them face to face and recognised which essay was whose in the 1st peer feedback, I could have my own first impression of and prejudice against them, which might cause any possible negative impact on the next peer feedback. For example, I might have some prejudice again their English proficiency, writing style and so forth. During face-to-face peer feedback, it's possible that I was able to have instant feedback, which was positive, but, at the same time, it's hard to guarantee the quality of immediate feedback. (Of course, it's also hard to guarantee the quality of peer feedback through the internet.)
Topic 1 총평: CG Scholar 와 알마인드 사용법에 그다지 익숙해지지 않은 1 차 토픽이었다. 더구나 주제를 굉장히 지엽적으로 해석하여 재택 근무의 장점인 저출산 문제 해결을 집중적으로 조명을 해 1차 초안을 썼었고 그 과정에서 굉장히 많은 피드백을 받은 시기였다. 동료 피드백은 물론 교수 피드백으로도 굉장히 많은 양의 지적이 들어와서 거의 2 차 초안을 쓸 때는 글 내용을 전체적으로 바꾸어야 했다. 이 시기엔 피드백을 거의 대부분 받았으나 수정하길 권고받은 예시 문장을 그대로 2 차 초안에 넣는 등 지적받은 내용을 토대로 다시 고민해보고 수정하는 노력은 다소 부족했었던 과정이었다.	General Review on Topic 1: I was working on the 1st topic when I was not that accustomed to using CG Scholar and Almind. Moreover, I wrote a 1st draft focused on a resolution of low fertility issues with very peripheral understanding of the topic. In this process, I got a lot of negative comments on that. I received a lot of negative feedback from peers and teacher, which made me change the overall contents while writing the 2nd draft. At this moment of the 2nd draft writing, I accepted almost all of the comments given by feedback, but I had lack of effort to re-consider and revised pointed out things by others on my own since I just used to copy and put the suggested exemplary sentences by them.

Coding (margin) labels:

- LG — Brainstorming: Almind:)
- LG — Brainstorming: Almind:
- LG — Writing Material
- LG — Writing Material
- 2개 메모
- 2개 메모
- LG — Scholar:
- LG — 1st Peer Feedback: Anonymity
- LG — 1st Peer Feedback: Quality (X)
- LG — 1st Teacher Feedback: Quality
- LG — 1st Teacher Feedback:
- LG — 2nd Peer Feedback:
- LG — Peer Feedback: Online
- LG — Peer Feedback: Face-to-face
- LG — Peer Feedback: Face-to-face
- LG — 1st Peer Feedback: Quantity
- LG — 2nd Peer Feedback: Actual
- LG — 2nd Draft: Peer/Teacher Feedback

Appendix 11 Reviews on Digital Writing Platform

This section suggests critical discussions and analysis based the findings of this study, focusing on the digital writing platform, *Scholar*, that was selected and implemented in the digital writing course of this study.

11.1 E-learning Environments for Argumentative Writing: online vs. offline

The digital writing course used in this study is the *Scholar*, which was created and has been used for collaborative writing environment by a team of educational technology at University of Illinois, US. While the *Scholar* was not originally invented for this study, the online writing platform was selected for implementation of the online writing design of this study. In the sense of development and operation of formal instructions in the orientation, analysis of the results from the lecture and e-developer interview data indicated that English lecturers and e-learning developers have higher trust in offline instructions than online instructions. This tendency was based on the belief that online instructions were more likely to bring lower level of concentration and engagement in the target learning contents compared with face-to-face instructions. Therefore, the necessity of the blended learning environment was generated as long as teaching and learning conditions permitted, which signaled a change of this online instructional design for English argumentative writing for modification and re-application through follow-up studies. Although as Meyer's (2003) study showed some evidence that some students preferred one form of learning between face-to-face and online learning and face-to-face discussions resulted in immediacy and energy of participation, many students in this study welcomed blended learning if possible.

Nevertheless, it is true that the learning courses which are available online only are necessary for students who cannot afford to attend classes in person at a specific time. Also, the asynchronous online environment for writing was acclaimed by students in this study because they highly valued no barriers of time and space, which helped them to use their time more efficiently and take part in review tasks more actively, as m and Lee (2003), Mayer (2003) and Hyland (2016) pointed out increased interaction and communication of students as one of the merits in online projects. Concerning the digital learning environments used in this study, the finding of this study indicated that all the interview

respondents clearly preferred online writing/interaction to offline writing/interaction. Although late submission of some participants and relatively one-sided inactive idea exchanges in peer feedback were seen as weakness of online courses, students were not inclined to be limited by time and space, which made them attend in online courses rather than offline ones.

More importantly, another significant reason for overwhelming support of students to online writing course was that they felt freer to provide frank reviews on essays to others when they were not directly facing their peers. This inclination might be resulted from the Korean culture that people often try to evade direct and sharp spoken or written responses to others right in front of them. As some studies (Choi & Rhee, 2013; DeWaelsche, 2015; Lee, 2016) on South Korean students investigated, South Korean college students are reluctant to express and share ideas, including giving written comments on drafts of their peers, due to sociocultural influences. As Scott (2014) and Watling (2014) pointed out, the culture and the context of teaching and learning should be considered to use feedback practice. In this respect of culturally sensitive verbal exchanges, online environment can encourage student writers to provide more commentary reviews or keener indications on insufficient or erroneous things of the essays of others, which can relieve stress and tension on showing polite manners. In fact, the condition of anonymity between reviewers which was used in this study was highly acclaimed as an important factor of free and honest responses by student participants, which has been pointed out as one of the benefits of online feedback (MacLeod, 1999; Neighbours et al., 2010; Tuzi, 2004).

The finding of this study suggested that offline pre-sessions were necessary for students' better preparation, for which a large number of students and lecture/e-developer pointed out the need of blended learning. The result shows that teachers should provide more explicit and direct instruction in the orientation stage and even later stages although the student-centered actual writing stages are operated online. In regard of well preparation through explicit instructions of online writing courses, the findings imply that e-learning developers should have more pre-consideration to develop enriched input, possible options and guidelines to fit the needs and learning tendency of the target learners. This is in line with other studies suggested the need of guidance, input and feedback, necessary resources

and so on (Evans, 2014; Im & Lee, 2003; Wang, 2014). The finding of this study specifically suggests that the patternised exercises for mastery of argumentation elements and their logical arrangement and elaborated guidelines including how to use rubrics as reference materials can be created and designed in each stage of writing. In the sense that digital-based instructions allow a variety of multimodal learning input and activities, teachers may design necessary pre-writing online activities or during-writing assistance such as explanatory pop-up texts for understanding the Toulmin model and its components, and participating in sample peer reviews, which can be new challenges and opportunities for classroom practice that writing teachers have at the same time, as pointed out by Hyland (2016). This was also advocated by the fact that students kept referring to explanations of the Toulmin model and rubric elements while drafting their own essays and reviewing others' essays. Therefore, the needs of students for more guides and instructions should be considered to modify the current online writing platform. Also, as highlighted by Colpaert (2006), the learner factors such as their needs, learning problems and so on, which is the first step of his pedagogy-driven design model, should be analysed in the design phased.

Also, how to devise and organise mechanical elements and interactive features on digital writing in accordance with learners' cognitive thinking process and instinctive habits of using digital resources can be another matter of design, which could be debated further. Chen (2013) suggested that collaboration can be promoted by creating a suitable mobile platform whereas Underwood, Luckin and Winters (2012) proposed a system of handheld devices for self-initiated personal and collaborative language inquiry. While most responses of the student participants to digital learning environments of this study were related to technically peripheral and layout features, such feedback cannot be ignored in the sense that the user-friendly systematic and environment is one of the essential prerequisites for facilitating and motivating learning. Considering the suggestion that Wegerif (2007) highlighted educational activities need to be designed as a whole, "not only the software but also the pedagogy" (p. 201), user expectations, which can be drawn from their feedback or reviews, should be addressed through the design process, including designed-in and contingent scaffolding (Hammond & Gibbons, 2005; Williams et al., 2013). Moreover, effectiveness of online assessment feedback is not just an issue of technology but an issue

of how to apply teaching method into a whole instructional design with technology. Therefore, the major ideas based on the results of this study are drawn as follows:

11.2 Incorporated Writing Platform

Firstly, the findings of this study showed that student participants preferred an integrated learning system to separate one with a variety of software media. They had given feedback system, including the submission and the annotation tools in *Scholar*, for easy, continuative, collective and collaborative participation all through the unified platform. In particular, the responsive and mutual feedback setting with the designated feedback panel was valued in the sense that learners could have opportunities to practice and to receive feedback on performance, connect other learners with increased interactivity in learning and communication. Not student respondents but lecture/e-developer respondents identified one of the best advantages of the *Scholar* is its sequential and merging system for giving and reading feedback, where they could submit their essay, read others' essays, exchange peer and teacher feedback, read feedback of others on their essays in a single web page. Students and lecture/e-developer respondents considered the *Scholar* new and technically advanced. On the contrary, the *Scholar* enabled them to keep working in a single and the same page from beginning to end, not moving between media for submission, reviewing and reading others and their own writing. As Hyland (2016) stated that electronic technologies on writing change creating, editing, proofreading and formatting process, the *Scholar*'s technically advanced and systematically responsive environment from writing to proofreading in the very same web page enabled student users to perform writing in the on-going, reiterative, linear, reflective and adaptive process, not jumping between their own written draft papers and proofread ones. Despite this advantage, the responses of the student participants still showed high dependence on word processors such as MS Word in writing down their content for checking spelling or grammatical errors and counting the number of words in their essays. This was because *Scholar* had no tools for this, which led students develop their writings using a word processor first and then copy and paste them into the *Scholar* writing panel. In this regard, it was identified that the use of the *Scholar* was confined just to submitting written work and then exchanging feedback, which is not its full potential for the comprehensive writing platform. Therefore, it seems that it would be

necessary to include some of the basic but high-frequency word processing options such as word count or spell check for a comprehensive platform with better usability.

11.3 Intuitive User-friendly Design

The findings of the student responses demonstrated that the general design from specific function buttons to access options between web pages needed to be more intuitive and readable. Many of the student respondents did not feel comfortable about the only way of approaching a designated writing and feedback panel for a specific topic. Also, they had difficulties in retrieving and differentiating others' essays on the same topic because the system did not display whether they had already have read between peers' essays. For better operational environments, some of them cited *Facebook* as a good option in the sense that it is easy to access to and let them distinguish every work of their own and others with new completed responsive work noticed automatically.

11.4 Visual Clarity and Running Speed

The findings show that online learning platform should be clear and stable in typographic readability and operation speed, which are critical for higher involvement of users in tasks. *Scholar* used in this study was often criticised due to its relatively slow operation speed even though the Internet speed itself was really fast and stable. Also, one the most frequent disadvantages of the *Scholar* that student users pointed out was the small size of all the texts and the feedback panel on the right hand side, which means that low readability in design caused them to spend more time in reading and having access to the right work page. This can also be a reason of decreasing motivation of intervention group participant for writing online, which can have influence in the quantitative result. Student responses indicated this discouraging environment negatively contributed to the availability of the *Scholar*, which resulted in higher usability of another word processor in actual writing.

In the aspect of online material development, particularly for writing tasks which ask students to read and write longer texts, user-friendly digital environment related to mechanical and design factors for easy reading and writing should be primarily considered for facilitating online-based writing on arguments. Based on suggestions provided by many

of the student respondents, larger and more noticeable text size and colour, more enlarged feedback panel with a zoom-in mode or an independent scrolling option, which is an essential part of the *Scholar* as a collaborative writing platform, can be applied for the functional and stylistic improvement in usability and practicability.

Appendix 12 Sample of Student Interview Data

Group 1 (Korean Version)	Group 1 (English Version)
Interviewer: 어, 우리 처음에 러닝컨텐츠 얘기를 할건데요. 전체적으로 우리가 단계가 있었잖아요. 오리엔테이션부터 시작해서… 그래서 각 단계 한번 이야기 해 볼게요. 음, 처음에 오리엔테이션 스테이지 어떻게 생각하시는지…필요하고 도움이 되셨는가…논설문 쓰는데 있어서… 그 이유는 무엇인가… 한번 이야기 해 볼게요. 처음에 툴민모델 설명드리고 그런거 도움 되셨어요? 코퍼앤가이슬러 모델이나? 사실 툴민모델에서 제가 말씀드렸던건 루브릭으로 다 넣었던거든요. 평가할 때, 점수 주실 때 하는거를… 그래서 어떤게 도움이 되셨는지 자유롭게 말씀해주시면 돼요.	Interviewer: Uh, we're going to talk about the learning contents. We've gone through writing stages. From the orientation… Now, let's talk about each stage. What do you think about this orientation stage? Do you think it's necessary and helpful to write your argumentational writing…and why do you think so? … Do you remember that I explained Toulmin's model? Was that helpful? Or what about Kaufer & Geisler model? Actually, I put everything that I explained about the Toulmin's model into our writing rubrics. For peer review, scoring your peer's essay… So what did help you to write your essay?
I1: 질문이 이해가 안 가셔요.	I1: I don't understand your questions.
Interviewer: 아, 처음에 오리엔테이션 스테이지에서…	Interviewer: Oh, in the orientation stage first…
I1: 저희가 처음에 나왔던 날이요?	I1: The day when we meet for the first time?
Interviewer: 네, 처음에 인제…사전테스트 30 분 보시고 제가 설명드렸었잖아요. 핸드아웃 드리면서…	Interviewer: Yes, first you took the 30 minute pre-test and then I gave a lecture, giving you handouts.
I2: 아…	I2: Ah…
I1: 네…	I1: Yeah…
Interviewer: 기억이 안 나시죠. (웃음)	Interviewer: Don't remember? (laughing)
I2: PPT 말씀하시는 거죠?	I2: Are you talking about the PPT materials then?
Interviewer: 네, 그 오래 전 이야기…(웃음)	Interviewer: That's right, the story a long time ago…(laughing)
I3: 가입하면서 들어가지구… 생각이 잘 안나요.	I3: I was listening to your lecture, doing registration process… I hardly remember. (laughing)
Interviewer: 그래요? 제가 핸드아웃 드리면서 뭐, 툴민모델이다, 뭐, warrant 는 이렇다…	Interviewer: All right. Giving you handouts, this is Toulmin's model, and this is the way that warrants do…
I2: 아, 네…	I2: Oh, yeah…
Interviewer: claim 은 이렇다, rebuttal 은 이렇다… 그런거 이야기 했을 때, 뭐 열심히 들어셨던 분도 계시고, 바쁘셔서 열심히 못 들으셨던 분들도 계시겠지만… 미리 뭐 그렇게 논설모델을 듣구, 논설문 형식을 듣구 논설문을 이후에 진행하니까 도움이 좀 되시던가요?	Interviewer: This is claim, this is rebuttal… When I talked about them, of course, some of you might pay attention to me and others might not since you're busy at the moment… You listened to the models on argumentation and structure on argumentational essays. And then you developed your argumentational essays. Was that helpful?
I2: 네. (웃음)	I2: Yes. (laughing)
Interviewer: (웃음) 도움 되시던가요?	I5: Yes, it was helpful to me…(laughing)
I5: 네. (웃음) 도움 됐는데…	
Interviewer: 크게 말씀해주시면 돼요.	I5: Uh… you explained to me that when we have a claim we should additionally use examples, not just evidence itself. So I kept them in mind and easily develop essays. When I wrote essays…
I3: 어…말씀하실 때 주장이 있으면 근거만 쓰는 게 아니라 근거에 대한 예시를 또 이어서 써야 한다고 설명을 해주셔갖구 그거 생각하면서 쓸 때 편했어요. 글 쓸 때…	
Interviewer: 네. 나중에 설명 들으시고 평가할 때 루브릭 쓰실 땐 어떠시던가요? 루브릭에서 뭐 warrant 넣었는지, 아니면 rebuttal 잘 들어갔는지, 뭐 이런식으로 제가 설명도 넣어놨잖아요, 점수주실 때…	Interviewer: OK. After you got a lecture on them, what do you think about using rubrics in the peer review? In our rubrics, whether to include warrant, or whether to use rebuttals effectively, also, I put explanations on each of them for your peer review…
I1: 그거 좀 평가하기 힘들었어요.	I1: That made it somewhat difficult for me to review.
Interviewer: 왜요?	Interviewer: Why?
I2, I3 & I4: 맞아요.	I2, I3 & I4: That's right.
I1: 겹치는게, 좀 비슷한게… 이것도 있고 저것도 있고… Ground 가 두 세 개가 나오니까 근거가…뭐…이거를… 똑같은 말인거 같은데 따로 평가할라니까 좀 힘들었어요.	I1: There're some overlaps, somewhat similar things between elements… There's one and another… There're two or three grounds as evidence… They all seemed to be the same things, but I had to evaluate each element separately, so that's hard to me.
	I4: Each person had different writing level, so one wrote only claims… Another wrote just short sentences of his/her claim

I4: 사람들이 수준이 다 다른데 누구는 주장만 계속 있구… 누구는 주장 요만큼 쓰고 warrant 만 막 확 쓰구, 예만 들구 그러니까… 그걸 좀 강제로 써야 제출이 되더라구요. 칸을 어떻게든 채워야… 그러니까 아무 말이나 쓰고 있는 거에요, 제가…

I2, I3 & I5: (웃음)

I4: 뭐, ground 가 없네요, 쩜쩜쩜… 뭐, 이렇게…

Interviewer: 음…. 안 써도 되야 되는 시스템이 돼야겠구나 그러면…

I1: 너무 딱딱딱 나와있으니깐 처음에 저희가 두 번째 쓸 때는 이거를 무조건 써야 한다는 강박관념이…마음편하게 못 쓰겠더라구요.

Interviewer: 원래는 생각을 하시면서 쓰시긴 해야 돼요. 그게 필요하긴 한데…

I1: 그러니까 주장이 있으면 근거를 쓰는 건 당연한건데, 그거를 뭐 warrant 니 막 rebuttal 이니 생각하면서 쓸라니까…

I2: 맞아요.

I1: 좀 힘들던데…

Interviewer: 이것저것 고려할게 많아서?

I1: 그게 딱 입맛에 맞춰서 써야 되니까…

Interviewer: 으흠…

I1: 루브릭에 맞게…

Interviewer: 네, 네…

I4: 약간 좀 한국 논설문이랑 스타일이 달라두 아무래두… 그래서…

I2: 저는 첫 번째, 두 번째 제가 다 참여했잖아요. 초기랑…

Interviewer: 네, 네.

I2: 초기에는 교육이 없었잖아요. 그래서 rebuttal 이런거 없이 썼어가지구 점수를 낮게 받았었는데…

I3, I4 & I5: (웃음)

I2: 교육을 받고 나니까 '아, 논설문을 어떤 요소를 넣어야 되는구나!' 이런걸 먼저 배우고 들어가니까 글이 좀 달라지는걸 알 수 있었어요.

I4: 그 루브릭을 좀 상세하게 써주셨잖아요.

Interviewer: 네.

I4: 보다 보면 이게 영어 에세이를 처음 써보는 분들이 있으시잖아요. 그러면 진짜 한국 스타일로 쓰시잖아요. 근데 그거를 저희가…뭐지? 그걸 그냥 저희가 읽으면 저희가 한국인이니까 한국 스타일로 만점을 줄 수도 있는데 사실 그게 막 미국애들 이런 애들이 볼 때는 빵점짜리 에세이일 수도 있잖아요.

I2: (웃음)

I4: 그걸 약간… 그 관점에서 평가할 수 있게 되는거는 좋은거 같아요.

Interviewer: 으흠… 그래서 뭐, 수정이 가해져야 된다거나, 아니면 더 뭐가 있었으면 좋겠다 그런 것도 있어요?

I1: 간략하게… 루브릭을… 그 6 갠가 있잖아요.

Interviewer: 네.

I1: 3~4 개로 바꿨으면 좋겠어요.

Interviewer: 줄이자?

I2, I3, I4 & I5: 응.

I1: 그걸 좀 더…피드백 할 때… 굳이 막 억지로 써야하는 느낌은 좀 없어질 것 같아요.

with only too much warrant and examples… When I did the peer review, it's required for me to write comments to submit. It's required to fill in boxes anyway… That made me write just anything, whatever…

I2, I3 & I5: (laughs)

I4: For example, you have no ground and periods. Like this…

I1: Our rubrics clearly present separate elements so when I wrote the second draft, I was pressured to use every element mandatorily… That's why I couldn't write at ease.

Interviewer: Originally, you should think about them in writing. They are necessary but…

I1: I mean it's natural that I need to write evidence for my claim. But I had to think about warrant and rebuttal, each category during writing…

I2: I agree with him.

I1: I felt a little bit difficult…

Interviewer: Because you had a lot of things to consider?

I1: I mean I felt like I should write according to the rubrics…

Interviewer: Ah-ha…

I1: Just fit the rubric elements…

Interviewer: Yeah, yeah…

I4: It's a little bit different from our Korean argumentational essay style, so that's…

I2: I participated in all procedures, you know. From the pilot…

Interviewer: Right, right.

I2: In the pilot, there's no training session, you know. So I wrote without rebuttals and that made me have poor grades…

I3, I4 & I5: (laughs)

I2: After I learned argumentational structure in the orientation, 'Oh, what kind of elements are necessary in argumentational essays?' I learned this kind of things, I could see that my essays had been developing as I wrote.

I4: You wrote our rubrics in detail, didn't you?

Interviewer: Yes, I did.

I4: When we see other's English essays, some of them have never written them before. They write English essays in the Korean rhetorical style. That's uhm…let's say, when we read and give them the full grades in our perspectives, but actually, when foreigners like Americans see, maybe they are just zero point essays.

I2: (laughs)

I4: In that sense, a little bit…it's good that we can evaluate them from the English native's perspectives, I think.

Interviewer: Ah-ha… Then, is there anything that you want to modify, or anything that you need further?

I1: Simpler…rubrics… The 6 elements we had?

Interviewer: Yes.

I1: It's better to change them to be 3 to 4 elements.

Interviewer: Let's make them simpler, right?

I2, I3, I4 & I5: Yeah.

I1: Then more…during feedback… we feel less compelled to use them on purpose.

I3, I4 & I5: Right.

I3: (Then we don't need to write) 'The same as the comments above.' like this…

Interviewer & every interviewees: (laughs)

I3, I4 & I5: 맞아요.
I3: '위에 내용과 같습니다.' 이런거…(쓸 필요 없겠죠.)
Interviewer & every interviewees: (웃음)
I2: 중간 부분이 좀 겹치는 것 같아요. 약간 ground 랑 evidence 랑…
I1: 네, 네.
I3, I4 & I5: 맞아요.
I2: 중간에 보면 비슷한데 조금씩만 달라지구…
I4: 그걸 묶으셔도 될 것 같아요. 주장과 뒷받침하는 근거가 잘 정리되어 있는가…
I1: 주장이랑 근거가 타당한가만 보면… 구성이 잘 돼 있구…
Interviewer: 으흠… 근데 엄밀하게 말해서는 다 다른 건데…
I2, I3, I4 & I5: 네, 네…
Interviewer: 쉽진 않죠? 이해하기가…
I1: 저희가 뭐 그걸 전문적으로 평가하는 사람두 아니구…
I4: 영어과도 아니구…
I1: 근데 영어과에서도 그런걸 배우긴 힘들어요. 저희가 영작문 수업을 들으며 평가를 받긴 하는데 그 평가기준이 많지 않고… 외국인도 많고…
I3: 토플 시험을 채점할 때 서론, 본론, 결론에서… 본론에서 근거 한 두 개 드는 걸로 이렇게 생각했었는데 다른 분 쓰시는 걸 보니까 본론이 두 개에 한 개에다 이유를 몰아 쓰고 나머지 한 개에다가 반론을 썼거든요. 그렇게 쓰는 것도 상관없나요?
Interviewer: 근데 가능하면 이유는 따로따로 두 개, 반론 문단 하나가 좋아요. 한방에 몰아쓰는거는 좋지는 않아요 사실…
I4: 저도 여쭤볼거 있는데… 그 뭐지? 저희가 처음에 제가 피드백하는 사람이랑 저한테 피드백을 주는 사람이 동일한거죠? 그룹 구성원이?
Interviewer: 약간 바뀔 수도 있어요.
I4: 근데 왜냐면 제가…
I2, I3, I4 & I5: (웃음)
Interviewer: 보복할려구, 보복할려구?
I1, I2, I3, I4 & I5: (웃음)
I4: 제가 리뷰를 했는데요. 진짜 뭐지? 말도 안 돼요. 구성이 막 서-본-결도 제대로 안 돼 있구. 근데 리뷰를 받았는데 완전 막 고급지식이에요. 진짜…
I5: 실랄하게? (웃음)
I4: 이 사람은 진짜 영어를 배웠다. 구조를 가지고 지금 뭐라고 하고 있는데? 근데 제가 본 사람들은 구조가 다 진짜 엉망이었거든요.
I3: 맞어.
I1, I2, I3, I4 & I5: (웃음)
I4: 고쳐주는 사람이…이걸 아는 사람이 그렇게 쓰면 안 되잖아요.
Interviewer: 근데 한 토픽에 있어서는 똑 같은 사람들이에요.
I4: 아, 그래요? 저는 그게 되게 이상했어요. 그래서 뭐지? 제가 본 글은 되게 이상한데 받

I2: I think there're some overlaps between ground and evidence, a little bit…
I1: Yeah, yeah.
I3, I4 & I5: That's right.
I2: Generally look similar, but slightly different…
I4: You can combine them together, I think. Are claim and evidence well organised…
I1: Enough to check whether the claim and evidence are reasonable… and whether to be well organized…
Interviewer: Uhm… But actually, strictly speaking, they are all different…
I2, I3, I4 & I5: Your're right, right.
Interviewer: Not that easy? To understand…
I1: We're not the ones who professionally assess them, though…
I4: We're not English majors…
I1: Actually, in the English department, there're rarely chances to learn them. When we take English composition classes, our essays are evaluated, but there're not many assessment criteria then… There're a lot of foreign students there…
I3: In TOEFL writing test scoring, the organisation of introduction, body, conclusion… My understanding is that we should have one or two reasons in the body parts, but I saw that some wrote only two body parts, and one of them had all the reasons and the other had rebuttals. Is that OK, too?
Interviewer: If possible, it's better to have each body part of a separate reason and one body of rebuttals. It's not recommendable to put all the reasons in one paragraph actually…
I4: I have a question, too. Well… The ones that I gave my feedback to were the same as those who gave feedback to me, weren't they? Our group members?
Interviewer: It's possible to change.
I4: Because I …
I2, I3, I4 & I5: (laughs)
Interviewer: For revenge, revenge?
I1, I2, I3, I4 & I5: (laughs)
I4: I reviewed one's essay. Really, well… That's none sense. The organisation didn't even have a sequence of introduction, body and conclusion. But when I got a review, that's extremely professional with expertise. Really…
I5: Seriously criticizing? (laughs)
I4: This person definitely has decent level of English. This person is pointing out my organisation now. But it's so strange that I read horribly organized essays in my group.
I3: Me, too.
I1, I2, I3, I4 & I5: (augh)
I4: The person who can proofread my organisation… s/he who has relevant knowledge of it shouldn't write that way.
Interviewer: But group members were the same for one topic.
I4: Were they? I felt that's so weird. I read really poor essays of my members, but reviews I got were so professional…
Interviewer: Ah, it was… That person has that special ability only in reviews…
I1, I2, I3, I4 & I5: (laughs)

리뷰는 너무 전문적이라서…
Interviewer: 아, 그렇구나… 그분은 리뷰에만 특별한 그런 능력을 갖고 계신…
I1, I2, I3, I4 & I5: (웃음)
Interviewer: 별의별 일이 다 있죠? 이름이 가려지다 보니까?
I1, I2, I3, I4 & I5: (웃음)
Interviewer: 실랄하게 막… 그래서 뭐 오리엔테이션에서 뭐 추가가 됐으면 좋겠는거라든지, 추가적인 어떤 도움이 더 있어야 된다든지… 더 트레이닝, 훈련이 됐으면 좋겠는 부분이나… 고런걸 말씀해 주셔도 좋아요.
I1, I2, I3, I4 & I5: (침묵)
Interviewer: 뭐, reading material 을 줬으면 좋겠다라는 의견도 있을 수 있지만… 저는 그냥 안 드리는 걸로 했었는데… reading material 좋은걸 좀 읽고 시작했음 좋겠다고 말씀하실 수도 있는거구… 다양하게 말씀해 주시면 되요. '초반에 뭔가를 더 배우고 들어가고 싶다!' 그런걸 말씀해 주셔도 되구.
I2: 글 쓸 때 반론을… 반대입장에서 생각을 안 했잖아요. 근데 그걸 생각해야 되니까… 그걸 적용할 수 있는 방법? 그러니까 반론도 저 같은 경우에는 먼저 그걸 쓰고 그거에 대해서 반론을 반박하는 걸로 썼었고… 아예 반론 모아놓고 거기에 대해서 내 생각 쓰는 것도 썼었고 했었는데… 다양한게…다양하게 있으면 좀 더 좋을 것 같아요. 반론을 좀 더 효과적으로 드러내면서 내용을 더 강화시킬 수 있는 방법? 그거 수업시간에도 배웠었거든요? 근데 되게 간단 했어요.
I1, I2, I3, I4 & I5: 맞어.
Interviewer: 으흠… 반론을 공격하는 것도 되게 다양하죠?
I2, I3, I4 & I5: 네, 네.
Interviewer: 다른 단락으로 뽑아낼 수도 있구, 아님 집어 넣을 수도 있구. 아니면 아예 반론으로부터 그 문단을 시작하시는 분도 계시구… 이번 분들 하시는걸 보니까 다양하게 하셨는데… 음, 반론을 적용할 수 있는 방법을 배웠으면 좋겠다.
I5: 저도 그 상황에 약간 동의 하는게 저도 저 같은 경우에는 토플 라이팅 이거를 아예 전혀 몰랐어요. 뭐, 본론 쓰고, 이유 두 개 쓰고, 결론 쓰고… 이걸 아예 몰랐는데 어…근데 이걸 배우고 나서? 나중에…근데 전 그대로 썼는데 평가 받고 나니깐 '반론에 대한 반론이 없네요.' 이러는 거에요. 그래서…
I2, I3 & I4: 맞어.
I5: 그래서 반론을 적용시킬 수 있는 방법을 설명해주시면 좋을 것 같아요.
Interviewer: 으흠… 네.
I2: 그리고 그 introduction 에 hook 하는 부분 있잖아요. 그것도 좀 다양한게 있다고 들었는데, 뭐 수치를 이용한다던가 사회현상을 알려준다던가… 그니까 그런 것도 조금 배워두려는… 왜냐면 첨에 어떤 얘기를 꺼내야 될지 잘…

Interviewer: So too critical to you… Then do you want to add up in the orientation, or any assistance… or more training you need… It's good to suggest them.
I1, I2, I3, I4 & I5: (silence)
Interviewer: Well, you might have an idea that reading materials are necessary… I didn't give you them, though… It's possible that you would like to read good relevant reading materials before you start a topic… You can suggest various ideas. 'I want to learn something more in the beginning!' like this.
I2: When we write, rebuttals… we've never thought about them. But now we have to consider them… so how to apply rebuttals in writing? I mean, I tried using rebuttals and then attacking them once… Other times I tried putting rebuttals together in one paragraph and writing my thoughts on them… In various ways… If we learn various ways to apply them, it'll be better, I think. The ways to represent rebuttals more effectively and strengthen my contents at the same time? I've learnt some in previous classes. They're just simple.
I1, I2, I3, I4 & I5: I agree with you.
Interviewer: Hmm… You've seen there're many ways to attack rebuttals, right?
I2, I3, I4 & I5: Yes, yes.
Interviewer: You can make separate paragraphs of rebuttals or combine them with your paragraphs of reasons. Or some starts a paragraph from a rebuttal… I saw that you used them in various ways… So, you want to learn how to apply rebuttals.
I5: I partially agree with that as well because I didn't know anything about TOEFL writing itself before. Well, write body parts with two reasons, then write a conclusion... I had no idea of this, but, uh, after I learn this? Later…I wrote my essay as I learned, but reviews said "There's no counter-arguments to the counter-arguments." So…
I2, I3 & I4: Your're right.
I5: So I think it'll be good for you to explain how to apply them.
Interviewer: Ah… I see.
I2: And the part of "hook" in the introduction, you know. I've heard that there're a variety of ways to do that, like using figures or informing social events… I mean, if we learn some of them…because (I don't know much of) what we should start essays with in the introduction…
I4: For doing so, I think we themselves need some background knowledge.
Interviewer: Sure.
I3 & I5: Ah-ha~
I2: Our own background information?
I4: Let's say, "It's good to use numerical data or this kind of words!" but (that's useless) if I don't know the data or situation itself…
I2: But we don't need to directly copy them, do we? Readers don't know whether they are accurate references or not, anyway…
I4: When I took the essay class before, the…what was that? Policy? That's violating it. It's not right to write my claim that

I4: 그거는 좀 본인의 배경지식이 있어야 될 거 같아요.

Interviewer: 맞아요.

I3 & I5: 아하~

I2: 개인적인 배경지식?

I4: 그러니까 '수치를 쓰는 게 좋아, 이런 말을 쓰는 게 좋아!' 해 봤자 내가 들이댈 수치를 모르고 내가 그 이론을 모르고 그 상황을 모르면…

I2: 근데 그걸 베낄 필요는 없지 않나? 근데 그걸 읽는 사람이 베끼는지 안 베끼는지 모르잖아.

I4: 제가 에세이 수업 들었을 때요. 그게 뭐고 그러지? policy 인가? 그걸로 걸려요. 나만의 주장을 그렇게 쓰면 안 된대요.

I2, I3 & I4: 아~~

I4: 그래서 좀…

I2: 거짓을 쓰면 안 된다? 수치…

I4: 그러니까 뭐라 그러지? '도둑질은 나쁘다. 왜냐면 나쁘기 때문이다.' 이렇게 쓰게 되잖아요. 내가 정확한 사실을 모르면… 그러니까 '도둑질은 나빠. 내 생각에는 그건 나쁜 짓이야. 뭐, 남에 걸 훔치는 건 안 돼.' 이렇게 쓰면 그냥 내 생각이잖아요. 뭐, 도덕적 윤리, 개념 이런 게 없고… 그…그게 걸린대요. 그게 원래 안 된대요. 그렇게 쓰면…

I2: 아니, 내가 말하는 건 뭐, '요새 퍼센테이지가 올랐다더라' 뭐 이런 hook 도 있잖아요.

I4: 아…

I2: 그래서 뭐, 우리 사회에서 뭐, 30%의 아이들이 뭐 인터넷에 중독…컴퓨터에 중독됐다더라. 뭐 요런 hook 같은 거?

Interviewer: 그러니까 다양한, 스타일 적인 면에서…

I2: 네, 네.

I4: 으흠… 아, 그리고 원래 이런걸 참고하면 안 되지만… 뭐지? Debate.com 인가? 막, 그런….거기서 토픽이 아예 주어져있고 사람들이 찬반으로 나뉘어서 막 싸우더라구요. 전 토픽 3 이 너무 어려웠어요. 그러니까, 프라이버시 침해는 안 돼. 그러니까 프라이버시는 프라이버시니까. 이 이상을 더 이상 생각할 수가 없는거에요. 좀 약간…되게 원론적인 얘기여서?

Interviewer: 돌고 도는 이야기가 되는 거죠?

I4: 네, 그래서 기본권은 침해하면 안 되는 본질적인 권리야. 여기서 더 이상을 나갈 수 없는 거에요. 그래서 너무 이렇게…아이디어가 안 나와서 그거를 봤어요. 근데 제가 그 사이트에서 다른 사람들이 생각하는거 다 똑같은 소리에요. 기본권이라 안 돼 안돼. 종종 논리적인 글이 있더라구요. 걔네 논리적인 글을 보기 전까지는 저는 토픽 3 을 못 썼어요. 서론 빼구. 아무것도… 그래서…

Interviewer: 그런 것도 도움은 되요.

I4: 연습이니까 봐두 괜찮지 않은가…

Interviewer: additional support 니까… 근데 어차피 남의 거라도 내가 이렇게 해서 한 번 다시 써보면 내 아이디어 되는 거지 뭐. 내 꺼 되는 거지 뭐.

way, I learned.

I2, I3 & I4: Oh~~

I4: In that sense, (I'm skeptical of your idea) somehow…

I2: We shouldn't use lies, you mean? Numerical data…

I4: In other words, how can I say? "Robbery is bad because that is bad." We often write this way because I don't know the accurate information… I mean "Robbery is bad. In my opinion, that's a bad behavior. Well, we shouldn't steal others." This is just my thought, there's no ethical moral concepts(logical explanation) here… So this is violating the…the… I heard this is not allowed basically…

I2: No, I mean, well, "The percentage has went up these days." There're HOOKs like this

I4: Oh…

I2: So, like… In our society, let's say, 30% of children are addicted to the Internet…addicted to computers. This kind of HOOKs?

Interviewer: You mean various (ways) in terms of styles…

I2: Right, right.

I4: Ah-ha… Oh, originally we shouldn't referrer to this… What's that? The Debate.com? That kind of…there topics were already presented and people were arguing them pro and con, I saw. To me, the topic 3 was too difficult. I mean, "We shouldn't violate privacy because privacy is privacy." I couldn't go any further from this. Somewhat…quite about basics?

Interviewer: It becomes a story going around in circles?

I4: Yes, that's why I couldn't step further from the point "Basic rights are the genuine rights that cannot be violated." So like this…I couldn't generate any idea and I saw the site. The sites also had exactly the same thoughts as mine. Shouldn't violate it in terms of basic right. But sometimes I could see some logical writings there. Before I saw them, I hadn't developed anything of the topic 3. Except the introduction. Nothing… So…

Interviewer: That's helpful sometimes.

I4: I thought reading them would be OK because I was just practicing writing..

Interviewer: That can be an additional support… Actually, even though you read other's idea, you did write your own essay once. That's can be your idea and becomes yours.

I4: Because I was just exercising writing…

I1: Both two side (of the topic) are based on somewhat basic theories…

I3 & I4: Hmm…

I4: Very… I'm the only one who felt difficulties in writing it?

Interviewer & every interviewees: (laughs)

Interviewer: No, not at all. And, well, I included orientation anyway… Uh, well, I gave you a brief explanation of the frameworks on argumentational essays. Some of you said they wanted to learn more about that.

I2: Oh…

Interviewer: What do you think about this? Like frameworks…

I2: In the (writing) styles abroad, the western styles?

Interviewer: Yeah, yeah. In terms of the general sequence, like introduction, body 1, body 2…

I3: Ah…

I4: 어차피 연습이니까…

I1: 좀 상식적인 이야기라서 두 의견 다….

I3 & I4: 음…

I4: 되게… 나만 어려웠나, 쓰기가?

Interviewer & every interviewees: (웃음)

Interviewer: 아니에요, 아니에요. 그래서 뭐, 하여튼 오리엔테이션은 제가 넣어놓긴 했었는데… 어, 뭐 논설문 프레임웍도 간단히 설명드렸더니 이걸 더 배웠으면 좋겠다 하셨던 분도 있긴 있으셨어요.

I2: 아…

Interviewer: 이거에 대해서는 어떻게 생각하세요? 프레임웍 같은거…

I2: 외국스타일, 서양스타일로요?

Interviewer: 네, 네. 전체적으로 흐름에 있어서 introduction, body 1, body 2 뭐…

I3: 아…

I1: 작문수업처럼요?

Interviewer: 네?

I1: 작문수업처럼요?

Interviewer: 약간 그렇죠. 그런 스타일적인 면을 좀 더 많이 배우고 들어갔음 좋겠다…

I1: 전 배우면 더 좋을 것 같아요. 근데 그런…

I2: 거의 다 알지 않나? 어느 정도는…

I3 & I5: (동의의) 으흠…

I3: 전 더 배울 필요는 없다고 생각했는데?

I4: 저는 차라리 영어를 좀 하시거나 토플을 따로 하셨으면 괜찮은데, 그 뭐지? Don't 이런거 쓰면 안 되잖아요, 축약형…

I2: 아…

I4: but 이런 거 쓰면 안 되구… 그건거 자체를 아예 그러니까 저희는 많이 모르잖아요. 처음 배우면 but 같은 거 뭐 왠만하면 쓰면 안 돼. 그리고 and 이런 걸로 시작하는 문장 쓰면 안 되구. 아주 이런 기초적인 것도 처음에는 모르잖아요. 뭐라고 누가 짚어주기 전에는…

I2: 저도 축약형 몰랐어요.

I1: 저도 몰랐어요. 쓰면 안 되는거…

Interviewer: 그거는 보통 구어체적인거에서 많이 쓰는거에요. 쉽게 편하게 빨리 말하려고 생긴 것이기 때문에 원래는 그게 아니잖아요. 그래서 평상시에 일상생활에서 쓰는 거라 격식을 갖춰야하는 글은 사실 그렇게 쓰면 안 되요. 이메일이나 친구들끼리 보내는 편지는 상관없겠지만, 기본적으로 논설문 자체는 굉장히 격식을 갖추는 거잖아요.

I1, I2, I3, I4 & I5: 아…

I1: 우리가 진짜 이런 기본, I'm 이라던가 can't 라던가 이 정도도 쓰면 안 돼나요?

Interviewer: 축약형은 거의 안 쓰는게 좋아요.

I2: 논설문은 좀 다른거네요? 기사는 축약형도 쓰고 그러잖아요.

Interviewer: 거긴 쓸 수도 있죠. 근데 여러분 전공서적 같은 거 보세요. 격식에 딱 맞춰서 써져있죠. 절대 축약이나 that 도 들어갈 수도 있고 빠져도 되는 거지만 이것도 거의 다 넣고 쓰구…

I1, I2, I3, I4 & I5: 아…

Interviewer: 원래 원론적인거에 거의 다 맞춰요.

I1: Just like composition classes?

Interviewer: Sorry?

I1: Like composition classes?

Interviewer: Quite similar. Do you want to learn more about the styles before starting essays…

I1: In my opinion, it'll be better to learn them. But those…

I2: Aren't most of us aware of them already? Some of them…

I3 & I5: (agreement) Uh…

I3: I've never thought that I need to learn them?

I4: I think if we are good at English or have learnt TOEFL, then we might know, the…what is that? We shouldn't use contractions like 'don't'…

I2: Ah…

I4: We shouldn't write like 'but'… Many of us are not familiar with that. When we are beginners in writing, it's better not to use like 'but' and the sentences starting with like 'and' At first, we don't know even this kind of basics. Before somebody points out…

I2: I didn't know about the contractions, either.

I1: Me, neither. Shouldn't use them…

Interviewer: Contractions are frequently used in spoken language. They're made to speak easier and faster, so they're not original forms. For we use them casually and usually, we shouldn't write that way in the formal essays. It'll be OK to use them in emails or letters between friends, but basically argumentational writing itself is to follow formal styles.

I1, I2, I3, I4 & I5: I see…

I1: We should not use basics like I'm or can't, really shouldn't use these?

Interviewer: It's better to try not to use contractions.

I2: Then argumentational essays are a little bit different? News articles have contractions, you know.

Interviewer: It's possible to us them in news. But let's think about the books of your major. They're written in the formal ways. No contractions. Or the objective-case relative pronouns can be abridged but they are mostly written..

I1, I2, I3, I4 & I5: Ah…

Interviewer: We generally meet the original grammar for them.

I4: Therefore, it'll be good to explain that kind of things. I mean, casual diary styles and informal styles like 'Are we talking about this idea?' should not be used…

I1: Later I found that common errors like using contractions and, what's that? Should not start a sentence with 'And' but I didn't know that before. It'll be good to let us know about that. It won't take much time, I think…

I2: Personally, I have difficulties in… using conjunctions, how hard I practice using them, I find that I always use my favorites.

I4: Therefore, for this reason…

I1, I3 & I5: (laughs)

I1: But, however…

I 2, I 3, I 4 & I 5: (laughs)

I1: so

Interviewer: Without practice, it's hard to use even what I know already, isn't it? As you practice using them, you can extend one and two more things that you can actually use.

그거는…
I4: 그러니까 그런 것만 좀 설명해 주시면 좋을 것 같아요. 그러니까 일반 막 영어 다이어리 쓰는 거랑…막 Are we talking about this idea? 막 이런 거는 안 된다고…
I1: 나중에 따로 흔히 하는 실수들, 아까 말한 축약어나 그 뭐지? And 로 시작하면 안 되는데 저는 그런거 몰랐거든요. 그런거는 한 번 해주시면 좋을 것 같아요. 시간도 오래 안 걸릴 것 같고…
I2: 저는 개인적으로 어려운게… 접속사 쓰는게 아무리 연습해도 내가 쓰는 것만 쓰게 되더라구요.
I4: therefore, for this reason…
I1, I3 & I5: (웃음)
I1: But, however…
I 2, I 3, I 4 & I 5: (웃음)
I1: so
Interviewer: 그게 연습을 안 하면 아는 것도 못 쓰게 되고, 그쵸? 연습을 하면 하나 둘 씩 쓸 수 있는 게 늘어요. 한 번 써 봤으니까… On the contrary 나 In contrast 쓸 수 있는, 그 On the other hand 는 사실 쓸 수 있는 상황이 따로 있는데 반대면 무조건 집어넣고 쓰고 그건 아니거든요? 사실 그런거는 한 번 확실하게 이제…내가 정말 쓰고 싶다, 생각 확 났다, 본론을 쓰는데 생각이 났다. 그래서 사전을 한 번 찾아봤다. 예 같은 거 어떻게 쓰여져 있는지 봤다. 그런 다음에 한 번 제대로 쓰기 시작하면 인제 아시는 건데, 한 번 안 쓰게 되면 영원히 안 쓰게 되는거고… 맨날 but, however 로만…
I 2, I 3, I 4 & I 5: (웃음)
Interviewer: 아니면 문장 중간에 but
I 2, I 3, I 4 & I 5: (웃음)
Interviewer: 근데 어쩔 수 없어요. 한 번은 시간이 들어야 돼. 예를 보거나, 뭐…요즘에는 한국사전도 잘 나오는 게 많더라구요. 그쵸? Corpus based 로..어…여러 가지 예를 쫙 뽑아주는 걸로 해서… 전반적으로 한 페이지 정도만 봐도 감은 와요. 아, 요런 경우에 요렇게 쓰면 되는구나. On the other hand 같은 거는 요정도의 수준에서만 쓰는 거구나…볼 수 있는데… 보통은…대부분의 문제는 뭐냐면 그냥 쓰고 싶은 문장 넣어서 확 써버려요. 그리고 첨삭 받아요. '이렇게 쓰지 마세요.' 음, 그런가 보다. 싹 폐기~
I 2, I 3, I 4 & I 5: (웃음)
Interviewer: 기억 속에 영구히 폐기해.
I 2, I 3, I 4 & I 5: (웃음)
Interviewer: 그 다음에 토픽 쓸 때 또 다시 써. 그런 게 계속 일어나요. 근데 한번 알아봐야, 궁금한게 있으면 꼭 알아봐야 돼요. 사전 찾아봐야 돼. 알아보고 보고 시간을 들여야 그나마 기억에 남는 거에요. 하여튼 뭐 pre-stage 에서는 rhetorical 한거 스타일적인 거라든지, 쉽게 하는 오류라든지 그쵸? 그런거를 우선 다 배우고 들어갔으면 좋겠다 그렇게 말씀하시는 거죠?
I1, I2, I3, I4 & I5: 네.

You've already used once…like you can use 'On the contrary,' 'In contrast,' uhm, actually 'On the other hand' should be used in a little bit different situation, that doesn't fit the opposite situation all the time? In fact, these things need to be mastered once, like…I want to use that expression, it occurs to me when I write a body part. Then I look it up in the dictionary and see examples of it to know how to use. And then once you can start using it correctly, now you clearly understand it, but you'll never use it unless you really try it. Always 'but, however' only…
I 2, I 3, I 4 & I 5: (laughs)
Interviewer: Or 'but' in the middle of a sentence.
I 2, I 3, I 4 & I 5: (laughs)
Interviewer: That's the way it is. It should take some time to learn once, like reading examples… Well, there're good English dictionaries in Korea these days, aren't day? They're corpus based…uh…showing various examples in a list… Generally, you can get some sense of a word by reading one page. Oh, this can be used this way in this case. On the other hand is used in this type of situations…you can see…usually… Mostly the problem is that you just write expressions in a sentence as you want to use. And then get proofreading. It says, "Don't use the expression like this." Hmm, I see. Then dispose of it~
I 2, I 3, I 4 & I 5: (laughs)
Interviewer: Erase it forever in our memory…
I 2, I 3, I 4 & I 5: (laughs)
Interviewer: Next time you do the error again. That happens over and over. But you have to look up, ensure that you should search for what you are curious of. Refer to dictionaries. Look up and take some time and then you'll remember. Anyway, well, in the pre-stage, rhetorical things, styles, or common errors and so on, right? You mean you want to learn them all before you start writing, don't you?
I1, I 2, I 3, I 4 & I 5: Yeah.
I4: Perhaps, in the Scholar we do editing, when we're doing the second feedback… Then, what's that? Through the annotation function, we have to check every annotation to see which part is annotated, and that was highlighted in just blue? But don't you think that being underlined in red, like real editing, will be more effective from the beginning stage of the feedback? This is because that can show that I made a lot of mistakes (at a first glance)… With one click of a mouse, one annotated thing appeared and with another click, other things appeared, so this made me misunderstand that there're not many errors in my essay…
Interviewer: In fact, a long list of annotations was seen…
I3: Oh, my god. The list was…
I1, I2, I4 & L5: (laughs)
I4: Annotation lists were somewhat long, they were very long, but I had to see one by one every time… Well… Yeah, if I had seen every mistake checked in the essay, I might have clearly understood my essay was problematic at a first sight…
Interviewer: I see…
I4: Isn't there no function like that?
I1, I2, I3 & L5: (laughs)
I5: If I put a mouse over an annotation (on the right side),

I4: 혹시 그 스콜라에서 고쳐주잖아요, 두 번째 피드백 할 때… 근데 뭐지? annotation 으로 하나씩 확인해야 어느 부분인지 해주는데 그거가 아예 그냥 좀 파란색 하이라이트로 돼 있잖아요? 근데 아예 처음부터 진짜 첨삭해주는 것처럼 막 빨간줄로 아예 그어놓으면은 더 효과가 높지 않을까요? 내께 왕창 틀렸구나를 알 수 있어서… annotation 하나 하면 하나 보이고, 하나 하면 하나 보이고 이렇게 하니까 오히려 뭐 별로 안 틀린 것 같고…

Interviewer: 근데 좀 리스트가 길게 나와서

I3: 리스트 진짜…

I1, I2, I4 & L5: (웃음)

I4: 리스트가 좀 긴데, 리스트는 엄청 긴데 그걸 하나씩 보니까… 뭐지? 좀… 네, 그걸 만약 실제로 다 체크된걸 봤다면 내가 진짜 잘 못하고 있구나를 확실히 한 눈에 알 수 있을 것 같은데…

Interviewer: 아아~

I4: 그런 기능은 없겠죠?

I1, I2, I3 & L5: (웃음)

I5: 그냥 뭐 annotation 에 이렇게 마우스 딱 갖다 대면 이렇게 딱 뜨잖아요. 밑에 이렇게 또 눌렀는데 바로 다음 문장 뜨고… 밑에 이렇게 또 눌렀는데 바로 다음 문장 또 뜨고 이래가지고 약간 좀 뜨끔하던데…

I4: 하하. (웃음)

Interviewer: 으음… 네. 스칼러 이야기할 때 요 이야기는 좀 더 길게 해 보도록 하고. 뭐, 그 다음에 1st draft 쓰실 때, 뭐 어쨌든 이 단계는 당연히 필요하기는 하죠. 한 번은 제대로 써야 되니까? 요 단계는 어떠셨어요? 1st draft? 필요하다, 아니면 뭔가가 더 있었으면 좋겠다, 요렇게 좀 고쳤으면 좋겠다…

I1: 토픽 선정할 때요, 전 누가 봐도 찬성이 더 많이 나오는 토픽있잖아요. 컴퓨터가 실생활에 유용한가, 누구나 다 유용하게 쓰는데 거기서 반대를 하려면 반대를 위한 반대를 해야되거든요. 근데 토픽을 선정하실 때 사회적으로 찬반이 진짜 많은 그런게 아무래도 좀 더 좋지 않을까…

Interviewer: 토플에서 따서 그래요.

I1: 토플 안 봐봐서 모르겠는데…

Interviewer: 토플 아니면 되게 다양할 수도 있고, 또 SAT writing 이 좀 더 어렵거든요. 고급이고, 사실은… 그게 더 좋은데, 여기 들어오신 분들은 시험에 조금이라도 도움 받으려고 오신거일거 아니에요. 그래서 실제 토플 주제에서 따다 보니까..

I4: 저는 오히려 그렇게 명백하고 쉽고 예제를 잘 찾을 수 있는 글이 그 뭐지? 레벨을 분반할 때 더 좋은거 같아요. 그 뭐지? 내가 영어를 잘 하냐 못 하냐랑 에세이를 잘 쓰느냐 못 쓰느냐는 다르다고 생각하거든요? Speaking 을 아무리 잘 해도 야매로 배웠으면은 글도 다 그럴 수도 있고 그런데… 오히려 막 너무 어려우면 글을 잘 쓰는 사람이나 못 쓰는 사람이나 그냥 아이디어가 없어서 30 분만에 그게 쫑이 나잖아요.

I3: 저희가 처음에 한 번 쓸 때는 시간 제약이 없잖아요. 사실 30 분 만에 써야 하는 건데 저는

something just pops up. And then I clicked the next annotation and it showed the right next sentence was wrong… And then I clicked one more next and it showed error comments in the sentence right below, so I got the breeze up (felt guilty) somehow…

L4: Haha. (laughs)

Interviewer: Uhm… OK, let's go on this issue longer when we talk about Scholar later. Well, and the next is, when you develop your 1st draft, this stage is necessary anyway, of course. This is because you should write down your essay at least once? What do you think about this stage? The 1st draft stage? Do you think this is necessary, or you think something more is necessary, or you think it should be amended this way…

I1: When the writing topics are selected, I think, some topics obviously have more supporters such as whether computers are useful in real life. Computers are useful for everybody, but to disagree with this, we have to oppose it for opposition's sake. So when you choose topics, I think more controversial issues are better…

Interviewer: I selected writing topics from TOEFL.

I1: I have no idea of it for I have never taken TOEFL…

Interviewer: Other than TOEFL writing, it's possible for me to choose a variety of writing topics, and SAT writing is more difficult and more advanced actually… SAT topics are better, but I understood the participants here came into the writing sessions to get some help in TOEFL. That's why I applied real TOEFL writing topics…

I4: In my opinion, writing topics that we can clearly understand and easily find examples, I mean, are better to divide classes by level. Well? The matter I'm good at English is different from the matter I'm good at writing essays. How good one's English speaking is, if he or she has never learnt formal language, it's possible that his or her written pieces are not good. In contrary…if topics are too difficult, regardless of writing level of each person, essay is over within 30 minutes not being fully developed with lack of ideas.

I3: In writing stages, there's been no time limit. Actually, we should have completed in 30 minutes but I spent 3 hours. (laughs)

I5: That's right.

I3: During writing development, I got easily idled or spent a lot of time in thinking about the topic sometimes. So I mean… When I heard that I would take a post-test this time, honestly I got nervous. (laughs)

I1, I2, I4 & I5: (laughs)

I3: I've got good marks on essays but I was worried that there's no improvement in the test… so if you give us time limit in essay development stages, we might be able to do more intensively.

Interviewer: When you usually practice writing, it's better to have enough time to fully consider (the topic). Some people say, "I was done in 30 minutes." But their essays were not that good…

I1, I2, I3, I4 & I5: (laughs)

Interviewer: You could practice completing an essay within 30 minutes But the quality of writing was poor. At the first

세 시간 걸렸거든요. (웃음)

I5: 맞어.

I3: 하구서 항상 되게 늘어지기도 하고, 되게 생각을 길게 하고, 그래서 뭐지? 이번 사후테스트 한다고 했을 때 사실은 떨렸어요. (웃음)

I1, I2, I4 & I5: (웃음)

I3: 점수는 잘 받았는데 여기 와서 또 봤을 때 변함이 없을까봐… 그래서 그런 것도 시간제약을 좀 주시면 좀 임팩트있게 할 것 같긴 해요.

Interviewer: 평상시에 연습하실 때는 충분히 생각을 해보시는게 좋아요. '30 분만에 저는 다 썼는데요?' 그러시는 분들 보면 별로에요, 글이…

I1, I2, I3, I4 & I5: (웃음)

Interviewer: 30 분 내에 쓰는 연습은 돼. 근데 글 자체는 못 썼어요. 첨에 30 분 내에 써 봤자 뭘 얼마나 쓰겠어요 사실…

I3: 그래서 좀 걱정됐어요. 이렇게 난 잘 쓸려고 세 시간 쓰는데 30 분 내에 써야 되면 그게 늘은 것 같지가 않을까봐… 긴장했어요, 사실 어제. (웃음)

Interviewer: 시간체크면에서는 그렇죠. 평상시에 열심히 생각해보고 하면은 아이디어 같은건 평상시에 생각해 본 게 차곡차곡 머리에 쌓이는 건 있으나, 그죠? 시험상황에서 시간 딱 맞춰놓고 쓰는거 자체는 쉽지는 않죠. 1st draft 는 뭐 그렇고… 뭐, 어떻게… 이 단계는 다 필요하다고 생각하시는 것입니까? 안 쓸 수 없지, 이건 뻔한 질문이죠?

I1, I2, I3, I4 & I5: 네. (웃음)

I2: 아, 근데 뭐지? 알마인드 올릴 때요. 용량이 계속 크다고 그러는데 그게 제 컴퓨터 문제인지… 그래서 저는 그냥 캡쳐해서 올렸어요, 계속… 처음엔 됐었거든요? 근데 요새 계속 안 되더라구요. 그게 용량이 있나요? 뭣 땜에 그런건가요?

I4: 제목을 한글로 하신 것 같은데?

I2: 그래요?

I4: 외국 사이트에는 한글 파일을 올리면 안 나오는 경우가 있어서…

I2, I3& I5: 아~

Interviewer: 으흠~

I1: 전 별문제 없었는데…

I5: 저도 그냥 캡쳐로 올렸어요.

Interviewer: 아~ 다 다양하셔가지구. (웃음)

I2: 난 왜 그러지? 캡쳐는 잘 올라가 지던데?

Interviewer: 그리고 1st peer feedback 은 어떠세요? 이거는 필요가 있다, 없다. 도움이 되었다, 안 되었다. 내지는 이렇게 바꿨으면 좋겠다 그런거 있으세요? peer feedback, 1st 에서?

I1: 전 아까 말했던 것처럼 그냥 항목을 좀 더 줄였으면 좋겠다…

Interviewer: 항목을 좀 줄였으면 좋겠다…

I1: 네.

Interviewer: 항목을 줄이는거에 그럼 다 동의하시는 거에요?

30-minute trial, it's not likely to well develop an essay actually…

I3: That's why I was worried a little. I'm spending three hours in developing an essay for better quality like this, but I was afraid that I couldn't show my improvement when I should complete everything within 30 minutes. That made me nervous yesterday, actually. (laughs)

Interviewer: You're right in terms of checking time. In usual practices, they're trying to generate ideas over and over and then the ideas are accumulated in your brain, aren't they? But it's not easy to write with limited time in test settings. All right. We've gone through the 1st draft… Well, what do you think about this stage? Do all of you think that this stage is necessary? Is this quite an obvious question because you had to write one draft (of a topic) at least, isn't this?

I1, I2, I3, I4 & I5: Sure. (laughs)

I2: Ah, what was that? When uploading Almind map, the (Scholar) web page said files were too large. I'm not sure if that came from computer errors… So I've captured images and uploaded them over and over… It worked at first. But it's not working these days Is there any restriction on the file size? What's the reason for this?

I4: I guess you made fine names in Korean.

I2: Really?

I4: Korean file names don't work in foreign web sites sometimes…

I2, I3& I5: Ah-ha~

Interviewer: Oh~

I1: I haven't got any problem…

I5: I uploaded captured images, too.

Interviewer: Oh~ You've used various ways. (laughs)

I2: Why did I have that problem? I have had no problem in uploading captured images, though.

Interviewer: And what do you think about the 1st peer feedback? Do you think this is necessary or not necessary, and useful or not useful? Or do you have any thoughts in the ways in which you'd like to change? In the 1st peer feedback stage?

I1: As I said before, it's better to reduce the number of review criteria…

Interviewer: It's better to make the criteria simpler, you said…

I1: Yes.

Interviewer: Do you agree with this suggestion, reduced criteria?

I2, I3, I4 & I5: I do.

I4: They are too vague. Also, I'm not sure if I'm clearly distinguishing each of them actually. What is ground and what is warrant…

I1, I2, I3 & I5: That's right.

I4: Some of you might laugh at me, but that's one of the ambiguous things…

Interviewer: Uh hah… And then, any other thing? If it's helpful, then how was helpful for you. Well, it's good to hear this kind of thing

I1, I2, I3, I4 & I5: (silence)

Interviewer: Perhaps, the real feedback activities made you

I2, I3, I4 & I5: 네.

I4: 너무 애매해요. 그리고 제가 그걸 확연하게 구분하고 있는지 사실은 잘 모르겠어요. 뭐가 ground 고 뭐가 warrant 인지…

I1, I2, I3 & I5: 맞어.

I4: 사실 웃는 분도 계실텐데, 애매한 것 중 하나가…

Interviewer: 으흠… 그럼 뭐, 또… 도움이 되었다면 어떤 방식으로 도움이 되었는가? 뭐 요런 것도 말씀해주시면 좋구요.

I1, I2, I3, I4 & I5: (침묵)

Interviewer: 실제로 peer feedback 을 하다 보니까 실제로 자기가 글을 쓸 때 그런 항목에 대해서 생각해보고 쓰게 돼서 뭐 도움이 되었다던지, 뭐 다양하게…

I1: 신경을 쓰게 되긴 하죠. 그런 채점 받는 항목에 대해서..

I1, I2, I3, I4 & I5: (침묵)

Interviewer: 순간 아이디어 고갈?

I2: 도움은 확실히 됐던 것 같은데, 그 뭐지? 옆에 글씨가 나오다가 끊기지 않나요? 그 옆에…채점할 때 제목이 세 개는 앞에 부분이 똑같아 가지구…

I4: 아, 그게 claim, ground, warrant 그 부분

I2: 다 똑같아가지고 다시 눌러보고 다시 와서 채점하고 그랬어요. 뭐, 큰 상관은 없을 것 같아요, 근데…

I4: 전 그게 좋았던 것 같아요. 아예 그 리뷰를 할 때 첫 번째랑…그 두 번째랑 아예 주제가 다르잖아요. 첫 번째는 구조를 보고 두 번째는 스펠링 같은거 보구? 근데 예전에 수업들을 때는 그런걸 한꺼번에 해주니까 오히려 더 정신이 사납고 그랬었는데, 이렇게 뭉태기로 이번엔 이것만 받으니까 좀… 그것만 볼 수 있으니까 더 좋았던 것 같아요, 전.

Interviewer: 요 단계는 끝? 아이이디어 없으세요? (웃음) 1st peer feedback 다른 활동이나 도움이 들어갔으면 좋겠다 뭐 이런게 있으시면 말씀해주셔도 되고… 음… 없으시면 2nd 로? 2nd draft 쓰실 때 이것도 아까랑 똑같이 말씀해주시면 돼요. 필요하다고 생각하는지, 도움이 되었는가… 뭐, 그런 이유가 있으면 말씀해주시고, 수정방향이나 아니면 추가적으로 어떤 도움이 있었으면 좋겠다 이런거 말씀해주셔도 되고… 두 번째 이제 2nd draft 쓸 때?

I3: 문법에서는 교수님(Interviewer 를 지칭) 리뷰가 도움이 됐고 다른 분들 리뷰는 다 비슷해서 뭐…

I4: 보이는게 다…(웃음)

I3: (웃음) 네. 다… 다른 분들도 다 '제가 문법을 잘 몰라서요…' 이러고 그냥 주셨거든요.

I1: (웃음)

I4: punctuation 이 되게…뭐지? 헷갈려요. 제가 이렇게, 그러니까 내가 쓰는 글은 내가 욕을 먹어도 되니까 그렇게 써도 되는데, '어디에 쉼표 찍으세요.' 근데 '어, 근데 이게 아니면 어떻하지?' 막… 좀…(웃음)

I5: 제가 피드백 해드리면서도 틀린건데 괜히

consider the elements used in the reviews when you did your actual writing, so that was of help. Well, like this, various opinions you have…

I1: I did consider the elements. About the grading criteria like that…

I1, I2, I3, I4 & I5: (silence)

Interviewer: You're running out of ideas now?

I2: I think the criteria were obviously helpful, but what was that? All the explanations on them didn't appear on the screen. On the right side (of the feedback panel), three of the elements had the same beginning when I tried to grade (other's essay)…

I4: Oh, that's the beginning part of Claim, Ground, Warrant.

I2: They all had the same introduction, so I clicked each to see its explanations and then return to the relevant panel to grade. Well, that's not a big deal, actually…

I4: What I liked is… When we did the reviews, the first focus is different from the second focus. We focused on the structure in the first review and then on others things like the spelling in the second review. Actually, when I attended previous classes, I got confused because I did every review work all at once. But we could only focus on the divided review criteria this time…well, it's better for me to see each focus only.

Interviewer: Is this the end of this stage? Do you have any further ideas? (laughs). You can say that you want to have other activities or aids in the 1st peer feedback… Uhm… If you don't have any, do we go onto the 2nd stage? You can talk about the same questions like the previous stage. Do you think this stage is necessary, or useful… and why do you think so? Or you can suggest things to be modified or additionally supported…when you develop the 2nd draft?

I3: In terms of the grammar, your (Interviewer's) reviews were helpful, but others were almost the same, well…

I4: What I saw in the list of folded annotations was all (even when I made them spread)… (laugh)

I3: (laugh) Right. Everybody… Other reviewers said, "I don't know much about English grammar…" That's all.

I1: (laugh)

I4: Punctuation was very…uhm…confusing. I write what I usually do in my essay and I feel easy that I get harsh comments on that. But when I'd like to say "Please put a comma here." I think "Oh, what if my comment is not right? I'm afraid…(laugh)

I5: When I do feedback on others, I'm afraid that I might give wrong comments…

I4: (Me, too.) Right after I wrote some, I just erased them… uncertain things to me…(laugh)

Interviewer: (laugh) That's why you couldn't give as much feedback as you expected?

I1: Because I'm not confident…

I5: "It'll be good if you do this." With little conviction like this…(laugh)

I4: I was not sure of it, so I wrote diffidently like "Isn't this the right one?" (laugh)

I1: We worried even though we did anonymously.

Interviewer: Uh… Well, do you have any ideas on necessary

했다가…
I4: (맞어) 쓰다가 지우고… 불확실한건…(웃음)
Interviewer: (웃음) 그래서 생각보다 많이 못 주게 된다?
I1: 제가 자신이 없으니까…
I5: 뭐만 하면 좋을 것 같아요 이렇게…(웃음)
I4: 불확실하니까 '이거 아닌가요?' 이렇게 소심하게…(웃음)
I1: 익명인데도 걱정해.
Interviewer: 음… 뭐, 필요한 assistance, 도움이라던가, 아니면 추가되었으면 좋겠는 활동이라던가 그런거 있으세요 혹시?
I1, I2, I3, I4 & I5: (침묵)
Interviewer: 음, 그런건 없고? 2nd draft 쓰실 때?
I1, I2, I3, I4 & I5: (침묵)
Interviewer: 아이디어 없으신거에요, 여기는? 그러면 final draft 마지막에 고쳐서 내시잖아요? final draft 에 대한 생각은 어떠신지, final stage?
I1, I2, I3, I4 & I5: (침묵)
Interviewer: 물론 한번은 제출해야 하는 거겠지만. 다 완성시켜가지고?
I2: final 은 내는 것 밖엔 없지 않나요?
I1: 끝난다는 느낌 밖엔 없는 것 같아요.
I1, I2, I3, I4 & I5: (웃음)
I4: 전보다 더 낫다.
I2: 이번 게 좀 낫다.
Interviewer: publication stage 가 있는데 어떻게 생각하세요? Final 내고 나서 제가 완성본에 대한 피드백을 드리면 내가 저널 형식으로 저장을 한다거나 뭐 인쇄를 할 수 있다거나, 아니면 웹 출판버전으로다가…
I4: 저희 이름이 나오는거는 아니죠? Anomyous 로…
Interviewer: 자기가 출판을 하고 싶으면 하는거에요. 블로그처럼 인터넷 버전처럼 보이게 되는 건데, 그런 기능도 사실 있어요. 필요하다고 생각하시는지? 뭐, 도움이 된다고 생각하나…
I5: 어쨌거나 제가 쓴 글이고 제가 고친거라 나중에 공부할 때 보기 좋을 것 같아요.
I3: 이름 내고? (웃음)
I1: 실명으로? (웃음)
Interviewer: 아니다, 난 굳이 이거는 별로 필요 없다고 생각한다 있으세요?
I1: 대부분이 그렇겠죠.
I5: 아, 그래요? (놀람)
I4: 그냥 자기가 폴더에 다 저장 돼있을 것 같은데?
I1: 네.
I2: 응.
I4: 워드로 거의 쓰시고…
Interviewer: 세 분? 별로다?
I1: 생각도 안 해봤어요. 그냥 제 컴퓨터에 있는 걸로 족할 것 같아요.
Interviewer: 또 이제 비주얼적으로 좋게 만들어가지고 저장하고 싶은 분도 있으니까…
I5: 네, 깔끔하게.
Interviewer: 자기 블로그에 나 이렇게 썼어 이렇게 해 놓고…

assistance or activities to be added?
I1, I2, I3, I4 & I5: (silence)
Interviewer: Umm, you don't have any? When you write the 2nd draft?
I1, I2, I3, I4 & I5: (silence)
Interviewer: No idea here? Then you revised your essay for the final draft. What do you think about the final draft, the final stage?
I1, I2, I3, I4 & I5: (silence)
Interviewer: Of course you had to submit once at least. After you're done with an essay?
I2: Submission was all for the final, wasn't it?
I1: All I've felt in the final is "it's over."
I1, I2, I3, I4 & I5: (laughs)
I4: The final draft is better than the previous draft.
I2: This is somewhat better (than the previous draft).
Interviewer: There's the publication stage. What do you think about this? After you hand in the final draft and then get my proofreading, you can save or print out in the journal style, or (present) in the way of the web publication style…
I4: Our name does not appear, right? Just anonymously…
Interviewer: You can publish if you want. Like blogs you can see your writing pieces like the typed passages on the Internet pages. Scholar does have this function. Do you think this is necessary? Or do you think it's helpful?
I5: I myself wrote my essays and revised them anyway. So I think it'll be good to see them again when I learn them later.
I3: With your name open? (laugh)
I1: With your real name? (laugh)
Interviewer: No, I don't think so. This is not necessary. Do you think this way?
I1: I guess most of us think so.
I5: Oh, do you? (surprise)
I4: I think everything is being saved in our own computer folders?
I1: Yes.
I2: Right.
I4: We mostly used MS Word…
Interviewer: Three of you? That's not helpful?
I1: I've never thought of it. I think I'm just happy that everything is in my computer.
Interviewer: Some might want to make essays visually better and then save them, too…
I5: Yes, neatly.
Interviewer: In my own blog I upload essays to show like "There are my essays."…
I1, I3 & I5: (laugh)
I4: (laugh) I'll be ashamed of them when I read them later.
Interviewer: Oh, do you feel ashamed?
I1, I2, I3, I4 & I5: (laugh)
Interviewer: OK, let's move on to Scholar. I guess you have a lot of things to say. Well, how was the use of Almind Map?
I3: It's uncomfortable a little bit to me.
Interviewer: Oh, that's not easy to use…
I3: Unless we are fully aware of how to use it, it's much better to draw circles and other things with MS Powerpoint and then capture its image to upload…

I1, I3 & I5: (웃음)

I4: (웃음) 나중에 보면 되게 창피할 것 같은데?

Interviewer: 아, 여긴 창피하다?

I1, I2, I3, I4 & I5: (웃음)

Interviewer: 자, 그럼 스칼러 들어갈게요. 이거 이야기할 게 많으실 것 같은데. 음, 알마인드 맵 쓰시는건 어떠셨어요?

I3: 전 좀 불편했어요.

Interviewer: 아, 불편…

I3: 아예 사용법을 숙지하지 않는 이상은 그냥 차라리 파워포인트로 동그라미로 그려서 그렇게 해서 캡쳐해서 올리는게 훨씬 낫지 않나…

I4: 근데 전 뭐 옮기려고 했는데 가지가 하나 더 생기고…갑자기 막…(웃음)

I5: 맞아요. (웃음)

I3: 맨 처음에 딱 화면 떴을 때 중간에 한 가지 주제만 있었다는게 그게 좀 불편했던 것 같아요.

I1: 맞어.

I3: 찬성, 반대 둘 다 생각해서 만들었어요

I1: 네. 저도.

I4: 근데 그거 뭐지? 독립 뭐 누르면 그렇게 할 수 있는데?

I3: 아, 몰랐어…

I5: 일부러 색깔이랑 모양도 다르게 나오잖아요. 딱 누르면은… 그래서 그걸 다 또 고치고…

I4: 근데 원래 마인드 맵을 먼저 그리고 하나요? 저는 옛날부터 글을 쓸 때 마인드 맵 훈련을 하잖아요. 근데 그게 너무 불편하고 저한테 너무 안 맞아서…

I1: 맞어. (웃음)

I4: 좀 주제를 대충 쓰고 찬, 반 아무렇게나 대충 막 써요. 반대 쪽 쓰고… 저는 마인드 맵으로 하니까, 일단 저는 제 스타일 대로 써요. 그리고 그걸 한 번 더 구조화해서 그렇게 만들어야 되는거에요. 굳이… 그러니까 저는 그 방식이 너무 안 익숙하고, 안 쓰고, 좀 안 맞았고…

I1: 저도 마인드 맵 안 쓰는 편이라서… 마인드 맵 만들어 놓고도 그거 안 봤어요.

Interviewer: 네…

I4: 자기 스타일대로 그냥 해서 올리면 안 되나요?

I1: 만들고 올리고 그냥 내가 내 식대로 쓰고…

I4: 응…

I5: 내 생각이 있으면 그거에 대한 마인드 맵을 만들고, 마인드 맵을 넓혀야 겠다는 그런 생각이 아니라 그냥 내 생각을 정리해야겠다…약간 이 정도였던 것 같아요.

I1: 올려야 되니까…

I5: 새로운 생각을 또 해봐야 겠다 이런건 아니구…

Interviewer: 음…

I3: 원래 쓸 때는 brainstorming 하는게 더 좋지만, 그냥 주제 생각하고 찬성반대 정하고 이유 딱 두 가지 정하고… 그 이상으로는 생각 잘 안 하는 것 같아요.

I1: 그렇지.

I4: 저는 보통 그렇게 했어요. 무슨 에세이를

I4: In my case, when I tried to move one thing, another branch suddenly came up… (laugh)

I5: Right. (laugh)

I3: When the first page comes up, there's only one box of a subject, which made inconvenience.

I1: Right.

I3: I considered and made two side, pros and cons.

I1: Yes. Me, too.

I4: What was that? You can make two key concepts if you click on the independent something.

I3: Oh, I didn't know that.

I5: The program automatically offers different colors and sizes (of concept circles) when we just click… That made me change all of them again…

I4: By the way, do others draw a mind map first before writing? To me, back then I exercised drawing mind maps in writing. But that was too uncomfortable to me and that didn't suit me at all…

I1: Me, too. (laugh)

I4: My style is to write on a topic just briefly and roughly with pros and cons. When I had to apply the mind map, I just jotted down my way first. And then I had to create a map after I organised them. So the way was not familiar to me, not frequently used, and didn't fit me somehow.

I1: I prefer not to use mind maps as well… I made them but I haven't seen them again, though.

Interviewer: I see…

I4: Yeah…

I5: I just thought that I should organise my ideas… this much, not to make a mind map according to my ideas and then expand its scale.

I1: Because we had to upload it…

I5: Not the way in which I try generating new ideas…

Interviewer: Um…

I3: Actually, it's better to do brainstorming when we write, but we usually think about the topic and its two reasons (for my claim)… I don't try to think further than that.

I1: You're right.

I4: This is what I usually did. Whatever I write, I start with writing one sentence of an introduction, two body parts and a conclusion each. I keep developing contents from each of the sentences and amending them… But (when I made a mind map first) it's more difficult for me to develop. I mean, I used to add up new things during developing (paragraphs), but to use a mind map, I had to generate relevant grounds from the beginning. Thus… everything in the mind map totally changed. I came to write an essay, not being in accordance with it at all.

Interviewer: Ah… All right… Then let's move to Scholar… Well… Whether Almind map is helpful or not, the brainstorming stage itself doesn't fit some of you, right?

I1: I don't care about the goodness or badness of the program, but the matter is that I can't be bothered doing the mind map itself. It's true that I've never referred to it again.

Interviewer: Uh…OK. I find that many of you just get into writing (without drawing a mind map). (laugh)

I1, I2, I3, I4 & I5: (laugh)

쓰던, 서론-본론-본론-결론을 한 문장씩 무조건 쓰고 시작해요. 거기서 쓰면서 계속 고치는데… (마인드 맵을 먼저 만들고) 그렇게 하니까 더 힘들었던 것 같아요. 그러니까, 하다가 생각나면 더 추가해서 쓰고 해야 되는데 처음부터 막 그 근거를 생각해내야 되잖아요. 마인드 맵을 쓸려면… 그러니까… 다 바뀌게 되던데? 그거랑 하나도 안 맞게 쓰게 되는 것 같아요.
Interviewer: 음… 네… 그러면 스칼러로 가서… 음… 알마인드 맵이 참 아니라고 하더라도 brainstorming 자체의 단계가 그럼 안 맞는 분들도 계신거네요?
I1: 프로그램이 좋고 나쁘고는 별로 신경 안 쓰는데, 마인드 맵 자체가 귀찮고 좀 저한텐, 제 경우에는 만들고도 안 보니깐요.
Interviewer: 음… 네… 바로 작문하는 스타일들이 많으시군요? (웃음)
I1, I2, I3, I4 & I5: (웃음)
I1: 한국어로 쓸 때도 그렇게 하다보니깐 영어로 쓸 때도 똑같아요.
Interviewer: 음… 그럼 이 단계를 빼는 게 좋다고 생각하시는 거에요?
I1: 하고 싶은 사람만 하고…
I2, I3, I4 & I5: (웃음)
Interviewer: 선택? 선택이면 좋겠다?
I1, I2, I3, I4 & I5: 네. (웃음)
I1: 그렇게 원래 하는 사람이 있을 수도 있잖아요. 그런 사람은 그대로 하고…
I4: 맞아요. 자기 스타일대로.
I1: 원래 그런거 안 하는 사람은 안 하고, 하고 싶은 사람만 하고.
Interviewer: 음…
I2: 이게 글이 짧아서 그런거 같아요. 글이 짧으니까 키포인트는 내 머릿속에 있는데 그림을 그려가면서 할 필요가 있을까 하는… 그냥 두 가지씩 해가지고…
I1: 취향따라 하는거죠.
I2: 근데 길면은 필요할 것 같아요.
I4: 구조화를 쓰기 전에 한 번 어떻게든 하게 된다는 건 좋은 것 같은데…
I1: 사실 좀… 저는 그 글을 쓸 때 서론을 어떻게 형식을 전개해 나갈까 이런걸 배우는 게 좀 더 유용하지 않을까… 첨에 첫마디를 어떻게 시작할까 이런거… 첨에 뭐 argument 주잖아요. 그러면 '나는 생각한다' 밑도 끝도 없이 이렇게 나오는 게 아니라…
I2, I3, I4 & I5: (웃음)
I4: 맞어.
I1: 이런게… 세상은…뭐…테크놀로지 시댄데 그… 어떤 식으로 전개해 나갈까… 서론만 전개를 잘 하면 본론은 아이디어만 있으면 금방 써지거든요. 그런게 더 유용하지 않을까… 배운다면…
Interviewer: 음… 네. 그러면 이제 스칼러로 가서… (웃음) 이거 어떤거 같아요? 디자인이나, 사용하기 편하셨어요?
I1: 편하진 않았어요.
Interviewer: 페이지나 버튼이라든지 여러 가지 면에서…

I1: Because that's the way I write essays in Korean, I do the same when writing in English.
Interviewer: Uhm… Then do you think that this stage should be scrapped?
I1: Just let only those who want it do the mind map…
I2, I3, I4 & I5: (laugh)
Interviewer: Selection? Do you mean it'll be better to be optional?
I1, I2, I3, I4 & I5: Yes, I do. (laugh)
I1: Because it's possible that there are people who draw a mind map first. Those can do as they usually do…
I4: That's right. Following one's own style…
I1: Those who don't make a map just skip and only those who want it can do so.
Interviewer: Ah…
I2: This is because our essays are short. Our essays are short and I have all the key point in my mind. So I don't feel a need of generating ideas with drawing images… I've just written essays with two reasons only…
I1: It's OK to choose what we like.
I2: But in case of longer essays, mind maps seem to be necessary.
I4: It seemed good to organise ideas once anyway before writing…
I1: In fact, well… I guess that it'll be more useful to learn styles or forms like how to develop introductions… Such as how to start the first sentence in the introduction… When we are given an argument, instead of staring with totally groundless claims like "I think that."…
I2, I3, I4 & I5: (laugh)
I4: I agree with you.
I1: This kind of thing… The world….urr…is the era of technology and then… The way to develop… I can easily complete body parts if I develop an introduction well. That sort of thing might be more useful…if we learn some…
Interviewer: Uhm… Understood. Let's go onto Scholar then… (laugh) What do you think about this? How about its design and was it easy to use?
I1: It's not easy to use.
Interviewer: Where did you feel regarding pages, buttons and so on…
I4: Don't you think font sizes were too small, do you?
I3 & I5: Yes
I2: Yeah.
I4: I thought it was just the matter of my computer settings, but it's the same in different computers I tried, particularly, uh what was that? While reviewing essays, (fonts were) tool small.
I1: Yes.
I2, I3 & I5: That's right.
I4: I couldn't fiture out whether I made typos or not.
I2, I3 & I5: Yes.
I1: I had to click on everything to see, return to the previous page and then click again…
I4: When I wrote in Korean, the letters appeared much smaller… that's…
I1: Are there any other web sites of that kind?

I4: 글씨가 너무 작지 않아요?

I3 & I5: 네.

I2: 응.

I4: 제 컴퓨터가 그런 줄 알았는데, 어떤 컴퓨터에서 써도 특히 그 뭐지? 리뷰할 때 그게 너무 작아요.

I1: 네

I2, I3 & I5: 맞아요.

I4: 오타가 났는지 안났는지 모르겠어요.

I2, I3 & I5: 네.

I1: 일일이 눌렀다가 돌아갔다가 눌렀다가…

I4: 한글로 쓰면 더 이렇게 찌끄매서… 그거는…

I1: 그런 류의 사이트가 좀 더 있나요?

Interviewer: 그… 그런 형식은 뭐, 있을 수도 있는데… 논설문 쓰는 사이트들이 다양하게 쪼금쪼금 있어요. 스칼러 같은 경우에는 이제 그 페이지에 딱 들어가버리면은 피드백을 서로 주기가 편하게 돼있다는 장점은 있죠.

I1: 그렇긴 해요.

Interviewer: 그러니까 그 동안은 워드로 내가 썼으면은 그 사람한테 다 뿌리고, 각각 다 이렇게 comment 를 준 게 있으면 그걸 다 다시 받아서 따로따로 다 보고…

I2, I3, I4 & I5: 맞아요.

Interviewer: 그 사람들이 comment 준거를 다 따로 보고 내껄 고치고 고치고 고치고… 해서 그 사람들한테 다시 다 보내고, 또 받고… 이게 있었는데…

I4: 기능은 좋은데…

I1: 좀 더 잘 만들었음 좋았을 텐데…

Interviewer & every interviewee: (웃음)

Interviewer: 어, 잘 만들었으면 하는 방향을 말씀해주시면 돼요.

I1: 선생님이 만드시는건가요?

I4: 근데 이걸 못 고치시지 않아요? 글씨가 너무 작다 이런걸 어떻게…

Interviewer: 아니, 그냥 (수정요망사항) 다 주시면 돼요. 왜냐하면 나는 이걸 쓰긴 했지만 내가 원하는 앞으로의 그런 prototype 이 있잖아요.

I5: 아아~

Interviewer: writing contents 를 만듦에 있어서 내가 생각하는 prototype 이 있으니까…

I1: 아아~

Interviewer: 그런거에 다 도움이 되는거죠.

I5: 저는 그 스칼러 쓰면서 불편했던게 제가 첨에 늦게 들어가면 메시지가 막 여섯 개씩 와 있잖아요.

I4: 어. 다 똑같이 생겼어.

I5: 눌러요. 그래서 확인을 하려고 하나를 누르면 여섯 개가 다 사라져버려요. 내가 뭘 확인했는지 몰라가지구… 가뜩이나 인터넷은 느린데… 그 뭐지? 자꾸 돌아가서 확인하고 그랬거든요. 그래서 제가 본 부분은 봤다고 좀 색깔이 연해지거나 그렇게 남아있었음 좋을 것 같았어요.

I1: 맞어.

I4: 전 좀… 그 뭐지? Review request 에 제발 숫자 좀 붙어있었음 좋겠어요. 들어간 걸 제가 계속

Interviewer: Well… Web sites like that… Well, possibly there are some… There are some different kinds of writing web sites for argumentational essays. In case of Scholar web site…web pages there were set up to easily exchange feedback each other just inside there.

I1: That's true.

Interviewer: Traditionally, we've written a piece by MS Word and then sent it to group members, and then received and read each file to see comments from each person…

I2, I3, I4 & I5: Right.

Interviewer: We've read comments given by each person on each file and then revised my essay over and over… And then we've emailed them again, and then received comments again… This has happened…

I4: Scholar has good functions, though.

I1: I wish it had been made better…

Interviewer & every interviewee: (laugh)

I1: Are you handling the web site?

I4: By the way, is it possible to amend, isn't it? How can you change it like too small letters…

Interviewer: No, just let me know everything (you would like to change). It's because I have my own prototype that I'd like to make in the future. I used this Scholar this time, though.

I5: Ah-ha~

Interviewer: In terms of constructing writing contents, I have my own ideas…

I1: Ah-ha~

Interviewer: Your comments will be helpful for me.

I5: When I felt uncomfortable with using Scholar, I got, like, 6 notification messages if I was late in coming into the web site first.

I4: Yes. Every message looked the same.

I5: I clicked one. To check messages, I clicked one of them and new message signs for others were gone. I couldn't figure out what I had read already… What is worse, the web site was running too slowly… Well, I used to come back to check unread messages over and over. So I thought whether I have read it should be distinguishable such as light colors for the checked messages.

I1: I agree with you.

I4: To me…well… I really want numbers in each review request. I clicked on the same messages again and again. Like this…

I1: That's right. It's hard to distinguish between messages.

I4: This possibly overlaps with what you said.

Interviewer: Once you read a message, it should be marked?

I1, I2, I3, I4 & I5: Yes.

I4: Or it should be easy to distinguish at least… Well, I found that I missed a review of one essay. Later when I read three essays one after another, I intended to click on each of them but I came to read the same one again and again. So… because every notification messages looked the same, if specific numbers on each of the review requests are put (it'll be better)…

Interviewer: Well.. Basically, once you get a notification on a submitted essay, it's good to get into the essay right away with a click on the notification. What do you think about it?

들어가요. 이렇게…
I1: 맞어. 이게 뭐가 뭔지 몰라요.
I4: 방금 말씀하신거랑 겹쳐서 그런 것도 있는데…
Interviewer: 한 번 읽은 게 표시가 됐음 좋겠다?
I1, I2, I3, I4 & I5: 네.
I4: 아니면 구분이라도 되면… 뭐지? 제가 리뷰를 하나를 안 했더라구요. 나중에 세 개를 연달아 읽는데, 저는 나름 클릭해 본다고 다 클릭해봤는데 똑 같은 걸 계속 들어가 봤나 봐요 제가 또… 그래서…다 똑같이 보이니까… 그런게 붙어있으면…
Interviewer: 음… 기본적으로 notification 을 받은 다음에 딱 들어가면 그냥 한방에 들어가는 장점은 있지만… 그게 어떤 것 같으세요? 편한 것 같으세요, notification 을 받아가지고 자기 입력 panel 로 들어가는 방식이?
I2, I3, I4 & I5: 그건 좋은데…
I1: 그건 편해요.
I4: 그건 좋은데, 페북처럼 들어가서 클릭하게…
I1: 거기 들어가서 움직이는게…(불편해요) 들어간 담에 똑 같은 거 계속 나오고…
I2, I3, I4 & I5: 응.
I5: (웃음) 맞어, 내가 그랬어.
I1: 자기가 쓴 글이 안 나오게 한다던가… 자기가 쓴 거 제출한 거는 안 나오게 한다던가, 읽었던거 확인하는 그런 표시가 나오면 좋을 것 같아요.
Interviewer: 아… 그 다음에 eyestrain, 눈의 피로나 주의를 산란하게 했다거나 그런거 있으세요?
I1: (눈) 굉장히 피로해요.
I2, I3, I4 & I5: (웃음)
I4: 글씨 진짜…(넘 작아요)
I1: 화 날 것 같아요.
I4: 리뷰 볼 때 막 (화면에 가까이) 이렇게 보고…
I1: 노환 오는 것 같아요.
I4: 아니면 아예 모니터 저걸로 확대해서 봐야지…
I5: 아, 그리고 리뷰를 쓸 때 제가 좀 읽기 편하시라고 enter 를 치면서 했어요. 근데 제출하고 보니까 그게 다 붙어있는 거에요.
I3 & I4: 아하…
I5: 네, enter 가 안 들어가더라구요. 리뷰에…
I1: 리뷰에? 그 feedback 줄 때?
I4: 아, 그래서 다들 그렇게 붙여 쓰셨구나…
I1: 아하~~
I2 & I5: 다 붙어요. (웃음)
Interviewer: 뭐, 이렇게 바꿨음 좋겠다, 저렇게 바꿨음 좋겠다 자유롭게 말씀하시면 돼요. 뭐, feedback tool 도 그렇고, annotation 기능이라던가 다…
I1: 좀 깔끔하게 좀…
I2, I3, I4 & I5: (웃음)
I1: 차라리 워드같이 그렇게 쓰면 되게 좀 편할 것 같은데…
I4: 네, 글씨고 크고…
I2, I3 & I5: (웃음) 맞아요.
I1: 큼직큼직 하고…

Do you feel it's easy to use, in terms of the way in which you receive a notification and then enter its own writing panel?
I2, I3, I4 & I5: That's good, but…
I1: That's convenient.
I4: I like that, but (it's better) to enter the relevant pages and then click to open them like Facebook…
I1: Going into the relevant panel and moving between pages back and forth… (was inconvenient). After entering there, I mistakenly click on the same essays…
I2, I3, I4 & I5: Yeah.
I5: (laugh) Right, I did so.
I1: What I've written does not appear, what I've submitted is not shown (on the front page), or it seems good to offer signs to let me know whether I've checked it.
Interviewer: Ah… And was there anything causing eyestrain or distraction?
I1: My eyes got really tired.
I2, I3, I4 & I5: (laughs)
I4: Letters were really…(small)
I1: I felt like I got angry (when reading on the web pages).
I4: When I read reviews, (made my face closer to the screen) I looked at them like this…
I1: I felt like I was getting farsighted.
I4: Or I had to enlarge my screen size (with the magnifying option of windows)…
I5: Oh, I pressed enter to let my peers comfortable with reading my reviews. But after I submitted my reviews, everything was gathered with no space.
I3 & I4: Ah-ha…
I5: Yes, it's true that enter keys didn't work. In the reviews…
I1: In the reviews? When you gave feedback?
I4: Ah, that's why everybody wrote words too close that way…
I1: Ah-ha~~
I2 & I5: Every sentence was closed spaced. (laugh)
Interviewer: Well, you can talk freely what you want to change like this way or that way. Well, anything about feedback tools or annotation functions, everything…
I1: I hope it should be neatly designed…
I2, I3, I4 & I5: (laughs)
I1: It seems to be easier if we can use it just in the way of MS Word.
I4: Yes, letters can be written largely …
I2, I3 & I5: (laughs) That's right.
I1: Larger letters…
I2, I3 & I5: (laughs) Yeah, yeah.
I4: If then, it's easy to read.
I1: Pages were narrow this much and even though I made them enlarged…(they couldn't become large enough)
I4: Right. It seemed that making page layouts larger was OK. Actually, there was too much space in white on each side.
I2, I3 & I5: Right.
I1: Who in the world made it?
I2, I3, I4 & I5: (laughs)
I4: The style abroad is quite…
Interviewer: An educational technology team in the US made it.

I2, I3 & I5: (웃음) 어, 어.

I4: 그럼 뭐가 뭔지 딱 보이니까…

I1: 화면도 일단 요만하니까 확대해도…(별로 안 커요.)

I4: 예. 사실 더 커도 될 것 같거든요. 사실 옆에 그 흰 부분이 쓸데없이 많아요.

I2, I3 & I5: 맞아요.

I1: 누가 만들었는지…

I2, I3, I4 & I5: (웃음)

I4: 그게 외국스타일이 좀?

Interviewer: 이거 교육공학 미국 팀이 만든거에요.

I4: 글씨가 조그맣고 못 알아보게 돼있는 것 같아요. 되게…

I2: 외국에 보면 사이즈가 다른가요? 아님, 그 사람들도 사이즈가 똑같은가요?

Interviewer: 같아요.

I4: 그럼 걔네는 눈이 좋나봐요. 되게 침침하던데?

I1, I2, I3 & I5: (웃음)

Interviewer: 글씨가 너무 작고…

I1: (난 화면 크기) 엄청 키웠어.

I2, I3, I4 & I5: (웃음)

I2: (글 안에) 제가 사진을 삽입했었는데, 사진을 삽입하면 삽입이 안 되더라구요. 변형 안 되나요? 아님 제가 뭘 못 만지는지…

Interviewer: 사진?

I2: 네, 사진 같은거 자료 있잖아요. 기사 같은거 쓸 때처럼 사진 첨부해서 할려고 그랬는데 그게 조절이 안 되더라구요.

Interviewer: 아~ 크기나 이런거 다?

I2: 예, 뭐가 안 되더라구요. 제가 한글 이런거에 익숙하니까 딱 줄이려고 하는데 뭐가 안 되더라구요. 그래서 본문이랑 매치가 예쁘게 돼야 되는데 그냥 딱 사진 들어가고 밑으로 들어가버리고 그렇게 되더라구요. 사진을 만드는 기능을 뭐 따른걸 눌러야 되는건지 모르겠네요?

I1: 사진을 왜 넣어…

I2: 사진 같은거 넣어서…

I4: 마인드 맵 같은것도…

Interviewer: 예를 들어 블로그 같이, 블로그 스타일로다가 기사형식으로 쓰시는 분들 같으면은…

I2: 네.

I3, I4 & I5: 아~~

I4: 전 그것만 좀, 남들이 피드백 되는 거를 좀 한꺼번에 다 볼 수 있는… 이렇게.. 사실 그 리뷰도요. Annotation 을 주시면은 하나하나 보다 보면은 나중에 만약에 그걸 하나씩 일일이 끄지 않으면 리스트가 쪽 벌어져서 제 글은 막 화면 위로 날아가 버리고 (annotation) 그거 밖에 안 보이는데… 그러면 나중에 어디가 어딘지 자기도 잘 몰라서… 이게…

Interviewer: 으흠…

I4: 좀…약간… 이게 그 뭐지? 그거를 클릭해야만 파란색으로 표시가 되잖아요. 아예 파란색으로 표시가 다 돼 있구, 거기다 마우스를 갖다 대면 설명이 나오게 했어도 괜찮을 것 같은데…

I4: Letters are too small to read. Really they are…

I2: Do foreigners look at the screen in different size? Or do they read in the same size?

Interviewer: It's the same.

I4: Then the people abroad have good sight, I guess. I felt my eyes became dim, tough.

I1, I2, I3 & I5: (laughs)

Interviewer: Letters are too small…

I1: I made my screen enlarged very much.

I2, I3, I4 & I5: (laughs)

I2: I tried to put images into the passages, but it's not possible. Is it possible to adjust them? Or is it because I was poor at it?

Interviewer: Images?

I2: Yes, visual data like photos. I tried to attach photos in my essay as we write newspaper articles, but I couldn't adjust them.

Interviewer: Oh, the size of images?

I2: Yes, it's not possible to adjust it. I'm used to the kind of Korean Word program and I tried to make them smaller as I used that. I wanted to make photos fit nicely between passages, but the images of the original size were just put under them. I'm not sure if I have to click one any other button for photos.

I1: Why did you insert photos?

I2: I wanted to insert photos and…

I4: Mind mas as well…

Interviewer: For example, if you want to organise texts like blogs, write news articles following the blogging styles…

I2: That's it.

I3, I4 & I5: Oh~~

I4: I want to see feedback from others all at once… like this… actually review comments as well. After I got annotations from others and read them one by one, I had to close each annotation. If not, the list of annotations on the right side of the screen became so long that I had to scroll down through the page, which finally made my texts gone beyond the page and only annotations visible. Then it's difficult for me to see which annotation was about in the essay. This…

Interviewer: Ahh…

I5: When we receive the first feedback, it seems more convenient to see all the feedback at the same time in one page. Rather than reading one's feedback and then reading another…

Interviewer: Uh-huh…

I1: I've seen one specific feedback only.

I5: Teacher's?

I1: Yes.

I2, I3, I4 & I5: (laughs)

I1: Because I had no time.

I4: Generally… most of the comments seemed quite similar.

I2, I3 & I5: Yes.

I4: This is because all of us have never learnt how to evaluate the…essays professionally, some might have done so, of course…

I1: Frankly speaking, other than your feedback, I have my doubts about how effective feedback activities between us

I2, I3, I4 & I5: 아…
Interviewer: 으흠…
I5: feedback 받는 부분에서도 1 번 부분에 있어서, 그냥 한꺼번에 여러 사람이 해서는 한번에 볼 수 있으면 더 편할 것 같아요. 이 분이 한 거 보고 다음 거 보고 이거보단…
Interviewer: 으흠…
I1: 전 하나밖에 안 봐요.
I5: 교수님꺼?
I1: 네.
I2, I3, I4 & I5: (웃음)
I1: 시간이 없어서요.
I4: 좀…다 말이 비슷비슷한 것 같아요.
I2, I3 & I5: 네.
I4: 아무래도 다들… 전문적으로 저희가, 그러니까 전문적으로 쓰기를 배웠을 수도 있는데, 그…쓰기를 평가하는 법을 전문적으로 배운 적이 없으니까…
I1: 저 솔직히 교수님이 하시는 거 말고 저희끼리 하는 feedback 이 많이 도움이 됐을까 하는 생각도 좀 있어요.
I4: 응.
I1: 아무리 익명이라도 엄청 점수 안 주고 진짜 이 사람이, 이 사람이 봐도 막 못 쓸 만큼 그랬구나 하는 생각은 드는데…
I5: (웃음)
Interviewer: 네…
I1: 3 점, 4 점 이런 점수 주면은 그냥 뭐 나도 그렇게 하니깐, 저도 그렇게 큰 의미를 안 두고 피드백을 주니깐…
I4: 전, 그 뭐지? 그…다 처음에는, 맞어, 다 오티랑도 연관되는데… 제가 첫 번째 토픽 1 에서…그러니까…피드백을 처음 받았을 때 그 원래 토픽 문장을 맨 앞에 쓰잖아요. 근데 그게 왜 맨 앞에 있냐고, 글은 이렇게 쓰는 게 아니라고 하신 분이 계셨어요.
I2, I3 & I5: (웃음)
I4: 그러니까 한국에서는 막….. 근거를 댄 다음에 그러므로 이렇게 나온다고 하잖아요. 그 분 입장에서는 ‘처음부터 주장을 이렇게 제기하는 것은 너무 강해보입니다’ 이랬던가?
I1, I2, I3 & I5: (웃음)
I5: 그게 더 좋지 않나?
I4: 이렇게 쓰라고 배웠는데… 또 오히려 (그 분은 그렇게 피드백을…)
I1: 저희들이 건의가 없으니깐요.
I2, I3 & I5: 응.
I4: 오히려 틀린 feedback 을 받을 때도 있는 것 같아요.
I1: 같은 학교 학생들이면 비슷비슷한 수준인데, 뭐 누가 누굴 평가하고…
I3: 차라리 실명으로 했으면은 근거를 얻을 수도 있잖아요.
I1: 안돼, 안돼. 큰일 날 소릴 하네?
I2, I4 & I5: (웃음)
I5: 실명으로 하면 쌈 날 것 같은데?
I4: 그럼 못 쓸 것 같아요.
I2: 응.
I3: 아, 그런가? 근데 익명으로 하니까 분명히 그

have been of help.
I4: Yeah.
I1: Even though everything was done anonymously, I understood that my writing was so poor that this person gave me very low scores…
I5: (laugh)
Interviewer: Yes…
I1: When I got 3 or 4 points, I felt okay because I had done those scores to others, not putting much weight on feedback…
I4: In my case… Well…at first, yeah, all of these are related to the orientation… In the first topic…I mean…when I got the peer feedback at first, I knew that it's right to write a topic sentence at the beginning of a paragraph, and I did so. But one person said to me why it was at the beginning and this is not the way I should write.
I2, I3 & I5: (laughs)
I4: In Korea, we say that we should suggest grounds first and then draw a conclusion. In his opinion, as I remember, "It looks strong too much to suggest your claim from the beginning"?
I1, I2, I3 & I5: (laughs)
I5: Isn't that better?
I4: That's why I learnt…but the person (gave me such feedback)…
I1: Because we didn't have any discussion.
I2, I3 & I5: Yeah.
I4: It seemed that we'd got wrong feedback from peers sometimes.
I1: In fact, since we are in the same university, we are in the same level of English. Well, who is eligible to evaluate others…
I3: We would rather have performed with our real name to get background information of reviewers (to judge their level).
I1: No, no way. You're talking about something serious.
I2, I4 & I5: (laughs)
I5: If we do with our real name, quarrels might occur, I guess.
I4: If then, I cannot write frank comments.
I2: Me, too.
I3: Ah, do you? We did anonymously. Some gave me the comment that I did well but gave me just 3 points. In that case, "What should I revise then?" I thought.
I1: But I don't agree with open names.
I4: I prefer anonymity, too.
I1: I prefer anonymity, but it's true that the system has some limits. In terms of feedback…
I4: Regarding grammar, I felt a lot of limits, too. I habitually use this, but I'm not confident to say that this is right…
Interviewer: If that so, well… there is a way like this. You should be trained in how to provide feedback itself, for example…
I2, I4 & I5: Ah, that's it.
I1: Yes, that kind of thing. Well…other than participants like us, isn't there a group that had to attend writing sessions in person, is there?
Interviewer: Uh, yeah.

feedback 쓰는 곳에는 '아, 잘 쓰신 것 같습니다' 이렇게 해놓고 점수 3 주시면 '뭘 고치라는 거지?' 약간 이런 생각이 들었어요.

I1: 아니, 근데 실명은 아닌 것 같구요.

I4: 나도 익명이 좋아.

I1: 익명이 좋은데, 익명으로 하더라도 좀 한계가 있다는거죠. Feedback 이…

I4: 문법쪽에서 그걸 되게 많이 느낀 것 같아요. 나는 습관적으로 이렇게 쓰긴 하는데 이 사람한테 '이게 맞아요'라고 할 자신이 없으니까…

Interviewer: 그러면, 뭐… 그런 것도 있어요. Feedback 을 주는 방법 자체도 트레이닝을 하고 들어가야 된다 뭐 이런거…

I2, I4 & I5: 아, 맞어.

I1: 네, 그런거. 그…저희 같은 애들 말고 와서 하는 그룹있잖아요?

Interviewer: 네, 네.

I1: 거긴 어때요?

Interviewer: 아…(한숨)

I1, I2, I3, I4 & I5: (웃음)

I5: 왜 한숨을?

Interviewer: 거기는 면대면이니까 더 심한 이야기를 못 하구요.

I2, I3, I4 & I5: 아~

I1: 아무래도 그렇지.

Interviewer: 또 30 분 정도? 시간이 안 되시는 분은 대충하고 자리를 확 뜰 수도 있고…

I2, I3, I4 & I5: 아~

Interviewer: 뭐, 다 장단이 있어요. 아무래도 종이에다 써야 되니까 더 많이 안 하실 수도 있고… 왜냐하면 인터넷으로 하시면은 불확실한게 있으면 내가 찾아볼 수 있잖아요.

I2, I3, I4 & I5: 맞어, 맞어.

Interviewer: 인터넷으로 찾아보고, 사전 찾아보니까 아무래도 이건 아닌 것 같아서 '이거 잘 못 쓰신 것 같습니다' 할 수 있지만… 여기서 바로 그냥 feedback 체크하는 종이 드리고 그 분 writing 있으면, 잘 모르겠으면 안 해버리고 가실 수도 있고… 확실한 것만 정말…am, are, is… 정말 확실한거, s 안 붙인거 그런거, 확실한 것만 해주시고 가실 수도 있고…

I3, I4 & I5: (웃음)

Interviewer: 어떠신 것 같아요? 인터넷으로 하니까 좀 더 솔직하게 되요?

I2, I3, I4 & I5: 네.

I1: 솔직하게는 할 수 있어요. 근데 익명성은 좋은데, 저희들끼리 하는 feedback 이 큰 의미가 있냐는거죠.

I4: 근데 좀 하면서 배우는 것도 있지 않나요?

I2, I3 & I5: 네.

I4: 전 그게 있어서… 제가 feedback 을 하다가 정신을 차려봤는데 나도 이 실수를 하면서 지적질을 하고 있는 거에요. 제가… 그래서 제가 '어?'..(웃음)

I2: 원래 자기 글은 잘 안보이고 남에 큰 건 잘 보이고…

I3 & I5: 응.

I4: 그걸 하다가 이제 두 번째 draft 를 쓰면서 '아,

I1: How was that group?

Interviewer: Uh…(sigh)

I1, I2, I3, I4 & I5: (laughs)

I5: Why are you sighing?

Interviewer: The group met face to face, so it's hard for them to give harsh comments.

I2, I3, I4 & I5: Ah~

I1: I know that's the way it is.

Interviewer: And about 30 minutes for feedback? If somebody doesn't have enough time, it's possible that they leave earlier giving a lick and a promise…

I2, I3, I4 & I5: Ah~

Interviewer: Well, every group has both merits and demerits. They should directly write their comments on papers and that might make them write less… If you do on the Internet, you can find what you are not certain right away.

I2, I3, I4 & I5: Yes, that's right.

Interviewer: After you look up on the Internet and then you think this is not right, you can say "I think this is wrong." But when you receive feedback sheets and others' essay, you might leave sessions without comments on what you are not sure of… Or you might give feedback on only the things that you know for certain such as am, are, is… quite clear things like missing plural s…

I3, I4 & I5: (laughs)

Interviewer: What do you think about this group? Did performing though the Internet make you more honest?

I2, I3, I4 & I5: Yes.

I1: That let me speak frankly. But what was the point in doing feedback between peers? (That's not that meaningful.)

I4: I think we have learnt some by doing feedback activities, don't you?

I2, I3 & I5: Yes.

I4: When I gave feedback on others, I found that I was pointing out others' mistakes that I had done as well. At the moment, I woke up and felt "Oh? (They are mine, too)" (laugh)

I2: It's natural that I never realise my own mistakes but easily find others instead because others' errors look more serious….

I3 & I5: Yeah.

I4: After I was done with the 1st feedback, then I wrote my second draft and found out that I made the same errors, too. All of a sudden…

I5: I felt sorry… (laugh)

I2 & I3: (laughs)

I4: I think I have learnt some during the feedback stages.

Interviewer: All right. And… What about the simultaneous auto-saving function? It simultaneously saves everything even if you press the pace bar once.

I1: Because I typed words in MS Word and then move them into Scholar…

Interviewer: Ah, did you? (laugh)

I2 & I5: Yes, I did.

I1: Because MS Word shows me how many words I've written… but the Scholar didn't have such a function. Well…that'll be good. If the site can be improved, it'll be good

나도 이랬네?' 막 그러니…갑자기 막…
I5: 미안… (웃음)
I2 & I3: (웃음)
I4: 그래도 배우는 건 있는 것 같아요, 하면서…
Interviewer: 네, 또… 실시간 저장되는건 어때요? 스페이스바 하나만 눌러도 실시간 저장이 되거든요.
I1: 저는 워드로 쳐가지고 옮겼기 때문에…
Interviewer: 아, 그래요? (웃음)
I2 & I5: 네.
I1: 그래야 단어를 몇 개 썼는지 보이고 하니까… 거기엔 그런 기능이 없더라구요. 그러면, 막… 그런 것도 좋을 것 같아요. 사이트 개선하면은 몇 단어인지 뭐, 워드처럼 나온다든지… 얼마나 썼는지, 몇 글자인지…
Interviewer: 으흠…
I2: 직접 만나서 하는 거랑 인터넷으로 하는 거랑 둘 중에 선택하라 하면 무조건 인터넷일 것 같아요.
I1, I3, I4 & I5: 네.
I2: 이거는 시간대비 효율대비… 인터넷으로 이렇게 보는 게 최고인 것 같아요.
Interviewer: 진짜요?
I1, I2, I3, I4 & I5: 네.
Interviewer: 어떠신 것 같으세요? 다른 분들은? 나 다시 해도 인터넷반 선택한다? 아니면 나는 진짜…
I1: 선택하게 하면… 그러면 안 될 것 같은데요?
I2, I3, I4 & I5: (웃음)
I1: 제 친구들은 와서 해요. 물어보거든요. 그러면은 너는 이것 땜에 와야 되냐고 하면 그렇다고… 표정 좀 안 좋고…(웃음)
Interviewer, I2, I3, I4 & I5: (웃음)
I4: 인터넷은 기한이 2-3 일 있으니까, 제가 하루쯤 무슨 일이 생겨도 괜찮은 것 같아요.
I2: 네.
I3 & I5: 맞어.
I4: 만약 중간에 갑자기 누가 크게 다쳤다던가 그래서 못 가면 그냥 땡이고, 그 분들도 제 feedback 을 못 보시고 그러니까…
Interviewer: 네, 네.
I2: 이런 시간적인 것도 있지만 저희가 영어로 글 쓸 때는 거의 컴퓨터로 작업할 때 밖에 없거든요. 직접 이렇게 쓸…(웃음) 경우는 정말 오래 전 이었던 것 같아서. 빨리빨리 습득할 수 있는 것 같아서, 그러니까 타자도 늘고 일단… 영타…
I3 & I5: 맞어, 맞어
I4: 맞어, 타자, 타자. (웃음)
I2: 영타가 중요해.
I3, I4 & I5: (웃음)
I5: 안 보고 치고 막…(웃음)
I2: 타자도 늘구…
I1: 타자 좀 늘어…
I4: 토플할 땐 타자 때문에 점수 안 나오는 분도 봤거든요. 영타가 150 타 이러면은 30 분 안에 두 문단 밖에 못 써요. 그거를 생각까지 해야 되니까… 타이머를 쓰고 하는 시험이니까… 이건 공짜잖아요. 근데 토플 시험가면 180 달러

to show the number of words typed in like MS Word…. How long I have written, how many words I have written…
Interviewer: I see…
I2: When we consider time and efficiency… doing activities through the Internet seems to be the best.
Interviewer: Really?
I1, I2, I3, I4 & I5: Sure.
Interviewer: What do you think about this? All of you? If I could go back to the starting point, you would definitely choose this Internet group? Or I want ….
I1: If you give us a choice… you shouldn't do that.
I2, I3, I4 & I5: (laughs)
I1: My friends belonged to the face-to-face group. I asked them if they should come to the writing sessions in person, and they said yes… but they looked unhappy…(laugh)
Interviewer, I2, I3, I4 & I5: (laugh)
I4: For the Internet group, we had 2 to 3 days left before the deadline, so it's OK that something might happen.
I2: Yes.
I3 & I5: Right.
I4: If some in the other group might be seriously injured and not be able to attend in the middle of the sessions, that's the end of it. They cannot see feedback from others anyway…
Interviewer: Yes, yes.
I2: Other than the matter of time, we mostly use computers only when we write English essays. I remember that it's so long ago when I wrote passages in English. (laugh) It seems that I can learn faster, I mean, first of all, typing speed in English improves…English typing…
I3 & I5: You're right, right.
I4: That' it. Typing speed, typing speed. (laugh)
I2: Typing speed in English matters.
I3, I4 & I5: (laughs)
I5: It's possible to type words without watching the keyboard. (laugh)
I2: Typing speed in English improves…
I1: It's true that my typing speed in English has developed a little…
I4 I've seen that some got lower grades than they expected in TOEFL due to their slow typing speed. If my typing speed is, for example, 150 words per minute, I can only complete two paragraphs within 30 minutes. We have to consider the time limit because a timer is running during the test. This is free but people are trying to do better in TOEFL tests because they are well aware that it costs 180 dollars to take the test…
I1: They have to practice typing. (laugh)
I2: In the face-to-face sessions, when they meet together and give feedback on others' essay, do you offer them your own set of criteria? Or do they give feedback just on their own? For one's essay?
I1: It's the same as ours.
Interviewer: I printed out and gave our rubrics to them… just like this…
I2, I3, I4 & I5: Ah…
Interviewer: Some did offer a lot of feedback to others and others just left blanks as they didn't know…
I4: Certainly, I might fear my comments would hurt them in

시험이라는거를 인식하고 있기 때문에 좀 잘 하려는 그게 있는데…
I1: 타자 연습하면 되잖아. (웃음)
I2: 그, 그룹으로 모이면은 feedback 해줄 때 나름 기준을 정해주시나요? 아님, 자기네들이 알아서 feedback 을 해주나요? 한 사람껄?
I1: 똑같아.
Interviewer: 우리 rubric 으로 print out 해서 드리는데… 요런 식으로 드리거든요 그냥… 다 비슷하게 print out 해서…
I2, I3, I4 & I5: 아…
Interviewer: 많이 해주시는 분도 있고, 모르면 모르는 대로 빈 칸으로 남겨두시는 분도 있고…
I4: 확실히 만나서 하면은 상처받을까봐 못 하는 말이 많을 것 같아요.
Interviewer: 음…
I2: 근데 익명성으로 해도 상처받아…(웃음)
I4: 아, 근데 뭐지? 그…오히려 얼굴이 안 보이니까 받아들이기 싫은 건 무시할 수도 있는데, 오히려 막 이렇게 면전에 대고…
I2: 아예 말을 안 할걸요? (웃음)
I4: 예, 그러니까 말을 아예 안 하겠지만… 정말 간이 강하신 분이 '이거 이상한데요?' 이러면은 되게 (기분이 안 좋을 것 같아요)… 그리고 만약에 그…feedback 을 주셔도요. 어떤 사람은 잘 썼으니까 (feedback 을) 덜 받고, 어떤 사람은 comma 이런거 다 틀렸으니까 (feedback 을 많이 해야) 할 수도 있잖아요. 막 시간이 길어지는 걸 남들이 보는데 그것도 좀… 그게…그런게 좀 있지 않을까요? 다 장단점이 있겠지만…
Interviewer: 그러니까 특별히 못 쓴 사람 때문에 시간이 더 길어질 수도 있고?
I4: 아뇨, 그러니까… 그게 뭐지? 다른 사람들은 다 5 분 걸렸는데 제 것만 5 분보다 훨씬 더 걸리는 것 같아요. 그럼 자기도 그걸 알잖아요. 스스로. 그러면 막 '나만 문제점이 엄청 많구나'라는 사실을 인식하게 되고…
I1: 근데 이런 연구를 또 하실거에요? 계속?
Interviewer: (웃음)
I2, I3, I4 & I5: (웃음)
I1: 그게 나중에 가르치려고 하시는걸 물어보시는건지 아니면 연구 자체에 대해서 많은게 궁금해서…?
Interviewer: 오늘 말씀하시는 이 자체에 대해서 포커스를 맞춰주시면 되고, 저는 원래 개발하는데 관심이 있는 사람이에요. 이런거…
I2, I3, I4 & I5: 아~~
Interviewer: e-learning environment 자체. 원래는 제가 다 개발을 하려고 prototype 짜놨지만, 그걸 인터넷 환경으로 만들려면 어마어마한 돈이 깨져요. 완전히 내가 서버를 사서, 모든 걸 다 구축한 다음에… 그래서 차선책으로 선택한 게 이런걸 쓰는 거였었어요.
I4: 스칼러를 아예 거기 연구원으로 들어가서서 바꿔주시면 안 되요?
Interviewer: 미국 일리노이대학교 교공팀에서 개발한거에요.
I1: 근데 한국인 정서랑 안 맞는거 같아요.
I2, I3, I4 &I5: (웃음)

the face-to-face sessions and this can stop me from speaking frankly
Interviewer: Umm…
I2: But anonymous comments hurt me, too. (laugh)
I4: Well, because I am not facing others, it's possible to ignore comments that I don't want to accept, but I imagine that they say something to my face…
I2: They wouldn't tell anything at all. (laugh)
I4: Yes, they wouldn't tell any… If a really brave person says to me, "This is really weird," I may feel really bad… And if we give feedback to others, some might need less editing because their essay is good and others might need more editing because their essay is poor with a lot of errors like commas and so on. While all of us see that it takes more time in someone's essay, that's somewhat… that's not good… (that makes the writer of the essay embarrassed,) I guess. Of course, every writing group has its own merits and demerits…
Interviewer: Do you mean that the essays of poor writers can delay longer?
I4: No, I mean… Well… It takes only 5 minutes to review most of the essays, but I feel that it takes much longer for others to review my essay. If then, I recognise that it is only I that have a lot of problems…
I1: By the way, do you keep doing this kind of study? Again?
Interviewer: (laugh)
I2, I3, I4 & I5: (laugh)
I1: My question is that you are asking us of what you want to teach later or what you are curious of in this experiment itself…
Interviewer: You should focus on our writing process itself, and I am actually interested in developing learning contents… like this…
I2, I3, I4 & I5: Ah~~
Interviewer: About the e-learning environment itself. Originally, I designed a prototype, but it takes a lot of money to set up the Internet platform. I have to buy my own server and construct everything and then… That's why I chose Scholar like this as an alternative way.
I4: Why don't you get hired as a researcher from the Scholar and then amend it?
Interviewer: That was invented by a group of educational technology at University of Illinois in the US.
I1: That doesn't match Korean sentiments anyway.
I2, I3, I4 &I5: (laughs)
I4: Letters are too…(small)
Interviewer: This fits e-learning teaching in the sense that it was made to exchange opinions each other… but don't you think that there are some restrictions in use? Facebook lets us directly interact and exchange one another but I felt that this Scholar is just to give something to others one-sidedly
I4: Or…
I2: Give once and take in return…
I4: I thought that it'd be good to have the synchronous chatting function.
I2: It is already.
I4: Oh, is it? I've never explored everything thoroughly…(laugh)

I4: 글씨가 너무…(작아서)

Interviewer: 음…

I2: 이게 e-learning teaching 에 맞는게 서로 의견을 교환하라고 만든거긴한데… 약간 제약이 조금 있지 않나요? 진짜 facebook 같은 거는 바로 상호호환이 되는데 이건 약간 주는 느낌? 이런게…이런 느낌이 있어요. 주는 느낌?

I4: 아니면 오히려…

I2: 한번 받고, 주고…

I4: 실시간 채팅기능이 있음 좋겠다는 생각도 했던 것 같아요.

I2: 그거 있어요.

I4: 아, 그래요? 제대로 보지를 않아서… (웃음)

I2: 쓰지를 않아서. 쓸 경우가 거의 없지 않나요?

I4: 그러니까 아예 feedback 을 따로따로 주지 말고 그 시간에 다 같이 모여서 익명인 상태로 바로바로 줄 수 있으면은…

I5: 아…

I2: 근데 저희가 채점할 때도 딱 rubric 이 있잖아요. 근데 그…아 뭐지? 내용적인 면에 대해서도 이야기를 할 때, 좀 뭐였지? 저희가 기사를 보고 나서도 '그건 아니다, 맞다'하면서 되게 재밌잖아요. 그런것도 있었으면 좋겠어요. '니 생각 그건 아닌 것 같은데?' 이렇게도 할 수 있어야 되는데 자기 의견을 써서 거기 맞다 그르다 할 처지는 아니잖아요. 그 rubric 에서…

Interviewer: 토론할 수 있는 공간?

I2: 네, 네.

I4: 익명으로!

I2, I3, I4 & I5: (웃음)

I1: 가장 중요한거는 시간을 얼마나 내느냐… 이것도 시간 많이 없었거든요. 다른거 하는 것 때문에…

Interviewer: 음… 그런건 어떠세요? 이거는 사실 여러명이 같이 안 모이고 하는 거기 때문에 deadline 을 잘 지켜야 하잖아요? 인터넷에 할 때는? 느리게 올리시는 분들도 있고, 아예 안 하실 수도… 어떤 분들은 feedback 을 아예 안 주고 지나갈 수도 있고 뭐 그런데… 그런 문제점들에 대해서도…

I3: 억지로 할 수 없는 것 같아요. 자기 일이니까…

Interviewer: (웃음)

I5: 네

I4: 팀 프로젝트에도 안 나오는 사람은 안 나오고…

I1: 이게 수업도 아니고 학점 들어가는 것도 아닌데, 학점 듣고 하는 수업에서도 그런 사람 많거든요.

I4: 갑자기 분개하고…(웃음) 리뷰 안 하는 사람!

I2, I3 & I5: (웃음)

I2: 이름 공개해. 성이 보이고…(웃음)

I3 & I5: (웃음)

I1: 경찰서 가고…(웃음)

I4: 이 사람이랑 과제하지 마세요. 이런거…

Interviewer: 근데 이름공개 안 하는게 더 좋다면서요.

I4: 근데 학번으로 하면 모르지 않나요? 타과 사람인 경우…

I2: But I've never used that. I think we rarely needed to use that.

I4: I mean instead of giving feedback asynchronously, (it'll be better) to get together and anonymously exchange feedback in real time…

I5: Ah…

I2: When we evaluated others' essay, we used the relevant rubrics. Well…the… when we talked about the contents themselves, well… for example, when we read news articles, it is fund to put replies such as "This is wrong, or right" to them. I hope that kind of thing exists. We should be able to respond to a specific content, saying like "I don't agree with your idea," but there's no room for suggesting my opinion with pros and cons there in the rubrics…

Interviewer: You mean the space for discussion?

I2: Yes, that's it.

I4: Anonymity, of course!

I2, I3, I4 & I5: (laughs)

I1: The most important thing was how much time I could spend… I didn't have enough time for this because I had other things to do…

Interviewer: Well, what do you think of this? In fact, you should keep deadlines very well because this online class runs without gathering all together in one place. When you do on-line activities? Some uploaded late and some might not do anything … Some of you might skip giving feedback to others, all of these may happen… About these problems…

I3: Nobody can make them do if they don't want to. Because everything is their own business…

Interviewer: (laugh)

I5: Right.

I4: There are some people who have never attended the team projects…

I1: This is not a regular class, and this is not to earn credits. Actually, many of the students don't even attend the regular classes.

I4: I got angry at…(laugh) those who were not participating in reviews.

I2, I3 & I5: (laughs)

I2: Just open their name. Or their last name is open…(laugh)

I3 & I5: (laughs)

I1: For that, we might have to go to the police…(웃음)

I4: Let's give comments like "Never do team projects together with this kind of person!"

Interviewer: But you said you preferred the hidden name policy.

I4: How about opening their student ID numbers? If they are in different departments, it'll be hard to know who they are only by their ID…

I1: No, it's possible to find them with ID numbers.

I5: I think it's possible to find them even though they are in different departments from mine. (laugh)

I4: I've had this experience once. Certainly, I pressed submit button. Because its server was located abroad and their speed was slow even in our computer lab, the button was not finally pressed, I guess. I ensured that I pressed the button at the moment. But my click didn't work and uploading was

I1: 에이, 찾을 수 있어.

I5: 타과 사람이라도 학번으로 찾을 수 있을 것 같아. (웃음)

I4: 저는 한번 그런 경우가 있었어요. 저는 분명히 submit 을 눌렀거든요? 근데 그게 외국 사이트다 보니까, 학교 컴퓨터로 했는데 느려가지고 안 눌렸나봐요. 전 눌렀는데… 적용이 안 돼서 업로드가 아예 안 된거에요. 그래서 메일을 주셨어요. 뭐, submit 을 안 눌렀다고. 그래서 들어가보니까 진짜 안 되어있는거에요. 진짜 그 submit 이 되었으면 'submit 이 되었습니다'라고 팝업이 떠야 되는데 됐는지 안 됐는지 몰라서 그 다음부터 다섯 번씩 누르거든요. Submit 이 됐는지 몰라서?

Interviewer & others: (웃음)

I4: 그런 시스템 영향도 있고…

I5: 저는 첫 번째 draft 랑 두 번째 draft 랑 올리는 부분이 다르잖아요. 첫 번째를 수정을 해 갖고 두 번째를 올리려고 했는데 어디에 올려야 되는지 몰라서… 첫 번째에다 그냥 submit 누르면 되는 줄 알았거든요. 남들 다 했을 때 제께 없다고 그래서 제가 교수님한테 따로 메일을 드린 적이 있어요. 그랬더니 두 번째거 해야하는데 안 했다고… 그래서 그때 따로 띄워주셨거든요. 그게 좀 어려웠어요.

Interviewer: 어제는 1st draft 입력창 따로 2nd draft 부터 final 까지 입력창 따로 있어서 좋았다는 사람들이 많았는데… 어떠세요? 한번에 그냥… 원래 2nd 부터 final 은 한번에 되잖아요. 고쳐서 계속 하는 걸로… 서로 다른 입력 panel 에 할 것 없이… 근데 다른 생각을 갖고 계실 수도 있으니까… 아예 1st 부터 한 입력 panel 에 시작해서 쭉 거기서 끝났으면 좋겠다는 분 계세요?

I3: 저요. 어차피 따로 구분해 놔도 안 보잖아요. 첫 번째 끝나면… 굳이 다른 페이지에 할 필요 없는 것 같아요.

I4: 근데 그럼 notification 은 새로 계속 뜨는 거죠? 그 전에 있던걸 계속 저희가 찾아봐야 되는데…

Interviewer: 어, 그러면 이제 그 다음 단계 하라고 계속 가는거죠. 아니면 notification 말고서도 내가 쓴 글은 언제든 들어가서 볼 수 있는 my page 그런 기능이 있었으면 좋겠다 하시는 분들도 있었어요.

I1, I3, I4 & I5: (끄덕끄덕)

Interviewer: 다 끄덕끄덕 하시네? (웃음)

I2: my page 가 왜 필요하죠?

Interviewer: 뭐, 이렇게… 언제든 내가 쓴 글을 다 몰아서 그 창에 다 들어가서 볼 수 있게, 내 글만 다 몰았으면 좋겠다 뭐 이런 생각이셨나봐요.

I2: 아…

Interviewer: 근데 보시면, creator tool 에서 sort 기능을 이용해서 내 글만 따로 쭉 모아서 볼 수는 있어요.

I4: 근데 그게 좀… 사이트가 직관적이지 못 하다고 해야 하나? 좀 메뉴탭을 찾아보기 쉽게 해놓지 않아서…

I2, I3 & I5: 응, 응.

incomplete at last. You emailed me to let me know that I had not submitted my essay. So I went into the website and fond that there's no file submitted. If submission is complete, a pop-up window should appear, saying "Submission complete." But I couldn't know whether submission was done or not. So I used to press the button five times after then. Because I was not sure if my work had been successfully submitted.

Interviewer & others: (laughs)

I4: There's such systematic malfunction…

I5: To me, you know we had to submit the 1st and the 2nd draft in different places. After I was done with revising the 1st one, I tried to submit the 2nd one, but I had no idea of where I had to hand it in… I just understood that I could press submit button in the 1st draft panel. When everybody was done except from me, you said that mine didn't exist. So I emailed you at the moment. Then you said I was not done with the 2nd draft… and you let me see the right panel then. That was somewhat difficult to me.

Interviewer: In the interview session yesterday, many of them liked different panels for the 1st and the 2nd draft each… What do you think about this? All together… Actually, from the 2nd to the final draft, you could stay in the same page, keeping revising it….you didn't need to move into another panel… But you might have different opinions… Is there anybody that thinks it'll be better to stay in the same page from the 1st to the final draft?

I3: It's me. Although there were different panels to distinguish, I rarely saw the previous one again. After I was done with the 1st draft… I don't think we need to work on a different page.

I4: Then the new notification messages will still appear, right? We need to look up the previous draft…

Interviewer: Uh, then notification messages will let you know that you are ready to move to the next stage. Or some said that the function such as My Page for you to go into and read your previous drafts whenever you want would be necessary.

I1, I3, I4 & I5: (nods)

Interviewer: All of you are nodding? (laugh)

I2: Why is the My Page necessary?

Interviewer: Well, like… whenever you want to see your drafts, a specific space lets you look up all the drafts you've done so far in one page, I understand they wanted to sort out their own drafts only.

I2: Ah…

Interviewer: But as you can see, it's possible for you to sort out and see your own essays with the tool of sort in the creator menu.

I4: But I felt somehow… the site was not intuitive? It was designed to easily find menus on the tab…

I2, I3 & I5: Yeah, yeah.

I3: It's hard to know what's there…

I4: Only good thing is to send and receive notifications… The site has very small letters. Really…

I2, I3 & I5: (laughs)

I1: That site was not all that.

I2: When I entered, I just kept checking upload times with

I3: 있는지 없는지…

I4: 진짜 딱 notification 만 가지.. 글씨가 너무 작아요. 진짜…

I2, I3 & I5: (웃음)

I1: 별로에요.

I2: 딱 봤을 때 more or less 눌러서, 언제 날짜에 올라왔는지만 확인하고… 그걸 계속 했던 것 같아요. 아, 이게 최근거구나. 그렇게 보고… 왜냐면 version 이 계속 바뀌다 보니까 저도 막 혼란스러워져서…(웃음)

Interviewer: 실시간 저장기능이 장단이 있어요.

I2: 네, 네. 근데 좋긴 진짜 좋아요. 날아갈 일이 없으니까…

Interviewer: 음…

I2: 약간… tab 버튼이 좀 쉬웠으면 좋겠어요.

Interviewer: tab 버튼… 또 다른거 뭐 여기서 더 어떤 기능이 추가되거나, 뭐 더 수정될게 있다던가, 뭐 제안점 같은거 있으시면 더 말씀해주셔도 되고…

I1, I2, I3, I4 & I5: (침묵)

Interviewer: 네? (웃음) 자, 다음 단계로 넘어가는거? 음, 그럼 general 로 가죠 뭐. 이 writing stage 를 전반적으로 봤을 때 도움이 되셨던 것 같아요? 논설문 쓰는데?

I1: 네.

I2, I3, I4 & I5: 네. 많이.

Interviewer: (웃음) 뭐, 어떤 면에서 도움이 되셨는지 말씀해주셔도 좋고…

I5: 평상시에 글을 쓸 일이 없으니까 이렇게라도 써 보면은 도움이 되는 것 같아요.

I1: 이렇게 쓰면은… 구조에 맞게 쓰니까…

I5: 네. 다른 친구랑도 '아, 이렇게라도 하니까 그래도 한다. 그렇게 어렵진 않네.'하면서 했거든요.

I3: 그리고 옛날에는 글의 구조가 약간 중구난방이었는데, 약간…이리 갔다 저리 갔다 막 이랬는데 하고 나니까 구조적으로 변하긴 했어요. 약간 뿌듯했어요.

Interviewer & I2, I3, I4 & I5: (웃음)

Interviewer: 그 다음에 젤 좋았던 단계나 활동이 있으면, 아니면 반대로 제일 싫었던 활동이나 단계가 있었다면? 뭐, 말씀해주셔도 좋고. 이유랑.

I1, I2, I3, I4 & I5: (침묵)

Interviewer: 요 단계의 요 활동이 젤 낫다. 아니면 젤 쓸데없거나 하기 싫었던 단계는 이런거였다. 제일 하기 싫은게 이거다 나는.

I1, I2, I3, I4 & I5: (웃음)

Interviewer: 2nd peer feedback? 그거에요, 혹시?

I4: 전 두 번째가 젤 좋았어요. 왜냐면 제가 솔직히 남들한테 도움이 되는거는 거의 없는데, 만약 제가 교수님한테 받잖아요? 제, 뭐지? 습관적으로 구어체로 쓰잖아요, 에세이에. 뭐지? 막, kid? 이런 것도 쓰면 안 된다고 그러더라구요. Kid 이런 것도 습관적으로 쓰는데 그런 것도 child 로 써야되구. 정확히 기억은 안 나는데 그런거를 짚어주실 때가 있으니까…

I3: 약간 실용적인 지식을 얻는다고 해야되나?

Interviewer: 또, 뭐 어떤게 젤 좋다, 싫다? 말씀…

clicking on 'more or less'. I knew "Oh, this is the latest one" by doing this. This is because latest version kept changing, which made me confused a lot…(laugh)

Interviewer: The simultaneous auto-saving function has both advantages and disadvantages.

I2: Yes, yes. Actually, that's really good. I had no worries of losing my data…

Interviewer: Oh…

I2: A little bit… I want to make it easier to use the tab button

Interviewer: Tab button… And you can say more things that you'd like to add or change, or suggest…

I1, I2, I3, I4 & I5: (silence)

Interviewer: Ha? (laugh) Ok, let's move to the next stage? Well, let's talk about the general questions. In general, do you think this writing process was helpful? For writing on arguments?

I1: Yes.

I2, I3, I4 & I5: Sure. A lot…

Interviewer: (laugh) Well, it's good to hear what kind of aspects were of help…

I5: Because usually I don't have many chances to write in English, it seems helpful for me to try writing on this occasion.

I1: If I write following our writing process, I can develop organised essays…

I5: Right. During this writing class, my friend and I said "Participating in here is making us write English essays regularly. English writing is not more difficult than we expected."

I3: My pervious essays were poorly organised a little bit, somewhat inconsistent Since I learnt in this class, my essay have become more organised. I felt a little bit proud of myself.

Interviewer & I2, I3, I4 & I5: (laughs)

Interviewer: Which activities or stages do you like or dislike the most? It's good to hear why you think so, too.

I1, I2, I3, I4 & I5: (silence)

Interviewer: This activity in this stage was the best. Or this stage was thought to be useless or lest interesting. I didn't want to do this…

I1, I2, I3, I4 & I5: (laughs)

Interviewer: 2nd peer feedback? Did you hate it the most perhaps?

I4: I liked the 2nd feedback the most. This is because I could get teacher's feedback. Honestly, I was rarely helpful to others, though. Well…we habitually use spoken language in essays. Well, uhm, kid? I found that this word should not be used. I habitually use this word but this should be replaced by child. I don't remember exactly but you pointed out that kind of thing…

I3: Let's say we got fairly practical knowledge in the stage?

Interviewer: Anything else you liked or dislike the most? Each one has different opinions on this, I guess. This stage was most annoying and lest interesting to me. Or this was the most interesting and exciting to me.

I5: To me, right after I got the 1st feedback was the most interesting. It' exciting to see all points that I'd got…(laugh)

개개인별로 또 다 다르실거 아니에요? 제일 짜증나고 하기 싫었던 stage 가 이거였다. 아니면 그래도 제일 관심있었고 재밌었던 stage 가 이거였다.

I5: 저는 첫 번째 feedback 받은 다음이 제일 재밌었어요. 점수가 확 나오는 재미도 있고…(웃음) 확실히 제가 아 이 부분은 좀 애매하다 싶게 쓴 부분은 다들 애매하다고 말씀하시더라구요. 물론 답을 주신건 교수님밖에 없었지만…(웃음)

I3: 왜 애매한지…

I5: 어. (웃음)

I3: 그리고 점수 주는거 있잖아요. 그거 아예 모르는 분도 계시는 것 같던데?

Interviewer: 그래요?

I5: 맞어.

I3: 글에는 잘 쓰는 것 같은데요. 전 그래 놓고 0 점이래.

I4: 응. 응.

I2, I4 & I5: (웃음)

I4: 빵점. 어이가 없습니다. 빵점.

I3: 평균을 봤는데 2.5 점인가, 1.5 점인가? 발끈해가지고 읽었는데 '잘 쓰신 것 같아요' 그래놓곤 빵점이래,

I4: 클릭에 미스난 것 같아요. 어떤 거 하나가 빵점 돼 있는 경우가 있던 것 같은데…

I3: 저는 다 빵점 되있었어요.

I4: 어…

Interviewer: 어, 점수를 아예 안 주시는 분이 있었구나.

I4: 점수도 체크 안 하면 제출 안 되게… pending 걸리더라구요. Comment 를 다 안 채우면…

Interviewer: 한 번이라도 (점수 bar 를) 이렇게 했다가 해…하는 걸로? (웃음)

I2: 그 annotation 하면은 불 들어오잖아요. 그거 되게 편해서 고치기 쉬운데 기억에 안 남는 단점이…(웃음) 왜냐면 바로 고치다 보니까 이게 머릿속에 고민하고, 왜 찾아봐야 할 때는 저게 어떻게 돼서 이렇게 됐나 찾는 거랑, 바로 해주니까 두 번째 문단 고치고 또 해서… 머릿속에 조금 덜 남을 수도 있겠다는 걱정이…

I5: annotation 을 할 때 제가 또 거기 똑같은 부분을 지적을 하면 그게 두 개로 뜨나요?

I4: 그, 뭐지? 쓴 review 별로 막 이렇게 뭉쳐서 따로 나오지 않아요?

I5: 아, 따로나오나?

I4: 그랬던 것 같은데?

Interviewer: 사람 마다 따로 보인다면서요

I4: 네, 그러니까 여기 1 번 사람이 막 뭐라 해놨어요. 근데 뭔가 익숙한 문구에요. 해보면은 똑 같은 부분인데 사람이 달라서 (annotation list 가) 더 길어지는 거에요. 단어끼리 그렇게, 그 부분끼리 모여있음 좋을 것 같은데?

Interviewer: 아, 같은 부분은 한꺼번에 모여서?

I1, I2, I3, I4 & I5: 네.

I4: 아, 진짜 그 뭐지? comment 에서 틀린 부분을 찾아가는 거 보다 틀린 부분에서 그 comment 를 진짜 마우스를 갖다 대면 바로 볼 수 있게 해줬으면 좋겠어요.

It's sure that all the other members pointed out ambiguous parts that I felt unclear about as well. Of course, it's only you that gave me an answer about them, though…

I3: Why they were ambiguous…

I5: Yeah. (laugh)

I3: And there's an activity that we had to give scores to others. I found that some were not aware of it at all.

Interviewer: Really?

I5: That's right.

I3: In the comments, one person said, "I think you did well" but he or she gave me zero.

I4: Yeah, yeah.

I2, I4 & I5: (laugh)

I4: Zero point. I was appalled by it. Zero point

I3: So I checked that the average scores given by the person and it was 2.5 or 1.5? When I got angry at the points, I read his or her contradictory comment that I did a good job.

I4: I think s/he made a mistake in clicking. I remember seeing that one criterion had zero point.

I3: I got all zeros from the person.

I4: Uh…

Interviewer: Oh, some did not give any marks.

I4: It should be operated the way in which users cannot submit feedback without scoring… as I got pending signs unless I filled in commentary boxes.

Interviewer: It's necessary to move a bar at least once, isn't it? (laugh)

I2: If we apply suggestions in annotations to our essay, then the sings got spotlights. That was really convenient but not helpful to memorise…(laugh) Because I could directly and easily correct them, referring to annotations, not considering how to correct them in my mind and looking up on dictionaries to understand why it was wrong, I was a little bit worried that what I edited with the help of given annotations wouldn't remain in my memory…

I5: In adding up annotations, I'm wondering if two people point out the same part, then the two annotation lists come out in the same place all together.

I4: The…well… Annotations were collectively presented according to each reviewer (in chronological order of participation), aren't they?

I5: Ah, they were divided into each reviewer?

I4: Yes, as I remember.

Interviewer: As far as I know, all the annotations appear separately by each reviewer.

I4: Yes, for example, the 1st reviewer added an annotation here. But (as I went on reading annotations,) I felt quite familiar with it. When I checked the rest of the annotations, I found that other reviewers put the same comment on the same part of my essay. That means every annotation was added up in chronological order by each reviewer, which made a list of annotations much longer. I want the annotations on the same part to be gathered together?

Interviewer: Ah, comments on the same part are together in group?

I1, I2, I3, I4 & I5: That's it.

I4: Ah, what's really… I want pop-up windows to appear when

Interviewer: 으흠… 특정 stage 나 그런게 빠졌으면 좋겠다, 아니면 더 들어갔으면 좋겠다는거 있으세요?
I2: 글 쓰기 단계에서요?
Interviewer: 네, 네. 전체 우리 process 통으로 봤을 때. 뺐으면 좋겠다. 아니면 어떤 분들을 또 그러시더라구요. 3rd draft 가 있어야 된다.
I1, I2, I3, I4 & I5: 에? (웃음)
I1: 누가 한 소리야?
Interviewer: 한 번 더 고쳤으면 좋겠다. 어떤 것 같아요? 지금 이제 feedback 이나 draft 를 계속 쓰잖아요. 고치는 단계 이 정도는 맞는 것 같아요?
I1: 지금 세 번 내잖아요.
Interviewer: 네.
I1: 네 번 내면 진짜 너무 힘들 것 같아요.
I2: (웃음) 그렇다고 두 번은 또…
I1: 그건 좀 성의 없는 것 같고…
I2: 네.
I1: 3 이 젤 적당한 것 같아요.
I2: 딱인 것 같아요.
Interviewer: 어제 분들 굉장히 그 energetic 하신 분들이에요. (웃음)
I3 & I5: (웃음)
I2: 한번 더?
Interviewer: 아니, 뭐… 보여주고 싶대요. 나 이렇게 다 고쳐서 짜잔~ 이렇게 완성했어.
I5: 아~
Interviewer: 보여줘서… 친구들한테 다 이렇게…
I4: 보여주고 my page 에 저장? (웃음)
Interviewer: 그러고 나서 제출하고 싶대요.
I2, I3 & I4: 아~
I4: 근데 두 번만 해도… 확실히… 근데 뭐지? 처음에 되게 막 이상했던 글도 있는데, 확실히 한 번, 두 번 고치면서 나아져요. 그게… 아예 다른 글 수준으로 바뀌는 것도 있었고… 두 번이면 충분한 것 같아요.
Interviewer: 현재 stage 는 어떻게 생각하세요? 그냥 뭐 이정도 괜찮다?
I1: 네.
I2, I3 I4 & I5: 네.
Interviewer: 더 빼고 줄이는건 아니고?
I1: 네.
Interviewer: 뭐, 추가하고 싶은 단계 같은거 있어요? 추가해서 뭐, 다른 걸 더 해봤으면 좋겠다. 글 쓰는 데 있어서…
I1, I2, I3 I4 & I5: (침묵)
Interviewer: 무조건 이걸로 땡?
I1, I2, I3 I4 & I5: (웃음)
Interviewer: 그러면 여기는 의견 없으시고… 그 다음에 스칼러 같은거 보시면 전반적인 구조라든지 디자인 같은거 총평해주시자면?
I4: 아!
I3: 1 점.
Interviewer: 안 좋다? (웃음) 몇 점 중에 몇 점?
I4: 5 점 중에 1 점.
Interviewer: 오! 5 점 중에 1 점?
I4: 색깔은 눈에 편한 색깔 위주로 써 놓은 것 같긴 한데요. 근데 되게 눈이 불편해요.

I put a mouse over the annotated area in the passages so that I can see comments nearby right away, instead of reading annotations first on the right side and then going back to the relevant contents.
Interviewer: Uh-huh… Do you have any ideas that specific stages should be excluded or additionally included?
I2: In writing stages?
Interviewer: Yes, yes. When you see our writing process as a whole, I want some stages to be scrapped or added. Some said the 3rd draft stage would be necessary.
I1, I2, I3, I4 & I5: What? (laughs)
I1: Who said that?
Interviewer: Do you think that you'd like to revise one more time? So far you've been doing feedback and drafting. Do you think that current revision stages are just enough?
I1: Now we should submit three times.
Interviewer: Yes.
I1: Submitting four drafts seems too demanding.
I2: (laugh) But two times of drafting is not (enough).
I1: Two drafts seem to lack insincerity..
I2: Right.
I1: Three drafts are thought to be the most appropriate.
I2: They are just right.
Interviewer: Interviewees yesterday were very energetic. (laugh)
I3 & I5: (laughs)
I2: One more drafting?
Interviewer: Well, just… They wanted to show their essays to others. I've revised them like these and Tara~ I'm done with them like these.
I5: Ah~
Interviewer: Let their peers see like this….
I4: After showing them to peers, save them in my page? (laugh)
Interviewer: After then, they would like to submit, as they said.
I2, I3 & I4: Ah~
I4: Actually, two times of drafting made essays obviously better as they go through the first and the second revision although some of essays were so poor at first. I've seen that some of them totally changed moving to another level… Two times are enough to me.
Interviewer: What about the current stages? Is this amount of stages OK?
I1: Yes.
I2, I3 I4 & I5: Yes.
Interviewer: Nothing to eliminate or add?
I1: No need.
Interviewer: Do you want to add any specific stage? In the additional stage, you want to do other things for writing…
I1, I2, I3 I4 & I5: (silence)
Interviewer: In the current stages, all you need is over?
I1, I2, I3 I4 & I5: (laugh)
Interviewer: OK, you have no idea on this. And the next is considering Scholar, would you give a general review on the overall construction, design and so on?
I4: Oh!

I2: 사이트를 facebook 도 그렇고 뭐 안 익혀도 알겠잖아요. 클릭하다보면… 근데 요 사이트는 저희가 원래 막…안내서 보고 그리고 하는거 되게 싫어하잖아요. 그냥 해서 됐으면 좋겠는데, 좀 시간이 필요한 사이트다라는 생각이 들었어요. 아, 좀 많이 익혀야 되는구나. (다른 것도) 원래 많이 익혀야 되긴 하지만… 쉽게 쓰게 되진 않겠구나, 좀 알아야 되겠구나. 근데 알면 진짜 편하겠구나.

I4: 그래서 딱 접속하면 처음 페이지에 친구추천 같은게 뜨더라구요? 그게 솔직히 별로 필요 없는 기능 같고… 그 사람들을 친구로 추가할 일이 전혀 없는 것 같아요. 의외로 notification 을 엄청 크게 해서 거기다가 옮겨놓으면은 더 좋지 않을까…생각하는데… 친구도 맨날 똑같은 사람만 뜨고…

I1: 좀 전문적인 웹디자이너를 써서 고칠게 한 두 가지가 아닌 것 같아요.

Interviewer, I2, I3, I4 & I5: (웃음)

I2: 근데 글 쓰는 시스템은 되게 체계적인 것 같아요. 근데 이미지 개선은 확실히 필요한 것 같아요. 사용자의 입장에서.

Interviewer: 음…

I4: 제 생각에 개발자의 입장에서 그 필요성을 못 느낄 것 같은게 원래 뭐지? 한국 과자는 막 되게 예쁘잖아요 이런거. (겉 포장은) 맛있게 생겼고. 근데 내용이 실하지가 못하잖아요. 다 질소고. 근데 외국 과자는 완전 꽉 차있고 포장은 잘 했는데, 그 겉 껍데기에 그림이 되게 맛 없게 생겼잖아요. 막, 과자 이름만 써있고 이런거… 사진도 되게 이상하게 찍어놓고 그래서 원래 습성이 다르지 않나. 우리나라 취향이랑…

I1: 외국 웹사이트 자체가 원래 좀 심플하고 아무것도 없고 글자만 있고 그렇잖아요. 뭐, 그래서 저희가 말하는게 들리기나 하겠어요?

I4: 그러니까… 그걸 왜 그래야 하지? 시스템만 좋으면 되지. 뭐 이럴 것 같아요.

I1: 저흰 그냥 한국 웹사이트에 익숙하니까 그런데 facebook 도 보면은 너무 잘 만들었잖아요. 외국사람이 만든거라도.

I4: 오히려 ESPN 이런 사이트 들어가면 완전 보기 어렵더라구요. 그것도 메인 뉴스가 아니면 찾아가는거 글씨 (작게) 요만하게 써놓고… 오히려 새로 만드시면 좀 큼직큼직하게 좀… 한국인 교육용으로…

Interviewer: (웃음)

I1: 새로 만드시면은…

I4: 토플 교육 프로그램 이런걸로…

I1: 맞어. 잘 만드실 것 같아요.

Interviewer: (웃음) 그 다음에 writing stage sequence 전체 순서는 괜찮으세요, 지금?

I1, I2, I3 I4 & I5: 네.

Interviewer: 뭐, 이렇게… 추가되거나 바뀌었으면 좋겠다는 건 없으시고?

I1: 네. 대안이 없지 않나요? 따로?

Interviewer: 음… 뭐, 어제처럼 더 쓰고 싶다. Editing stage 더 넣어야 한다.

I1, I2, I3 I4 & I5: (웃음)

I1: 그 분 혼자 쓰시라고 해요.

I3: One point.

Interviewer: Not good? (laugh) How many points? For a total of what?

I4: One point out of five

Interviewer: Oh! One out of five?

I4: It seemed that they tried to use comfortable colors in our eyes. But I got pain in my eyes when using the site.

I2: Other sites such as Facebook are so easy to learn how to use functions there as we keep clicking on them… But this site is…you know we hate to read and follow the instructions in the user guide. I want to learn how to use while I try one thing or another on the page. We need some time to get familiar with this site. Ah, there are many things to learn. Of course, we need time to learn how to use other sites, too. I felt that I would not be willing to use this and had to learn some more functions to use. Meanwhile, it seems to be really convenient to use once I get accustomed to it.

I4: Once I logged into the site, the front page showed something like friend recommendations. Honestly, the function seemed almost useless… I have no need to add them into a list of friends. Instead, it'll be better to make the notification space larger there…. Every time the same people were recommended as peers….

I1: I think they should hire more professional web designers and let plenty of things be modified by the experts.

Interviewer, I2, I3, I4 & I5: (laughs)

I2: By the way, the writing system it has looks very systematic. It should completely improve its image, though. From the user's perspectives…

Interviewer: Huh…

I4: In my opinion, developers of the site are likely to feel the need of image improvement. Generally, well, Korean cookies are pretty like these. They seem to be delicious, but they have poor contents, almost full of nitrogen gas inside. In contrary, snacks abroad have full contents and are safely wrapped, but the images outside don't look good. Well, they have only their names outside like these… Pictures are weird. I think their style is different from ours. Tastes differ between countries, too…

I1: Foreign websites themselves are generally simpler with nothing but letters. Well, then do they even want to listen to us?

I4: So… Why should we make that way? The quality of system only matters. They might think this way.

I1: We know we're just familiar with Korean web sites, but Facebook is well made even though foreigners made it.

I4: Rather, it was extremely difficult for me to read texts in the web sites like ESPN. The site had small letters, this much, to move into other articles except for the main news… If you make a new one, please make letters bigger…for educating Koreans….

Interviewer: (laugh)

I1: If you create a new one…

I4: For educational programs like TOEFL and so on…

I1: That's it. I think you can make a good one.

Interviewer: (laugh) And the next… Do you think that the general sequence of the writing stages is okay now?

Interviewer: 고치고 고쳐도 영원히 고칠게 많은데…

I2: 고치고 그 다음 페이지에는 혹시 어떤 식으로 점수를 주면 좋겠다는 말도 나왔었나요?

Interviewer: 그런건 없구요. 맨 마지막에 나한테 제출하기 전에 정말 final 로 해서 친구들한테 한 번 더 검정을 받고 싶대요. 내 글이 finalized 가 돼서 이렇게 나왔다.

I4: 근데 또 해주시지 않으세요?

Interviewer: 근데 그건 나 밖엔 못 보니까. 이렇게 나아졌어, 얘들아. 토탈적인 comment 도 동료들끼리 주고 받는게 어떠냐고 하시더라구요.

I1, I2, I3 I4 & I5: 아…

I2: 진짜 그러네.

Interviewer: 왜냐하면 따로따로 나눴었잖아요. 1st 줄 때 다른 관점이 있었고, 2nd 줄 때 다른 관점이 있었기 때문에, 다 완성이 되었을 때의 그냥…총평식으로 하는거?

I4: 근데 그러면 구조는 두 번째 쓰실 때 거의 고치시니까 문법 오류만 고쳐서 내잖아요. 거의 마지막 부분은… 그러니까 아예 두 번째 feedback 할 때 맨 마지막 탭에다가 해서 '첫 번째 draft 에 비해 많이 나아졌습니까?' 그냥 이런거 물어보시면 그냥 대충 될 것 같은데?

Interviewer: 으흠… 그러니까…

I4: 그러니까 완전히 마지막 버전을 (feedback) 해주지는 못 하더라도 첫 번째 것 보다는 두 번째 것이 확실 낫잖아요. 작은 오류나 그런건 있지만…

Interviewer: 그러니까 그런 눌러서 점수 주는거? 첫 번째 보단 많이 나아졌다?

I4: 네, 많이 나아졌다? 5 점. 전혀 없다. 0 점.

I1: 그리고 세 번 내잖아요. 마지막에 최종 내기 전에 이렇게 한 화면에 딱딱 나오게 하는 것도 좋을 것 같아요. 슬라이드처럼… 그러면 뭐가 변했는지 한 눈에 보이니깐…

I2, I3 I4 & I5: 아…

Interviewer: 아…

I1: 솔직히 제가 따로 보려면 찾기 힘들거든요? 뭐가 다른건지… 그냥 다른 느낌? 그래도 좋아졌다는 느낌은 받는데 솔직히 어디를 바꾼건지 한번에 알아보기 어려운게 있으니까… 뭐, 1 차는 이랬고, 2 차는 이랬고, 3 차는 이렇게 해서… (그렇게 하면) 괜찮을 것 같아요.

Interviewer: 음… 선생님 feedback 은 이제 나중에 주는 게 낫다고 생각하세요? 친구들 feedback 먼저 보고 그 다음에 선생님 feedback 이 뒤에 오는 게 낫다.

I2: 동시에.

I1: 동시에 오면은 전 하나밖에 안 봐요, 진짜. (그래서 선생님껀 나중에 봐야 좋아요.)

I2: 근데 같이 해야 이게 맞는지 아닌지 확인이 가요. 왜냐면 선생님은 5 점 주셨는데 어떤 분은 2 점 주고 그러면 되게 고민 돼요.

I3, I4 & I5: 어, 맞아.

I2: 만약에 2 점을 받았으면 '진짜 뭔가 잘 못 됐구나' 먼저 생각하고 고치곤 하는데…

I4: 고쳤는데, 고친거를 또, 또 '예전이

I1, I2, I3 I4 & I5: Yes.

Interviewer: Well, is there anything that you would like to add or modify?

I1: No. There's no alternative, isn't there?

Interviewer: Well… Like interviewees yesterday, you might want to develop your essay further. It's necessary to include more editing stages, for example….

I1, I2, I3 I4 & I5: (laugh)

I1: Let them do themselves. I'm not interested in further editing.

Interviewer: Although you've revised over and over, you have still something to edit…

I2: Did they talk about the way to grade it after the additional drafting?

Interviewer: Nothing like that. They said they wanted to get final reviews from their peers one more time before submission. Here's my finalized essay like this.

I4: But you give us feedback on the final draft anyway.

Interviewer: But it's only I that can see the finalised version. My essay has been improved this way, my friends. They said it'd be good to exchange comments on the finalised 3rd draft as well.

I1, I2, I3 I4 & I5: Ah…

I2: It really is.

Interviewer: Because we focused on different aspects of feedback between the 1st and the 2nd draft, they meant just the comprehensive review on the final draft before submission?

I4: By the way, we generally revised our structure in the 2nd draft and then we just corrected grammatical errors before submitting the final version. So with the last tab in the 2nd feedback stage, it'll be just fine to ask if the last version gets better than the 1st draft.

Interviewer: Uh-huh… You mean…

I4: I mean although we cannot give feedback on the final draft each other, the 2nd draft is definitely better than the 1st one. Of course, it still has minor errors…

Interviewer: So you mean scoring with a click of a mouse, assessing whether it's been better than the first one?

I4: Yes, if we can see a lot of improvement, then give 5 points. If not, zero point.

I1: By the way, I've submitted three times. At last, it might be good to see all of the three drafts in one page right before submission. Just like slides…. That can show us what has been changed at a look…

I2, I3 I4 & I5: Oh….

Interviewer: Oh….

I1: Frankly speaking, it's difficult for me to look up all the drafts of a topic. To see what has changed… I just felt that something in the essay was different? I could get better impression on it but actually it's difficult to figure out changes immediately… Well, the 1st draft was like this and the 2nd one was like that, and then the final one was completed this way… It'd be good (to present this way).

Interviewer: Uh… Do you think that teacher's feedback should be provided later? Once you read peers' feedback first, then you finally read teacher's feedback.

좋았습니다'라고 하면 또 다시 고치고 막…
I1: 취향이 맞냐에 따라 선택을…(웃음)
I2: 어느 정도 기준을 딱 정해주셔야 그…저기… 판단을 하고 고칠 수가 있는 것 같아요.
I4: 그, review 끼리 말이 틀린 것도 있어서…
I2, I3 & I5: 응. 맞어.
Interviewer: 음… 다른 건 없으세요? 땡? 뭐, 전반적인거 이야기해 주셔도 되고… 개선점이라던가 뭐 그런거…
I1: 다 한 것 같아요.

I2: (I want) At the same time….
I1: When I got reviews from peers and teacher at the same time, I only read teacher's, really. (That's why I prefer to read teacher's feedback later.)
I2: To check if this is right or not, we need all the feedback at the same time. This is because I was in trouble when one of my members gave me 2 points but my teacher gave me five points (at the same criteria).
I3, I4 & I5: Uh, that's right.
I2: If I get two points, I start thinking that something is really wrong and then try to revise errors…
I4: After I've already revised things that my reviewers pointed out, some said, "Previous one was better" and then I tried to make changes again….
I1: We often choose comments that we like…(laugh)
I2: You should set up a general standard first, well…so that we can make a judgement on what and how to correct.
I4: Well, accounts differed between reviewers…
I2, I3 & I5: Yeah, right.
Interviewer: Uh… Anything else? Is that all? Well, you can give me general comments…such as points of improvement and so on…
I1: I think we're done.