

A WIKI-BASED PROCESS WRITING APPROACH TO ACADEMIC WRITING IN AN
ODL INSTITUTION

by

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submitted in accordance with the requirements

for the degree of

MASTER OF ARTS

in the subject

TEACHING ENGLISH TO SPEAKERS OF OTHER LANGUAGES

at the

UNIVERSITY OF SOUTH AFRICA

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NOVEMBER 2020

ABSTRACT

Writing, an important academic skill for university students to acquire, becomes more important in a distance education institution where assessment is primarily on written work. Successful teaching and learning practices for Open Distance Learning (ODL) incorporate multiple forms of interaction when using technology within a constructivist approach.

The study seeks to understand students' perceptions of wikis within a process writing approach, and the suitability of Web 2.0 technology for tasks designed to teach academic writing. A participatory action research design was selected as it merges social action and research to solve educational problems while increasing human understanding of the phenomena.

The findings show that students may be open to using wikis within their actual learning environment. Of significance was the issue of the early integration and engagement of students into online learning communities. The challenges experienced in the study can be addressed adapting Chickering and Ehrmann's (1996) principles to frame the development of online learning.

Wikis, action research, constructivism, process writing, academic writing, ODL, perceived usefulness, perceived ease of use, online learning, integration, engagement, interaction

DECLARATION

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A wiki-based process writing approach to academic writing in an ODL institution

I declare that the above dissertation is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

I further declare that I submitted the dissertation to originality checking software and that it falls within the accepted requirements for originality.

I further declare that I have not previously submitted this work, or part of it, for examination at Unisa for another qualification or at any other higher education institution.



SIGNATURE: CT SEHLODIMELA

DATE: 02 NOVEMBER 2020

DEDICATION

To my father,

Masoka Ngoako Peter Sehlodimela

To my son,

Phoenix Tumanosi Culolethu Sehlodimela

Batho ba ka

ACKNOWLEDGEMENTS

This is a journey I could not have taken without the support of many. I would like to extend my sincere gratitude to the following whose input made the writing of this dissertation possible:

My supervisors, Prof Brenda Spencer and Dr Thuli Shandu-Phetla, your patience, support and unwavering belief in my abilities spurred me on when I faced challenges with the research and subsequently lost interest. Had it not been for the clear guidance, constructive feedback and the pep talks, I still would not have a dissertation.

My mother's constant enquiry into my progress is the light I needed to see this project to fruition. Kealeboga mama! I am because you are. For the strength and resilience to continue, I am grateful. To Lebogang Omphile-Lethabo, uncle to my Phoenix, thank you for stepping in and standing in the gap. We stand on the shoulders of giants.

My friends, Thandekile, Tshiamo, Reabetswe, and many others, you have supported me in ways I cannot recount. In you I see God's unfaltering love; thank you for walking this path with me.

"For the vision is yet for the appointed time; It hastens toward the goal and it will not fail. Though it tarries, wait for it; For it will certainly come, it will not delay." (Hab 2:3, KJV)

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CHAPTER 1: CONTEXT AND INTRODUCTION

1.1. INTRODUCTION

In the pedagogy of Open Distance Learning (ODL), more than one form of interaction is important for successful teaching and learning practices. In line with pedagogy for using technology for learning which advocates for a constructivist approach (Gilakjani, Leong & Ismail 2013; Anderson & Dron 2012; Krahenbuhl 2016; Mafenya 2016), the University of South Africa's (Unisa) ODL policy situates the student at the centre of the learning process. Daniel, West and Mackintosh (2007:77) state that successful distance learning institutions set up systems that integrate traditional approaches for interactive learning with social software. Many wikis (for instance, Blackboard and Wikispaces) have features that include discussion boards and chat, which provide a potentially effective opportunity to develop online teaching and learning initiatives while emphasising the social dimensions of learning. "Social interaction is formalised through various types of learning; that is to say collaborative and cooperative learning" (Tatkovic, Ruzic & Tatkovic 2006: np).

The ability to write academically is an essential skill for any student irrespective of their background. However, academic literacy standards in South Africa, and the world, are very low leaving students underprepared for the academic environment (Lillis & Scott 2007; Ivanic & Lea 2006; Lea 2004; Lea & Street 1998; Gambell 1991). Writing is an important academic skill for university students to acquire and it becomes more important in a distance education institution where student assessment is primarily on the students' written work. Also, writing is the "most difficult language ability to acquire" (Allen & Corder 1974: 177) since it is a complex task that requires extensive effort and practice for developing ideas and composing those ideas into a coherent and cohesive argument (Myles 2002).

Defined as a "process of thinking that uses written language" (Henning, Gravett & van Rensberg 2002: ix), academic writing ensures that students grapple with a text in a critical and meaningful manner. Additional language students find it difficult to completely understand what they have read and battle to express themselves academically even if they are able to communicate fairly fluently in the additional language (Wingate & Tribble 2011; Wingate 2012). Therefore, Wingate (2012:27)

argues that both native and non-native speakers of English should be taught academic writing since both are novices to academic writing.

Writing has been studied from two viewpoints: the product and the process with a range of viewpoints between these two ends of the continuum. A product approach to writing is fundamentally focused on the aim of the writing task – the final product. Studies that focus on the final product tend to be excessively concerned with formal accuracy (Spencer 2005) and view student errors as a result of negative transfer from the first language. The other viewpoint looks at the composition processes employed in writing. One means of evaluating the process approach is by means of think-aloud protocols (Van Weijen, Van den Bergh, Rijlaarsdam & Sanders 2008; Yangun 2009), and through a task-based approach. According to Nunan (2006:14), the guiding principles for task-based learning include:

- selecting content based on student needs
- using authentic texts for learning and ensuring that classroom learning mirrors the language used outside the classroom
- emphasising the need to communicate and interact in the target language
- focusing on language learning and the learning process, and
- enhancing the student's personal experiences as necessary for contributing to the learning.

Since no single approach is mutually exclusive, this study will, therefore, integrate the process writing and task-based approaches in developing students' academic writing at an ODL institution.

1.1.1. Context of the research problem

The Unisa ODL Policy (2008:1) defines distance education as a “set of methods or processes for teaching a diverse range of students located at different places and physically separated from the learning institution” while open distance learning (ODL) focuses on removing barriers to access learning, flexibility of learning provision to ensure student success¹ (Unisa ODL Policy 2008). As a mega distance education

¹ Unisa's definition of ODL is a combination of the characteristics of distance education (a method of education provision) and the approach of open learning into open distance learning.

institution and the largest distance education institution in Africa² (Pityana & Baijnath nd), the University of South Africa (Unisa) caters to students from diverse backgrounds and academic competence. One of the institution's policies is to "provide for the integration of information communication technologies (ICT) in learning programmes by making effective and innovative use of technology in developing its methods and improving its teaching methods" (Unisa Tuition Policy 2007).

Although Unisa has its own customised student portal, *myUnisa*, Kamanja (2007:729) has found that "no single ICT is suitable to address the various requirements of an ODL system and as many of them as possible should be used so that more access to learners can be achieved". Mikropoulos (citing Wong 1999) refers to a study that emphasised the interface between educational materials and technology to support interactive teaching and learning in distance education. These technological tools can be classified as either synchronous or asynchronous tools. The asynchronous tools proposed included email, email discussion tools and discussion bulletin boards. Much has changed since Wong's (1999) research in terms of what can be included as asynchronous technology with the advent of YouTube, blogs and wikis. Asynchronous technologies such as wikis can be used effectively to support teaching and learning (Unisa ODL Policy 2008).

Unisa uses a wide variety of assessment methods that not only follow appropriate pedagogy but are also suitable for the field of study. Written assignments constitute a significant part of assessment while studying at Unisa. With these assignments, students not only receive new knowledge in a subject but also learn a new language – an academic and subject-specific language. The difficulty is that students not only have to come to terms with academic language and writing but also must do so in an ODL context.

To this end, the Department of English Studies offers a module that aims to develop students' proficiency in English and to prepare them for university studies especially within the distance learning environment of Unisa. English Proficiency for University Studies (ENG 1511) aims "to develop learners' ability to read critically with

²The new University of South Africa (Unisa) was established in January 2004 following a re-alignment and restructuring between technikon and university programmes as outlined in the National Plan for Higher Education in 2000 and spearheaded by the South African Ministry of Education. Unisa emerged as a comprehensive mega university with a staff complement more than 5 000 and student enrollment exceeding 200 000.

comprehension and insight, improve their linguistic competence and develop their ability to write critically and logically” (ENG 1511 Tutorial Letter 101 2015:3-4). This is a semester module that runs over a period of 11 weeks. By the end of the module, students should have “gained proficiency in the English language... [and] be able to command proficiency in listening, reading, critical thinking and writing” (ENG 1511 Tutorial Letter 2015:3-4). Students were requested to purchase a journal at the beginning of the course wherein they complete selected activities in the module; they were encouraged to use writing as a learning tool in preparation for the two assignments required for formative assessment. By this time, students should have improved their competence in aspects of critical thinking, language structure and use, and reading strategies.

1.2. LITERATURE REVIEW

1.2.1. Process-driven task-based approach to writing

The behaviourist approach to language acquisition – and by extension writing – is that “behaviours are learned (become habitual) as a result of reinforcement” (Case & Bereiter 1984:141). This means that students are shown a desired, objective behaviour to which they are required to emulate over time through practice. Meanwhile, the prescriptive approach to writing relates commonly accepted patterns of writing in a specific genre such as academic writing and dictates a model for writing in that particular genre (Dudley-Evans 2002; Leki 1991). For instance, academic writing follows a pattern of having an introduction, a body that expounds the discussion and a conclusion to summarise key issues raised.

However, process writing reflects a pedagogical shift towards a post-modern interpretation of language (Silva & Leki 2004 in Stapleton & Radia 2010). The approach “offers an understanding of writing as a complex, recursive, creative, exploratory and generative process” (Silva & Leki 2004:6; Onozawa 2010:155) through a collaborative workshop environment. Instead of viewing writing as a “controlled composition” (Silva 1990 in Wong, Chen, Chai, Chin & Gao 2011:1209), this approach views writing as an ongoing, continuous process. As the language of learning and teaching in many multiracial schools in South Africa is English, many schools have taken to the communicative approach for language teaching. This language approach encourages students to use their second language (L2) in social

interactions as a communicative tool to express their experiences and ultimately learn to be competent and proficient in their second language. Where tasks are more cognitively demanding, students need to have a cognitive academic language proficiency (CALP) (Cummins 1999) to succeed in a formal academic environment. Students using the process approach to writing need competence in their additional language for them to successfully complete cognitively demanding writing tasks (Grabe 2003). A study by Wang and Wen (2002) looking at whether students use their L1 in the L2 composing process not only found that L2 writing is a “bilingual process” (Wang & Wen 2002:239), but also identified the writing process to have five different composing activities: task analysis, idea generating, idea organising, text generating and process controlling (Wang & Wen 2002:243).

Van Weijen et al. (2008) conducted a study to determine whether the text quality varies depending on the different composing activities when writing in a second language. They found that “a variation in process execution appears to be related to text quality” (Van Weijen et al. 2008:219). However, they proffer that the variation is due to the individual’s cognitive behaviour rather than the task. Storch (2005: 154) advocates for cognitive scaffolding in a collaborative process writing environment. One form of cognitive scaffolding entails that an able student is paired with a novice student and assists the novice beyond his/her level of understanding. Collaborative writing in an L2 environment not only makes students reflect on their grammar and vocabulary usage but also considers other facets such as content and structure (Storch 2005; Nunan 1991 in Onozawa 2010; Wong, Chen, Chai, Chin & Gao 2011).

Within this approach, the teacher plays the role of a facilitator enabling students to write naturally. Integrating a task-based strategy within the process approach creates a valuable learning opportunity as students become critically aware of the language they use in creating meaning while adding communicative value in terms of articulation and eloquence of thought and accuracy. According to Chimbganda (2001: 173), in order to “facilitate maximum engagement”, the task should have varying levels of difficulty ranging from descriptive tasks to abstract tasks requiring evaluation and opinion making. Meaningful writing activities can be set up using a task-based strategy and implemented in a process approach mechanism.

Researchers such as Atkinson (2003), Matsuda (2003), Stapleton and Radia (2010) have presented a post-process approach for second language writing that

incorporates technology as a means to teach writing and accentuates the social and interactive nature of writing where, in a distance institution, students have a tendency to feel alienated and isolated. It is within this context that, through this study, I am advocating for a post-process approach.

1.2.2. Using Web 2.0 technology as a teaching tool

Stapleton and Radia (2010) argue that in an era of word processors and new technologies, most common errors found in students' writing such as concord, subject-verb agreement, sentence structure and spelling errors have been reduced. The impact technology has made on the written product now leaves the teacher more time to focus on the student's argumentation skills in terms of content and structure, thereby rendering a product-based approach even more outdated.

Moreover, technology has evolved from a one-way form of communication to inclusive, interactive platforms. This one-way form of communication – also known as Web 1.0 – had limited user interaction permitting only “website owners (not users) to collaborate or manipulate the information or text displayed” (Handsfield, Dean & Cielocha 2009:40). Conversely, Web 2.0 technologies encompass websites based on a set of features that include user-generated content and have a strong social component to collaborate online (Cormode & Krishnamurthy 2008; Handsfield, Dean, Cielocha & 2009). This technology, commonly referred to as Web 2.0 or social technology, creates a sense of engagement and “collective authoring and participatory webbing” (Deters, Cuthrell & Stapleton 2010:123; Alexander 2006).

A wiki is an example of a Web 2.0 teaching tool. It is a “freely expandable collection of interlinked web pages, a hypertext system for storing and modifying information – a database, where each page is easily edited by any user with forms-capable Web browser client” (Leuf & Cunningham 2001:14 cited by Kuteeva 2011). Simply put, a wiki allows several people to create information on editable webpages that can be embedded with videos, links and other material. The edit function of a wiki page allows a user to modify the content by making changes to text, creating new pages and inserting hyperlinks and videos among other functions. Wiki page histories allow users to see the development of an entry over a period of time which, in the teaching environment, allows teachers and students to see the development of writing (cf Lundin 2008).

As an asynchronous computer-mediated communication tool, wikis decentralise learning that is focused on an individual student towards an interactive, collaborative, socially constructed learning environment. The use of wikis in online learning aptly lends itself to the constructivist approach to learning in a bid to incorporate the cognitive, social and text-based nature of writing. Constructivists believe that individuals learn best when they actively construct their own meaning of new material. This is achieved when individuals relate and use their prior knowledge, experiences or beliefs as a reference point when processing new information that is being presented to them.

Various published works (Mikropoulos nd; Naidoo 2010) on the pedagogy of ODL institutions and the use of technology follow a constructivist theoretical approach while emphasising a collaborative learning environment (Mikropoulos nd). Valasidou, Sidiropoulos and Bousiou-Makridou (2005:3) assert, “the constructivist learning is a process of sense making, assimilating and accommodating new information with existing knowledge structures so as to construct new meanings”.

Research on writing using Web 2.0 tools shows that students tend to pay attention to content instead of structure (Kessler 2009), while showing an improvement in writing proficiency and accuracy (Elola & Oskoz 2010) thus improving their use of Standard English (Kargozari & Ghaemi 2010). A wiki page can be used to create a virtual learning environment that enables cognitive scaffolding and collaboration; research shows that if it is well structured, it fosters critical thinking (Lee 2010:261), enables student autonomy (Kessler, Bikowski & Boggs 2012) and contributes to a higher quality of writing (Storch 2005).

Using wikis, Wong, Chen et al. (2011) developed a V.S.P.O.W. approach, which is a recursive writing process focusing on the vocabulary (V), sentence construction (S), paragraph writing (P), outlining their writing (O) and essay writing (W). This was used to address “fundamental linguistic and writing challenges” (Wong, Chen et al. 2011:1219) in L2 writing. A significant finding of the V.S.P.O.W. process is peer coaching within student groups. This supports the social constructivist argument for the human need for relatedness to create a sense of belonging (Wong, Chen et al. 2011). The success of this project is attributed to the wiki being used as a supportive tool for aspects of student writing such as vocabularies, sentence construction and paragraphing. Lee (2010) found that peer scaffolding plays a crucial role in developing

students' process writing. Nearly half of the students in Lee's (2010) study reported that the wiki enabled them to produce high-quality final products and that the text type affected the amount of writing produced. However, she (Lee 2010:271) also found that 40% of the students were uncomfortable correcting each other's work and that the instructors needed to not only guide students during this process but also offer hints and suggestion for the effective use of feedback.

Kuteeva (2011) integrated the task-based and process writing approaches in her study on wiki-based academic writing. She found that students learnt about the conventions of academic writing and collaborated effectively on the brainstorming, drafting and reviewing stages of process writing. This illustrated a focus on grammatical accuracy, and text cohesion and structural coherence. Similarly, Wheeler and Wheeler (2009) found that examined students also improved their skill and competence in academic writing through their formal interaction using the course wiki. However, some studies (Wheeler & Wheeler 2009; Lee 2010) show that students showed a reluctance and unwillingness to correct each other's text (Wheeler & Wheeler 2009) and were not confident in their own writing ability (Lee 2010). This contrasts with Kessler's (2009) finding that most students were comfortable correcting and critiquing each other.

Some benefits of using wikis, according to Bold (2006), include effortlessness when collaborating, user friendliness, and aiding students to learn how to improve their online interaction skills. Not only does Deter, Cuthrell and Stapleton (2010) corroborate Bold's (2006) findings, they also add that students' overall experience of wikis was positive, despite mixed feelings (Elgort, Smith & Toland 2008) towards wiki use and highlighted the role wikis can play as teaching tools. These are seminal works that lay the foundation for the beneficial use of wikis in teaching academic writing.

Furthermore, Eggleston (2010) states that wikis are an effective tool for realising Bloom's (1956) "higher order thinking activities", which are remembering, understanding, applying, analysing, evaluating and creating. Stayanachi (2017) asserts that the role of these cognitive skills is essential for academic success and must be embedded in content-based instruction that allows for greater depth of learning, especially in acquiring language skills.

The purpose of this study was to exploit the use of wikis for an effective open distance learning environment with specific goals and outcomes. Thus, the use of wikis in this

study fits within the concept of using tasks specific to academic writing while enabling a social, collaborative need that a process approach fosters.

A review of the literature shows that although wikis have been used in second language teaching and learning, there is insufficient data on how this approach has impacted students' academic writing in an open distance institution. Furthermore, wiki affordances include ease of collaboration and use which can improve interaction and achieve Bloom's higher order thinking capabilities necessary for success in a distance education. For the purposes of this study, the wiki tasks for ENG1511 were designed based on Kuteeva's (2011) findings that students' writing on the wiki focused primarily on structural coherence and grammatical accuracy as well as Kessler's (2009) finding that students focus on content and expression. While there were a number of aspects of the wiki that could be explored in the study, my focus was on the students' perception of wiki use in an ODL institution and to determine whether wikis are suitable for teaching a process approach to academic writing.

1.3. RESEARCH QUESTIONS

The aim of this study was to explore undergraduate students' experiences of using a wiki as a computer-mediated tool for facilitating process writing in an ODL context. The objectives of the study were to:

1. Ascertain student perceptions on the use of wikis when a process writing approach is used to teach academic writing
2. Determine the suitability of Web2.0 technology, especially the use of wikis, for tasks designed to teach academic writing.

The main research question that adequately addresses these objectives is: What are undergraduate students' experiences of using a wiki as a computer-mediated tool for facilitating process writing in an ODL context. The following sub-questions were asked in pursuit of this inquiry:

1. How do students perceive the use of wikis when a process writing approach is used?
2. What makes students find Web 2.0 technology, especially the use of wikis, suitable for tasks designed to teach academic writing?

1.3.1. Participants and materials

The requirements for participation were stringent. All participants had to have access to their own personal computers and to be competent users of word processors such as MSWord, including browsing the internet, using email and online chatting. The students were encouraged to view tutorial videos on YouTube to acquaint themselves with the use of wikis, specifically Wikispaces. In addition, the researcher provided guidelines to the students explaining how to contribute to the wiki.

The profile of the participants varied, but they all had one commonality: they were second language speakers of English with limited proficiency in the language and were, thus, registered for the module ENG1513³ to improve their language proficiency. Their background showed that they came mainly from the peri-urban townships surrounding Unisa and travelled daily to the Sunnyside campus to make use of the facilities (library, study centre and computer centre) despite Unisa being a distance education institution.

1.4. RESEARCH METHODOLOGY

1.4.1. Research design

According to Leedy and Ormrod (2005:85), “the research design provides the overall structure for the procedures that the researcher follows, the data the researcher collects and the data analyses the researcher conducts”. In planning for this study, the criteria of universality, replication, control and measurement were borne in mind by the researcher. In the planning and design of the study, the researcher had noted that within an ODL setting there are confounding variables such as external input that participants may be exposed to that may impact on the study. However, the focus of this study was not be on these variables.

As the study followed a qualitative approach, the research design selected was action research which is defined as “a form of participatory research that combines social action and research to resolve a specific problem facing a community and to increase human understanding of similar problems and their solutions” (Bless & Higson-Smith

³ Participation changed over the various iterations: the population sample was amended to include students registered for ENG1501, ENG1502 and ENG1511 but not for ENG1513. This is detailed in Chapter 3 of this dissertation.

2000:153). This means that action research is by its nature collaborative as it requires not only an understanding of the context and its solutions but also involves the community or participants in finding solutions to the problem within the research context (Nieuwenhuis 2007:74). According to Mackey and Gass (2005:172), one of the advantages of action research is that it can be used to compare and contrast the behaviour of a group within their context in order to shed light on the complexities of learning. Action research was most appropriate for this study as it provided a large quantity of description and detail that the researcher could draw on. However, a weakness of conducting action research is applying generalisations drawn from a small sample and applied to a larger population as this may cause unreliable and biased views (Mackey & Gass 2005:172). In order to mitigate the risks associated with action research, multiple sources of data collection were employed in this research. Action research also allows for iterations that can be used to verify and triangulate rich data.

1.4.2. Data collection

The study was applied to all students registered for ENG1511. A call for voluntary participation was made to all registered students via their *myUnisa* email; letters requesting participation were posted on the *myUnisa* platform. The students each received information about the study as well as a participant and informed consent letter to sign.

There are various types of methods and sources available to collecting data. These include, among others, participant observations, questionnaire, structured and unstructured interviews, documents and archival records (Mackey & Gass 2005:305). In order to answer the abovementioned research questions, the study followed a mixed-methods approach using qualitative data collection, with the wiki itself being the primary source of data together with the questionnaire and follow-up interviews. In addition, document analysis in the form of the WhatsApp group chats supplemented the data collection.

- Wiki text

Since the study was conducted on Wikispaces, the texts produced by the participants was collected from the Wikispaces site and scrutinized. A thorough analysis of the wiki and its history pages was conducted alongside cloze reading of the students'

WhatsApp group texts. The wiki pages were essential as students performed the tasks given and engaged with each other as they discussed and justified their revisions.

- Questionnaire

A questionnaire is an effective way of gathering information and gauging participants' perceptions. Also, it is one of the ways that can be used to collect qualitative and/or quantitative data. The questionnaire was sent out to all group participants via the wiki site. In collecting qualitative data and addressing one of the aforementioned research questions, on the students' perception of the use of wikis, this questionnaire will be used to describe the participants' opinions and experience. In order to elicit information from the students, an open-ended questionnaire will be administered.

The student responses to the questionnaire were compared to find similarities and difference in the answers. The data collected would provide further evidence to illustrate and support the findings based on the analysis of the students' texts and group chat comments.

- Interviews

Follow-up interviews were conducted to collect additional information about the students' opinions on the writing wiki. Since the sample size was small, all students were interviewed. The interviews served as a source of additional information and clarification. The interviews were recorded and transcribed.

- Document analysis: WhatsApp group chat

A WhatsApp group chat was created to augment the support needed by the students. The group chat texts were analysed to gain insight on the participants' engagement and interaction with each other and the researcher. This interaction and engagement was assessed to determine whether the students met the theoretical requirements of social constructivism.

1.4.3. Study population

Polit and Beck (2008:338) define the study population "as the aggregate of cases about which the researcher would like to generalize". In this study, the population evolved with each iteration. In the first iteration, the population was limited to students registered for ENG1513, but evolved in subsequent iterations to include students

registered for ENG1501, ENG1502 and ENG1511 but not for ENG1513. ENG1513 was discontinued at the start of the 2016 academic year.

1.4.4. Sampling

Polit and Beck (2008:339) define sampling as “the process of selecting a portion of the population to represent the entire population so that inferences about the population can be made”. It is worth noting that while the study was planned to use a large selection of participants through purposive sampling, the first iteration did not progress to the point where participants interacted with wiki. Therefore, convenience sampling was selected for subsequent iterations of the study. Convenience sampling was preferred because the researcher used her discretion in choosing readily available participants (Burns & Grove 2005:350). The sample size varied for each iteration: ten participants formed the sample size for iteration 2 and only four participants constituted the sample size for iteration 3.

1.5. SIGNIFICANCE OF THE STUDY

Even though the aim of this study was not to create generalisations, the study is relevant to ODL contexts similar to Unisa. It is anticipated that the outcome of the study will not only be beneficial to students but to teaching staff as designers of learning content and material. As technology use in higher education is gaining prevalence, the findings of the study will guide teaching staff on how to implement Web 2.0 effectively in order to create collaborative online learning environments.

The research study recommended the steps that should be taken to provide support to students facing challenges with academic writing within a distance learning institution. Recommendations were made based on the findings. Suggestions for further research were provided for those areas not covered by this research.

1.6. DELIMITATIONS OF THE STUDY

This study focused on first year students registered for an English course at an ODL institution (Unisa). As a result, English first language students were excluded from the study.

1.7. QUALITY AND RIGOUR

In order to ensure that the study achieved the goals it intended to address by seeking answers to students' perceptions of the use of wikis for a process writing approach and whether they find wikis suitable for teaching academic writing, the researcher had to make use of multiple data collection instruments as a means of collecting rich data for analysis. This process was aimed at establishing validity, which Lee (2012:151) describes as "a continuous process of accumulating evidence that suggests scores from a measurement procedure to reflect its intended construct".

In this study, rich data have been collected using multiple instruments: interviews, observations, questionnaires and document reviews. The accumulation of evidence by making use of multiple techniques and corroborating the findings with available literature ensured validity.

1.8. ETHICAL CONSIDERATIONS

In order to pursue this research study, my research proposal was accepted and I was granted ethical clearance by the Higher Degrees Committee of the Department of English Studies (see Appendix A). In addition to this, the Research Permission Sub-committee of SRIHDC granted me permission to conduct the study on human subjects to conduct wiki research, to distribute an online questionnaire and conduct interviews only with the students registered for the module ENG1513 in the second semester of 2015 (see Appendix B). Because of challenges faced in the first iteration, the ethics approval had to be amended to recruit students using a blended approach of both online students through *myUnisa* and face-to-face students during workshops (see Appendix C). The population sample was modified for the third iteration which meant that ethics approval had to be sought from the chairs of the departmental and college research ethics committees as well as the Research Permission Sub-committee of SRIHDC. Furthermore, the participants were given assurance that the information gathered during the study would be treated as confidential and used only for research purposes (see Appendix F). Therefore, the study adhered to the required ethical considerations of Unisa. The following principles of ethics were adhered to during the study: beneficence, respect for human dignity, and justice.

1.8.1. Principle of beneficence

Researchers are constrained by the principle of beneficence to ensure that participants are not only exposed to harm, but also derive the maximum benefit from partaking in a study. This is especially relevant in studies of human subjects. Every effort was made during the study to protect participants from discomfort and exploitation. The nature and purpose of the study was described and explained to the participants to allay their fears and anxiety. The participants were assured that their participation or any information they provide would not be used against them in any way (Polit & Beck 2008).

1.8.2. Principle of respect for human dignity

According to Polit and Beck (2008), the principle of respect for human dignity means allowing people to choose and make decisions for themselves. To obtain informed consent, the researcher described the nature of the study and explained to the participants that they could choose to partake in the study. The participants were given an option to refuse to give information.

1.8.3. Principle of justice

The principle of justice means that all participants are treated fairly and their privacy is respected. Polit and Beck (2008) emphasise that the participant should have access to the researcher should they want to clarify information. To ensure accessibility, the researcher was available at the selected region and via text on the WhatsApp group throughout the process of data collection. Participants' privacy was protected as they were fully informed about the nature and purpose of the study, and information gathered was not shared with others. To ensure anonymity and confidentiality, no names were used on the questionnaire and the students were informed that any identifying information would be redacted and used only for the purposes of the study (Polit & Beck 2008).

1.9. DEFINITION OF KEY TERMS

In the context of this research report, the following key terms are used based on the definitions provided:

- Active participation entails “engaging students in meaningful practices [...] and of involving them in actions, discussions, and reflections that make a difference

to the communities that they value” (Wenger 1998:10). For learning to take place, it should be interactive, which means that students interact not only with the learning material but with each other and social communities within the learning environment (Vygotsky 1978).

- Collaboration relates to individuals “who share mutual aspirations and a common conceptual framework” (Appley & Winder 1977:281) working together in a group to promote and improve learning. In the context of this study, collaboration means students working together to achieve an agreed upon learning goal.
- Constructivism is a learning theory that presupposes that students actively construct their own knowledge based on their experience. As such, students can “construct self-knowledge by actively participating in their own learning processes and sharing experience with their peers rather than passively receiving knowledge from a teacher” (Yusop & Abdul Basar 2017:350).
- Open distance learning is a type of learning where a student is not limited by time, geographical location or socioeconomic standards. In this setting, the student undertakes the task of learning on an individual basis while receiving student support from the learning institution. According to the Unisa ODL Policy (2008:1), distance education is defined as a “set of methods or processes for teaching a diverse range of students located at different places and physically separated from the learning institution”.
- Web 2.0 technology is the umbrella term for user-generated content is shared and further knowledge can be collaboratively created for the benefit of learning. Social networking sites such as Facebook, blogs, and wikis are examples of such technologies.
- Wikis, as defined by Leuf and Cunningham (2001:14), is a “freely expandable collection of interlinked web pages, a hypertext system for storing and modifying information – a database, where each page is easily edited by any user with a forms-capable Web browser client”. Simply put, this means that users can add, delete or revise content on wiki pages.

1.10. OUTLINE AND STRUCTURE OF THE RESEARCH REPORT

The dissertation will be structured in the following manner:

- Chapter 1 provides the overall context of the study by explaining the purpose of the study, problem statement, and significance of the study. The research questions, and the conceptual and theoretical frameworks that would assist in answering the research question are also covered in the first chapter.
- Chapter 2 provides a comprehensive review of the literature that addresses the research questions. It provides a background on the theoretical framework by looking into constructivism, technology and theories on web 2.0 adoption and user participation within the distance education landscape. A comprehensive review of studies addressing the process approach to writing is then provided. Furthermore, the chapter looks at technology as a teaching tool by focusing on wikis, writing and cognitive scaffolding and collaboration.
- Chapter 3 covers two substantive sections: the research design and methodology. The idea of action research is introduced followed by a comprehensive description of constructive action research as it pertains to this study. Secondly, details of the research methodology and the rationale for selecting the approach are also provided. This study adopted a qualitative research approach. The ethical considerations taken into account while conducting the study are also explored before the chapter is concluded.
- Chapter 4 presents the data collection methods used in the study. It details the design principles used for creating the wiki and the learning tasks and how the procedure was carried out over three iterations. The findings of the study are also presented in this chapter.
- Chapter 5 offers a discussion of the research findings.
- Chapter 6 concludes the research report by offering a summary and discussion of the research findings, implications for practice, and recommendations for future research.

1.11. CONCLUSION

This introductory chapter provided a context for the research problem that has prompted the need for the study. This chapter outlined the research study and detailed the goals and objectives for pursuing the research. It described the research methodology, significance of the study and delimitations, while also defining key terms and ethical considerations taken in pursuit of this study's goals.

CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

This chapter reviews literature on the use of wikis for teaching writing in open distance learning by first providing a theoretical framework on constructivism as a learning theory that views learning as an active process in the construction of knowledge. A brief discussion on constructivism and distance education ensues prior to delving into the process approach to writing by reflecting on the pedagogical shift from a behaviourist approach to a less prescriptive view of language learning. A further discussion on technology as a teaching tool, with a focus on wikis, collaboration and writing will follow. This chapter will also highlight the challenges to wiki adoption in higher education.

2.2. THEORETICAL FRAMEWORK: CONSTRUCTIVISM

Dewey (1966), Piaget (1973) and Vygotsky (1978) each proposed that students can use their prior knowledge gained from personal settings to fashion new knowledge. Students' prior knowledge is integral to the process of synthesising and analysing information while learning. It is from the prior knowledge that new ideas are internalised and constructed within an interactive learning environment (Fung 2011). Within this learning theory, learning is seen as an active process where knowledge is created and shaped by participants' context and frame of reference (Vygotsky 1978; Kaufman 2004; Lui & Matthews 2005; Fung 2011). Therefore, constructivism is a "theory about knowledge and learning" (Woo & Reeves 2007:18). Constructivists underscore problem solving and understanding by using relevant texts that are within the student's frame of reference and social milieu.

Constructivism is a diverse and dynamic theory (Bredo 2000) with varied strands such as cognitive and social, each attributed to its influencer such as Piaget (1973) and Vygotsky (1978) respectively. Piaget (1973) argues that learning is dependent on an individual's cognitive capabilities "through thoughtful engagement in assimilation and accommodation" (Woo & Reeves 2007:18). Shuell, a cognitive psychologist, stresses that learning is an "active, constructive and goal-oriented process dependent upon the mental activities of the learner" (Shuell 1986:415). Furthermore, Shuell (1986:415) and later Garrison (1993:201) reiterate the importance of cognitive tasks that lead to

behavioural change such as metacognitive or higher-level learning processes, the influence of prior knowledge, the student's ability to extract meaning and the cognitive processes involved in analysing learning tasks.

Conversely, Vygotsky (1978) views knowledge as created within a social setting where new ideas are co-created and assimilated during a social interaction within a specific cultural setting (Woo & Reeves 2007:18). Accordingly, knowledge is not a fixed entity but is constructed by individuals based on their own subjective experience. Hein (1991) avers, "there is no knowledge independent of the meaning attributed to experience (constructed) by the learner, or community of learners." Constructivists assert that learning is a "recursive, self-referential process in which students interact with the environment, select and transform information and construct their own knowledge" (Benckendorff 2009 citing Parker & Chao 2007; Reinhold 2006). Fundamentally, constructivism is a paradigm with Vygotsky's sociocultural theory as a related theoretical framework. This relates to the study in that students come to the study environment with their past experiences and cultural understanding which they leverage on through social negotiation and in framing new concepts, interpretations and knowledge.

Jonassen, Davidson, Collins, Campbell and Haag (1995:12) affirm "constructivist environments engage learners in knowledge construction through collaborative activities that embed learning in a meaningful context and through reflection on what has been learned through conversation with other learners". Summarily, the key guiding principles for constructivist pedagogy include using real-life examples that are influenced by the students' lived experiences in order to situate the learning experience by promoting critical thought and reasoning, and co-creating new knowledge. Furthermore, constructivist learning is achieved in an environment that fosters social interaction and active learning (Woo & Reeves 2007; Benckendorff 2009; Fung 2011).

2.2.1. Constructivism and Distance Education

Distance education has undergone five model permutations to what it is currently. The delivery technology for the first model, the correspondence model, was primarily focused on print while the teleconference model, which followed the first model, incorporated print, audio and video conferencing. The advent of information and

communication technologies brought with it the third generation of distance education: the telelearning model, which made use of telecommunication technology to provide synchronous communication. Similarly, the fourth model permutation – the flexible learning model – exploits these information and communications technologies to deliver online learning via the internet. This model relies on the internet and online delivery. The associated delivery technologies of this model include: interactive multimedia (IMM), internet-based access to internet resources, computer mediated communication, using automated response systems, and campus portal access to institutional processes and resources (Taylor 2001:3). The intelligent flexible learning model – the fifth permutation of distance education – leverages on asynchronous communications based on the interactive nature of the internet. Table 2.1 is a summary of the model permutations of distance education.

Table 2.1: The five generation of distance education

Generation	Model descriptor	Key technology
First	Correspondence	Print medium: written and printed texts using postal services for delivery of content in the forms of books, tutorial letters, newspapers, and manuals (Taylor 2001; Aoki 2011).
Second	Teleconference	Print, audio and video conferencing technology (Taylor 2001), radio and television broadcasting (Moore & Kearsley 2005)
Third	Telelearning	Multimedia/telecommunications media: computer-assisted learning, interaction with content (Taylor 2001; Heydenrych & Prinsloo 2010); multimedia CD-ROM (Aoki 2011); Correspondence-assisted broadcasting (Moore & Kearsley 2005)
Fourth	Flexible learning	internet and online delivery: Telelearning – interactive audio/video conferencing (Moore & Kearsley 2005)
Fifth	Intelligent flexible learning	Automated content and responses and campus portals (Heydenrych & Prinsloo 2010);

(Adapted from Taylor 2001; Moore & Kearsley 2005; Heydenrych & Prinsloo 2010; Aoki 2011)

It is worth noting that both Taylor (2001) and Moore and Kearsley (2005) propose distance education to encompass five model permutations. Furthermore, Taylor (2001:12) asserts that using the internet for educational purposes has the potential to offer students valuable education at the fraction of the cost of traditional teaching. For

the purpose of this study, the fourth and fifth generation of distance education are viewed as one since the fifth generation is closely similar to its predecessor as it leverages on “the features of the Internet and the Web” (Taylor 2001:2; Heydenrych & Prinsloo 2010). This study is grounded in the fifth generation of distance education. Wikis are a form of asynchronous communication that will be used as a vehicle to teach academic writing, while other Web 2.0 technologies such as social media will facilitate interaction with the students. Online learning on the uses of wikis will be aided by the use of YouTube as a form of content delivery through video blogging.

2.2.2. Technology use in distance education

Distance education is defined as “all arrangements for providing instruction through print or electronic communications media to persons engaged in planned learning in a place or time different from that of the instructor or instructors” (Moore 1990:xv, as cited in Jonassen, Davidson, Collins, Campbell & Haag 1995:13). In his view of distance education, Keegan (1995:7) asserts that teachers and students are separated by technology without the need to travel to “fixed place, at a fixed time, to meet a fixed person, in order to be trained”. As such, the effective delivery of distance education rests heavily on the technology being used (Woo & Reeves 2007; Usluel & Mazman 2009).

Since the beginning of distance education, the effective provision of education has rested on the interaction between students and teachers. According to Keegan (2006), technology in the form of distance learning systems becomes a conduit in maintaining the integrity of the education process in bridging the gap to interpersonal transaction absent from distance education. A study undertaken by Phipps (2015) to develop principles or benchmarks for quality distance education revealed timely student interaction and constructive feedback to student assignments and questions as essential for success.

Jonassen et al. (1995:7) and Tam (2000:11) assert that constructivist principles are essential for “learner-centred, collaborative environment that support reflective and experiential processes”. Other published works on the pedagogy of distance learning and the use of technology follow a constructivist theoretical approach while emphasising a collaborative learning environment (Garrison 1993; Naidoo 2010; Mikropoulos nd). Huang (2002:30, citing Jonassen 2000) states, “technologies are

cognitive tools [that] help learners to elaborate on what they are thinking and to engage in meaningful learning". It is through this technology that students can solve problems and construct their knowledge, and in order for instruction to be effective, they must be actively engaged to make use of this new information by assimilating it with their current frame of reference.

Distance education programmes should, according to Crawford (2009:7),

create stimulating environments that capture learners and enable them to formulate knowledge and derive meaning themselves...thus allowing for collaboration and encourage meaningful dialogues so that understanding can be individually constructed.

Fostering autonomy in learning is essential in a distance education setting as it empowers students to take ownership of the learning process. Cotterall and Cohen (2003:159) assert that students should assume a perspective where they take a stance and situate it within a context referred to as a rhetorical context.

Although autonomy and independent learning are necessary for distance education, the educator still has the responsibility to structure the learning task within a framework that students can make sense of the facts and ideas as well as account for deficiencies in the students' prior knowledge (Garrison 1993). In order to achieve independent learning, it is advisable to focus the learning process on the purpose of the task while also taking note of the problems encountered during the process and the possible strategies necessary for solving learning problems.

In distance education, all interaction is facilitated via a medium (Vrasidas 2000:340; Anderson & Dron 2011:86). Providing interaction among students, educators and technology is very important in a distance education setting (Usluel & Mazman 2009). Educators form the basis on which knowledge is constructed together with the student's prior knowledge. Technology, whether synchronous or asynchronous, becomes a conduit for sustained communication to enable students to "interpret, clarify and validate their understanding through sustained dialogue and negotiation" (Garrison 1993:202). However, Jonassen et al. (1995:7) caution "technology used in distance education should facilitate good learning experiences in an extended classroom model rather than broadcast teacher-centred lectures and demonstrations".

The student's technological skill and proficiency will directly impact how they progress in distance education (Vrasidas 2000:341). Notwithstanding the advanced features of technology for social and recreational purposes, they are not easily transferrable for academic use (Lai & Hong 2015). There is a need to provide support for those students who are unfamiliar with digital technology, especially in using these advanced features, to aid formal learning. This assertion is supported by a study conducted in Australia where Lai and Hong (2015) found that students use a limited range of digital tools (Google, Facebook, mobile phone, etc) and do not critically evaluate the content available on the internet. Lorenzo and Dziuban (2006) concluded in an earlier study that students do not have the skills to assess and evaluate information found on the internet; this implies that they are not as knowledgeable as expected.

Beldarrain (2006) urges that teaching models should integrate technology that may yield better student control in a bid to support knowledge construction. In addition, Beldarrain (2006: 144) insists that in proactively implementing technology, the following seven principles should be followed when addressing the needs of the students and learning programmes:

1. Encourage contact between students and faculty
2. Develop reciprocity and cooperation among students
3. Use active learning techniques
4. Give prompt feedback
5. Emphasise time on task
6. Communicate high expectations
7. Respect diverse talents and ways of learning

These principles, adapted from the work by Chickering and Gamson (1987; Chickering & Ehrmann 1996), should guide decisions on which technology tools are ideal to aid knowledge construction and the type of interaction required from the students. To this end, a thorough discussion and practical application of the principles in relation to the findings is presented in chapter 4 and chapter 5 of this dissertation.

When choosing which technology to use within a distance education setting, it is important to consider the accessibility and suitability of the tool for the desired instructional approach and outcome, its interactivity and user-friendliness, unit cost per student as well as organisation issues (Bates 1995). It is imperative to consider

access as some students may not have access to personal computers and/or internet broadband. In addition, Lai and Hong (2015:727) assert, “even in economically advanced countries, access to technology for young people is uneven” since not everyone is immersed and well-versed in the use of technology. Hand-in-hand with access is the issue of unit cost per student especially in South Africa, which has the highest data costs among Africa’s biggest economies (*BusinessTech* 2017). It is noteworthy that today’s emerging technologies were not “developed with educational issues at the heart of the design and development” (Jegede 2000:49). The choice of technology must be directly useful for teaching despite meeting the requirements of being online, being student-centred and offering collaboration. In terms of interactivity and user-friendliness, not all students entering distance education are digital natives having the requisite proficiency to operate a computer and navigate the internet. Lastly, organisational issues pertain to infrastructure and administrative controls available also impact the delivery of education through technology.

However, technology must not be seen as a panacea for addressing the challenges faced in distance education. The freedoms afforded by technology may be marred by infrastructure and administrative and legal controls. For instance, the integration of technology for countries that lack connectivity is problematic.

The importance of technology in distance education is emphasised because it provides for effective interaction, flexible participation and collaboration among teachers and students (Aoki 2012; Usluel & Mazman 2009). Scholars such as Beldarrain (2006) place emphasis on critical thinking, active and collaborative learning as critical in achieving quality teaching and learning within distance education.

The advantages of Web 2.0 technologies in distance education can only be fully realised by taking a holistic view of the various models (such as the Technology Acceptance Model I and II) and theories (such as Diffusion of Innovation Theory, Theories of Reasoned Action and Planned Behaviour, and the Unified Theory of Acceptance and Use of Technology) about adoption of Web 2.0 (Usluel & Mazman 2009). Each of these theories will be briefly outlined in the next section.

2.2.3. Theories on Web 2.0 adoption in distance education

As previously mentioned, the fourth and fifth generations of distance education leverage the use of the internet and the web in delivering quality teaching and learning.

Usluel and Mazman (2009: 820) argue that studies of Web 2.0 adoption in distance education should take into consideration “individual decision processes and features of innovation” in creating a comprehensive approach.

The advent of Web 2.0 technologies, the most notable of which include blogs, wikis, podcasts, and social networks, further exploit the flexible learning model by focusing on computer mediated communication (Aoki 2012: 1184-1185; Taylor 2001:2). A key feature of these technologies is users’ active participation in the content creation process (Usluel & Mazman 2009). Many distance education institutions such as Unisa are only just beginning to implement the flexible learning model by leveraging on the immeasurable opportunities presented by the internet through online learning. For instance, the Department of Mathematical Sciences in the College of Science, Engineering and Technology (CSET) at Unisa delivers the mathematics curriculum by using an internet-supported programme that combines various technology-enhanced media and digital student support (Huntley 2019).

In relation to constructivism as a theoretical framework, most technology-related studies use these theories as a theoretical framework for the technology. This section will provide a brief outline of the Theories of Reasoned Action and Planned Behaviour the Diffusion of Innovation Theory, Unified Theory of Acceptance and Use of Technology and the Technology Acceptance Model I and II.

2.2.3.1. Theories of Reasoned Action and Planned Behaviour

Finding its origins in social psychology, the theory of reasoned action (TRA) is used to explain human behaviour. According to Usluel and Mazman (2009:820), TRA proposes that the “behaviour of adopting an innovation is influenced directly by intention and intention is determined by attitude and subjective norms”. Essentially, TRA relates to an individual’s beliefs, motivations to comply (social norms) and intent which result in one’s attitudes toward a specific behaviour (Taherdoost 2018; Legris, Ingham & Collerette 2003). Within the theory on planned behaviour (TPB), an extension of TRA, perceived behavioural control is “determined by the availability of resources, opportunities and skills, as well as the perceived significance of those resources, opportunities and skills to achieve outcomes” (Taherdoost 2018:962; Usluel & Mazman 2009; Venkatesh, Morris, Davis, & Davis 2003). TPB suggests that because of factors outside of one’s control, the resultant behaviour may be different to the intended or planned behaviour.

2.2.3.2. Diffusion of Innovation Theory

As the name suggests, this theory looks at the spread of innovation within a system. In their review of acceptance models, Venkatesh, Morris, Davis, and Davis (2003:431) found the premise of this theory to be “relative advantage, ease of use, image, visibility, compatibility, results demonstrability and voluntariness of use”. Looking at the various components of innovation, Taherdoost (2018:964) surmises that “it has less power in explanatory and less practical for prediction of outcomes compared to other adoption models”.

2.2.3.3. Unified Theory of Acceptance and Use of Technology

Venkatesh, Morris, Davis and Davis (2003) undertook a longitudinal study to review eight user acceptance models with the view to formulate a model that integrates the core elements of the acceptance models. The resultant model, the Unified Theory of Acceptance and Use of Technology (UTAUT), is an amalgamation of the theory of reasoned action, the technology acceptance model, the motivational model, the theory of planned behaviour, a model combining the technology acceptance model and the theory of planned behaviour, the model of PC utilisation, the innovation diffusion theory, and the social cognitive theory.

The UTAUT model consists of four constructs with a direct determining factor of user acceptance and usage behaviour: performance expectancy, effort expectancy, social influence and facilitating conditions and four key moderators of key relationships: gender, age, experience and voluntariness of use (see Figure 2.1).

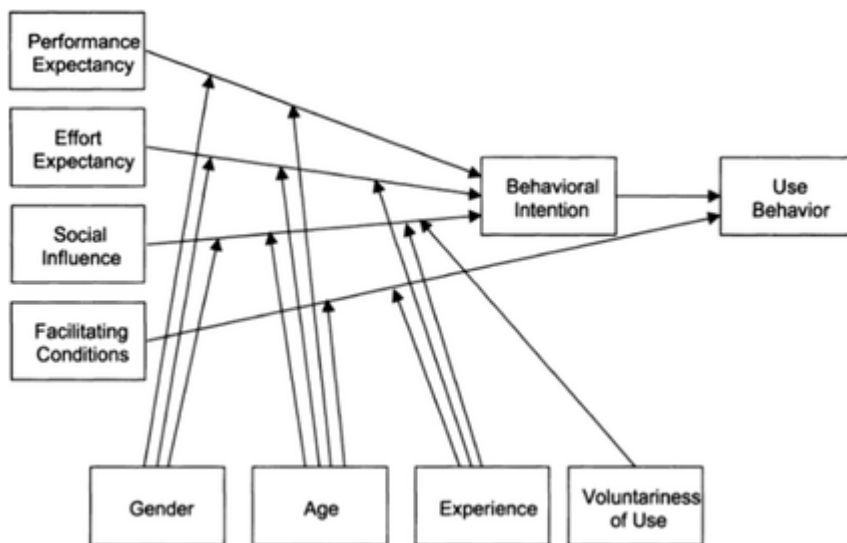


Figure 2.1: UTAUT model developed by Venkatesh, Morris, Davis, and Davis (2003:447)

2.2.3.4. Technology Acceptance Model I and II

Emanating from studies within Information Systems, Davis (1989) proposes that individuals are likely to accept an application or technology which they believe to be easier to use. The Technology Acceptance Model (TAM) is premised on perceived usefulness and perceived ease of use. Perceived usefulness is defined here as “the degree to which a person believes that using a particular system would enhance his or her job performance” (Davis 1989:320), while perceived ease of use “refers to degree to which a person believes that using a particular system would be free of effort” (Davis 1989:320). The TAM II (Venkatesh & Davis 2000) builds on the key constructs of perceived usefulness and perceived ease of use to explain external variables such as the impact of society and the intellectual processes that affect a user’s intentions and acceptance of technology (Legris, Ingham & Colletette 2003; Usluel & Mazman 2009; Benbasat & Barki 2007). The determined constructs within social influence are “subjective norm, voluntariness, and image” (Venkatesh & Davis 2000:187), whereas the constructs encompassing “cognitive instrumental processes are job relevance, output quality, result demonstrability and perceived ease of use” (Venkatesh & Davis 2000:190). Figure 2.2 is a simplified illustration of the Technology Acceptance Model.

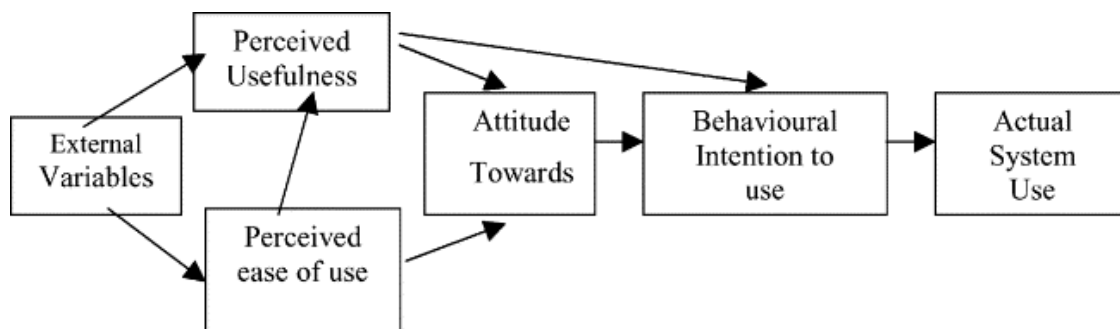


Figure 2.2: Technology acceptance model (Legris, Ingham & Colletette 2003:193)

Since it is outside the scope of this study to delve deep into the models and theory of adoption, it is necessary to highlight the importance of users’ active participation as critical in the creation of content, critical thinking and collaborative learning. According to Poole (2000:175), the flexibility of these tools can prolong the length of time students engage with the learning material and through reflection, inspire others to participate in the learning activity.

Based on the outline of the theories associated with technology-related study, TAM is closely interlinked to this study as the research questions tackle perceptions and use.

2.2.4. User participation in technology use for online learning

In terms of active user participation, Hew and Cheung (2008) examined the facilitation techniques used by student facilitators to draw the attention of their peers to participate in online discussions. The results of the study show the use of seven facilitation techniques (Hew & Cheung 2008:1117-1118):

1. Giving own opinions or experiences
2. Questioning and asking for other people's viewpoints i.e., seeking clarification on ideas
3. Showing appreciation i.e., acknowledging contributions made
4. Setting ground rules i.e., setting expectations or desired online behaviour
5. Suggesting new direction i.e., positing a new different perspective for consideration
6. Personally inviting people to contribute i.e., encouraging peers to participate engage in discussion
7. Summarising i.e., giving a brief synopsis on what has transpired

If student facilitators are engaged in expressing their own opinions or experiences, questioning and seeking other participants' viewpoints and suggesting a new direction, they are more likely to elicit discussions that yield critical and analytical thinking as well as to create new content as a result of the collaborative learning (Kerbs, Ludwig, & Muller 2010).

In a related manner, Poole (2000) examined how student participation evolved depending on tasks assigned. In general, the students "far exceeded expectations" in their dedication to learning by regularly accessing some of features of the wiki (Poole 2000:174); however, they did not make use of the chat feature available to them.

2.3. PROCESS APPROACH TO WRITING

Process writing reflects a pedagogical shift from the "behaviourist approach to a less prescriptivist, post-modern view of language" (Stapleton 2010 in Silva & Leki 2004). The approach "offers an understanding of writing as a complex, recursive, creative, exploratory and generative process" (Silva & Leki 2004:6; Onozawa 2010:155; Chao

& Lo 2011:395) through a collaborative workshop environment. Instead of writing being viewed as a “controlled composition” (Silva 1990 in Wong, Chen, Chai, Chin & Gao 2011:1209), with this approach writing is viewed as an ongoing, continuous process.

According to White and Arndt (1991:3) writing is similar to problem solving because it requires one to develop original ideas that will be expressed in a unique voice that elucidates the intention behind the written work. On the other hand, it involves “planning, goal-setting, monitoring and evaluating” (White & Arndt 1991:3). On the other hand, Zamel (1983:165) views writing as an endeavour to create meaning. It is, thus, a “non-linear, exploratory, and generative process whereby writers discover and reformulate their ideas as they attempt to approximate meaning” (Zamel 1983:165). Figure 1 below illustrates a model of the writing process according to White and Arndt (1991).



Figure 2.1: A model of writing as proposed by White and Arndt (1991)

Process writing focuses on “content, fluency, personal voice and revision” (Carolan & Kyppö 2015:15), which includes the stages of brainstorming, planning, drafting, revising and editing (Carolan & Kyppö 2015:15). Brainstorming relates to generating ideas or concepts related to the topic while also establishing students’ background knowledge in order to bridge knowledge gaps; it is beneficial for establishing a purposeful foundation. Planning entails evaluating the ideas and arranging them in terms of relevance to the topic. The drafting stage is where ideas are organised in a logical manner – this may entail grouping similar concepts together, making

connections and developing the point of departure for the writing task. At this stage, the structure of the argument is being formulated.

The teaching of process writing is important because “language competence is comprehensively fostered from different sides so as to develop both receptive and productive skills resulting in an overall improvement of students’ language competence” (Alves 2008:16). Furthermore, process writing harnesses the skill of revising and editing which are necessary for assessing logical structures and cohesion especially in academic writing (Alves 2008:16; Carolan & Kyppö 2015:15). As a result of the iterations of revising and editing, students are likely to build on their basic knowledge by expanding on their skill level through ‘learning by doing’ (Alves 2008:16) and by constructing new knowledge.

Within the process approach, the teacher plays the role of a facilitator enabling students to write naturally. The editing stage plays a pivotal role as it forces the student to pay attention to clarity and organisation of the argument, as well as to accuracy of expression. Integrating a task-based strategy within the process approach is beneficial to the learning environment as students become critically aware of the language, they use in creating meaning while adding communicative value in terms of fluency, complexity and accuracy. According to Chimbganda (2001:73), in order to “facilitate maximum engagement”, the task should have varying levels of difficulty ranging from static descriptive tasks to abstract tasks requiring evaluation and opinion giving. Meaningful writing activities can be set up using a task-based strategy and implemented in a process approach mechanism.

A study by Wang and Wen (2002) looking at whether students use their L1 in the L2 composing not only found that L2 writing is a “bilingual process” (Wang & Wen 2002:239), but also identified the writing process to have five different stages: analysing and assessing the task, generating ideas, gathering and organising ideas, developing new texts, and evaluating and controlling the process (Wang & Wen 2002:243). Text analysis entails examining the topic and remarking (brainstorming) on the topic; idea generating refers to planning the content and evaluating it; idea organising is planning and conceptualising the structure and organisation of the content; text generating refers to producing the main body of the text and process controlling relates to controlling the writing procedures.

In 2011, Graham and Sandmel conducted a meta-analysis of 29 experimental and quasi-experimental studies that examined whether students would be motivated to write and whether their writing would improve. They define the “measures of writing quality [to] take into account factors such as ideation, organization, vocabulary, sentence structure, and voice” (Graham & Sandmel 2011:401). The overall quality of writing produced by students in general education classes improved and “83% of the comparisons resulted in a positive effect for the process writing approach” (Graham & Sandmel 2011:403); however, the same cannot be said for writing instruction given to struggling or at-risk students’ overall writing quality. In relation to whether the process writing approach improves students’ motivation to write, Graham and Sandmel (2011:403) found this approach ineffective.

Although Graham and Sandmel (2011:405) present a tepid appreciation of the process writing approach, they emphasise that it is imperative that the success of its implementation rests on student autonomy and the use of real-life writing tasks within a learning environment conducive for effective learning. Hyland (2003:18) supports the view expounded by Graham and Sandmel that unless “explicit and systematic instruction” is provided, this writing approach does not yield significantly better writing in the L2 context. Hyland (2003) further argues that this approach represents “writing as a decontextualised skill” (2003:18) without the understanding that foregrounds the mechanisms of how language is patterned within a specific context (2003:19). Nonetheless, Bayat (2014:1138) found that the process writing approach “affected writing success in a positive and statistically significant way”.

Although their study was based on students in Grades 1-12, Graham and Sandmel (2011:403) note impressive improvements in the writing of average and struggling writers were obtained when the amount of explicit and systematic instruction provided in process writing classrooms was increased. Conversely, Li and Vandermensbrugge (2011) found that creating an ongoing writing group for students enrolled for higher degrees resulted in a generally positive experience for the students. The participants noted the following key successes from this ongoing process:

- An increased awareness of language use as a result of the close reading and attention given to written expression which was enhanced by the continuous feedback.

- Developing reader awareness which led to clarity of meaning and comprehension.
- The creation of a cooperative, collaborative peer learning environment.

Van Weijen et al. (2008) conducted a study to determine whether the text quality varies depending on the different composing activities when writing in a second language. They found that “a variation in process execution appears to be related to text quality” (Van Weijen et al. 2008:219). However, they do proffer that the variation is due to the individual’s cognitive behaviour rather than the task.

Issues on text quality rarely focus on the form of a text such as grammar, punctuation and spelling but more on the content of the text such as coherence in the logical flow between paragraphs and the expression of ideas (Vardi 2012; Lea & Street 1998). University writing aims to assess a student’s ability to conceptualise, synthesise and structure understanding in a manner that illustrates learning (Vardi 2012). To this effect, Vardi (2012) conducted a naturalistic study for a third-year comparative industrial relations study unit to analyse the form and content of student writing following a process writing approach. The aim was to determine how, through a process of writing and rewriting, student writing changed based on the feedback the students were given. This writing process underwent three iterations each assessing coherence, citation and referencing, academic expression and mechanics and adherence to additional task requirements. The overall findings indicate “that prescriptive text-specific feedback was effective in producing changes to student texts, particularly when students were given an opportunity to respond to the feedback” (Vardi 2012).

Researchers such as Atkinson (2003), Matsuda (2003), Stapleton and Radia (2010) have presented a post-process approach for second language writing that incorporates technology as a means to teach writing. The post-process approach accentuates the social and interactive nature of writing that, in a distance institution, students have a tendency to feel alienated and isolated. Hashemnezhad and Hashemnezhad (2012:724) state that the post-process approach is “focused primarily on writing as a cognitive or internal, multi-staged process, and in which by far the major dynamic of learning was through doing, with the teacher taking a background role”. This post-process approach not only focuses on the steps or stages of writing, but also

ensures that students are aware that writing happens within a specific social and political context.

2.4. TECHNOLOGY AS A TEACHING TOOL: THE CASE FOR WIKIS

Web 2.0 or social technology enables engagement, “collective authoring and participatory webbing” (Alexander 2006). Web 2.0 technologies are also referred to as social software (Anderson 2006) because they allow for social feedback within a group, conversational interaction through instant messaging or asynchronous collaborative spaces and support social networks via a digital platform (Benckendorff 2009). A wiki is a Web 2.0 technology that allows for mass collaboration “between geographically dispersed individuals” (Tapscott & Williams 2006 as cited by Benckendorff 2009:103).

A wiki is a “freely expandable collection of interlinked web pages, a hypertext system for storing and modifying information – a database, where each page is easily edited by any user with a forms-capable Web browser client” (Leuf & Cunningham 2001:14 cited by Kuteeva 2011). Simply put, a wiki provides an online space for collaborative work that allows various people to create and edit webpages, which can be ideal for improving teaching and learning within the education context. The edit function of a wiki page allows a user to modify the content by adding or deleting text, creating new pages, and inserting links amongst other functions. In a teaching environment, wiki page histories allow users (teachers and students) to see the development of writing over a period of time (cf Lundin 2008).

As an asynchronous computer-mediated communication tool, wikis decentralise learning focused on an individual student to an interactive, collaborative, socially constructed learning environment, which aids in implementing the constructivist perspective necessary in distance education (Valasidou, Sidiropoulos & Bousiou-Makridou nd). The use of wikis in online teaching and learning aptly lends itself to the constructivist approach to learning as means of integrating the cognitive, social and text-based nature of writing. According to Usluel and Mazman (2009:819) wikis are “effective tools for learning and teaching as they facilitate collaborative learning, provide collaborative writing, support project based learning, promote creativity, encourage critical searching, support inquiry based and social constructivist learning”. Theoretically, wikis are well supported by two primary learning tenets: collaborative

learning and social constructivist learning (Benckendorff 2009 citing Parker & Chao 2007).

The quality and efficacy of any communication depends on the efforts of the participants (Liu 2012). Hadjerrouit (2011:388) questions the “pedagogical usefulness” of true collaboration using wikis. Since collaboration promotes and improves learning, Elgort, Smith and Toland (2008:198) emphasise that the co-creation and sharing of knowledge are important outcomes for higher education learning. Yet, they found that a significant number of students preferred to complete the tasks on their own (Elgort et al. 2008). However, Choy and Ng (2007) suggest that unless a course requires students to work collaboratively, then the use of wikis will be problematic and challenging.

Schwartz, Clark, Cossarin, and Rudolph (2004) advise that before implementing educational wikis, institutions should take note of the cost and difficulty of using the wiki infrastructure, and the control mechanisms and technical support available to staff and students while also creating a shared understanding of its use and features among staff and students. Some benefits of wiki use are increased interaction and knowledge sharing among students (Boulos, Maramba & Wheeler 2006) and collaborative writing in group work (e.g. Trentin 2009).

2.4.1. Wikis and writing

Research shows that students tend to pay attention to the content instead of the structure of their writing (Kessler 2009), while showing a developing proficiency in their writing (Elola & Oskoz 2010) thus improving the use of Standard English (Kargozari & Ghaemi 2010). Research shows that if it is well structured, a wiki fosters critical thinking (Lee 2010:261), enables student autonomy (Kessler, Bikowski & Boggs 2012) and contributes to a higher quality of writing (Storch 2005). Lundin (2008:439) argues that collaborative writing on wikis is not time or space dependent which is beneficial for ODL institution such as Unisa.

Stapleton and Radia (2010) argue that in an era of word processors and new technologies, most common errors found in students' writing have been reduced. Earlier reports by Storch (2005) and Guth (2007) argue that the improved grammatical accuracy in student writing is due to the enhancement of the writing process afforded by collaborative writing on wikis. Recently, Ioannou, Brown, Artino (2015:40) found

“significantly more expansion, deletion, content editing, and formation and spelling actions in the wiki group-owned document”, which supports Trentin’s (2009) finding that wikis support co-writing. The impact technology has made on the written product now leaves the educator to focus on the student’s argumentation skills in terms of content and structure. The mode of communication and technology have changed from a point where time and space separated the sender and receiver to more inclusive, interactive platforms that allow for ease of use and user-generated content (Rollett, Lux, Strohmaier et al. 2007; Cheung & Vogel 2013; Arkorful & Abaidoo 2015).

The recursive nature of wikis enables students to “make new connections between concept and create knowledge rather than simply absorb information” (Benckendorff 2009:104). There are many benefits of using wikis; one such optimal instructional application of wikis is for students to practice writing. When used in writing instruction activities, Kuteeva (2001) found that students improved their audience awareness and paid attention to grammatical correctness and structural coherence. Miyazoe and Anderson (2010) revealed students’ positive perceptions of using wikis for online writing. In 2010, Lee found that students’ motivation can be increased with wikis because computers are seen to be fun and fashionable and are associated with games. These views were shared by Liu (2012) who states that “writing in wikis provides a sense of audience and motivates students to write well”. Therefore, wikis foster peer learning in a less stressful virtual setting.

Using wikis, Wong Chen et al. (2011:1219) developed a V.S.P.O.W. approach, which is an iterative writing process focusing on the vocabulary (V), sentence construction (S), paragraph writing (P), outlining their writing (O) and essay writing (W) to address “fundamental linguistic and writing challenges” in L2 writing. A noteworthy finding of this process is peer coaching within student groups, which supports the social constructivist argument for the human need for “relatedness” that fosters sense of belonging (Wong, Chen et al. 2011). The success of the V.S.P.O.W project is attributed to the wiki being used as a supportive tool for aspects of student writing such as vocabulary, sentence construction and paragraphing.

Lee (2010) while investigating the benefits of collaborative writing on a wiki found that scaffolding plays a crucial role in developing students’ process writing. Nearly half of the students in Lee’s (2010) study noted that the wiki enabled them to produce high-quality final products and that the text type affected the amount of writing produced.

However, Lee (2010:271) also found that 40% of the students were hesitant to comment and give feedback on their students' work and that the instructors need to not only guide students during this process but also offer hints and suggestion for the effective use of feedback.

Kuteeva (2011) used a combination of two main approaches, task-based and process, to teach academic writing using a wiki. By integrating both approaches, she found that students learnt about the main features of academic writing while at the same time collaborated effectively through the brainstorming, drafting and reviewing stages of process writing. The results of the study show that using a wiki for writing activities enabled students to pay attention to grammatical correctness, text organisation and structural coherence, which are considered key features in academic writing. Similarly, Wheeler and Wheeler (2009) also found that examined students also improved their writing skill and competence in academic writing through their formal interaction using the course wiki. However, some studies (Wheeler & Wheeler 2009; Lee 2010) show that students showed a reluctance and unwillingness to correct each other's text (Wheeler & Wheeler 2009) and were not confident in their own writing ability (Lee 2010). This is in contrast to Kessler's (2009) finding that the majority of students were comfortable correcting and critiquing each other.

The purpose of this study was to explore the use of wikis for an effective open distance learning environment with specific goals and learning outcomes. Therefore, the use of wikis in this study fits within the concept of using tasks specific to academic writing while meeting a social, collaborative need that a process approach fosters.

2.4.2. Wikis, cognitive scaffolding and collaboration

2.4.2.1. Cognitive scaffolding

As mentioned previously, wikis create learning environments that enable cognitive scaffolding and collaboration (Storch 2005). The concept of "cognitive scaffolding" was coined by Wood, Bruner and Ross (1976:90) to describe a "process that enables the child or novice to solve a problem, carry out a task, or achieve a goal which would be beyond his unassisted efforts." The concept of scaffolding has continued to gain prominence in studies on second language acquisition, especially the acquisition of writing skills (Hasan 2018; Li & Kim 2016; Storch 2011; Mackiewicz & Thompson 2014; Laru 2012; Flick 2000).

Since learning is an active process (Sheull 1986) and students actively participate in constructing their knowledge, cognitive scaffolding entails pairing a more able student with a novice student to “scaffold” elements of learning that the novice student cannot yet comprehend. In essence, the metaphor of the “scaffold” is used to support and leverage the novice student towards higher order thinking skills by embedding the learning situation in authentic tasks. As a result, the novice gains autonomy (Kessler, Bikowski & Boggs 2012), learns to self-correct, solve problems and complete learning tasks (Hasan 2018:39). Scaffolding can only be effective if the student is aware of his/her learning shortcomings and is willing to get involved and engaged by the more-able student (Flick 2000).

Building on the work by de la Colina and Mayo (2007), Dobao (2014) conducted a study using scaffolding techniques in pair work and small groups, focusing students’ attention to language and resolving language-related problems to facilitate learning. Dobao (2014) found that while the groups produced a considerable number of language errors, and resolved them, both the pairs and small groups focused on attention on form. In this instance, scaffolding allowed for second language learning.

In their study, Mackiewicz and Thompson (2014) analyse instruction, cognitive scaffolding and motivation scaffolding techniques used by experienced writing centre tutors. The findings indicate that “cognitive scaffolding probes students’ thinking and gets them to answer questions or perform tasks they cannot perform without scaffolding support” (Mackiewicz & Thompson 2014:67).

Exploring how students scaffold and support each other, Li and Kim (2016) examined the occurrences and non-occurrences of scaffolding using a writing wiki. Their exploration of scaffolding strategies revealed collective scaffolding and constructive interactions in task completion and text construction as illustrated in the participant’s balanced wiki involvement. Moreover, the findings illustrate the students used intersubjectivity to create a shared understanding and joint commitment to the writing task. Other scaffolding strategies used are affective involvement and contingent responsivity, direction maintenance, which relates to the group upholding and pursuing the project goal; instruction, which means guiding others in an authoritative tone; and recruiting interest of group members as it relates to the task.

A wiki page can be used to create a virtual learning environment that enables cognitive scaffolding and collaboration. Collaborative writing in an L2 environment not only makes students reflect on their grammar and vocabulary usage but also to consider other facets such as content and structure (Storch 2005; Nunan 1991 in Onozawa 2010; Wong, Chen, Chai, Chin & Gao 2011).

2.4.2.2. Collaboration

Essentially, wikis are online collaborative tools that allow multiple users to contribute and modify content. Wikis have gained prominence in teaching and learning as they enhance the process of learning by facilitating collaborative learning (Bold 2006) that can be used to engage students in learning from each other thereby improving their online interaction skills. Writing on a wiki also makes students aware that they are writing for an audience. Not only do Deter, Cuthrell and Stapleton (2010) corroborate Bold's (2006) findings, they also added that students overall experience of wikis was positive, despite mixed feelings (see also Elgort, Smith & Toland 2008) towards wiki use and its potential as a teaching tool.

Furthermore, Eggleston (2010) states that wikis are an effective vehicle for achieving Bloom's (1956) higher order thinking activities, which are remembering, understanding, applying, analysing, evaluating and creating. Stayanachi (2017) asserts that the role of these cognitive skills is essential for academic success and must be embedded in content-based instruction that allows for greater depth of learning, especially in acquiring language skills.

Wikis provide an environment for collaborative knowledge construction. According to Elgort, Smith and Toland (2008:189), "the functionality of a wiki can potentially improve knowledge sharing and collaborative knowledge construction within an academic environment". In a case study conducted by Raman, Ryan and Olfman (2005), it was found that wiki technology was most effective in managing and updating existing knowledge and was least effective in collaboratively creating new knowledge. However, Ducate, Anderson and Moreno (2011) refute the findings by Raman, Ryan and Olfman (2005) in that students have now become "information producers" as opposed to "information consumers".

The collaborative features embedded in wikis include: an editing function within a shared document where changes can be made; discussion pages with comment

features for group work where users may need to confer with each other and negotiate consensus before proceeding with modifications to shared documents, a tracking function that provides version control for any document modifications; and a notifications function that alerts other users to changes on a shared document.

Using wikis to investigate the effectiveness of student collaboration for online group projects, Kear, Donelan and Williams (2014) found that combined with a forum, wikis are a valuable tool for group projects to share resources. Also, the data revealed that the perceived usefulness and ease of use were important factors for the students' adoption of the wiki for their collaborative work (Lai & Ng 2011; Ioannou, Brown, Artino 2015). These findings corroborate Benckendorff's (2009:104) earlier assertion that "ease of use reduces the technical skill required to use wiki features allowing users to focus on the information and collaborative tasks". Earlier studies on the usefulness of wikis in facilitating collaborative include Richardson (2006) who concluded that wikis create opportunities for students to create knowledge and function in a world that values group work, and Cobb (2007) whose results indicate the practicality of wikis in collaborative problem solving in legal education.

A University of Delaware report (2008) on the value of wikis in higher education had found that the entire creative process can be observed on a wiki due to its openness of structure. Benckendorff (2009) stresses that this creative process, together with a developed, critical and reflective practice, is a necessary skill for students leaving university to have acquired (Ducate, Anderson & Moreno 2011). The non-linear format and virtual space created by wikis allows students to take control of the structure and content (Elgort et al. 2008).

Carroll, Diaz, Meiklejohn, Newcomb and Adkins (2013) undertook a wiki study involving 500 students where they integrated interactive, online social media into the assessment profile of an undergraduate cohort at the Queensland University of Technology to improve their academic writing and research skills. The individual contribution – both the product and the writing process – were developed and displayed on the wiki for review and critique by peers. Generally, their study yielded positive results in that the learning achieved was "socially, publically (sic), collaboratively and competitively, and via an iterative process wherein students observed and studied each other's work and then both imitated and innovated ways of conducting their own projects" (Carroll et al. 2013:523). From their collected data,

Carroll et al. organised the findings from their data into a praxis of social learning that produces high quality academic writing and research (see Figure 2.4 below).

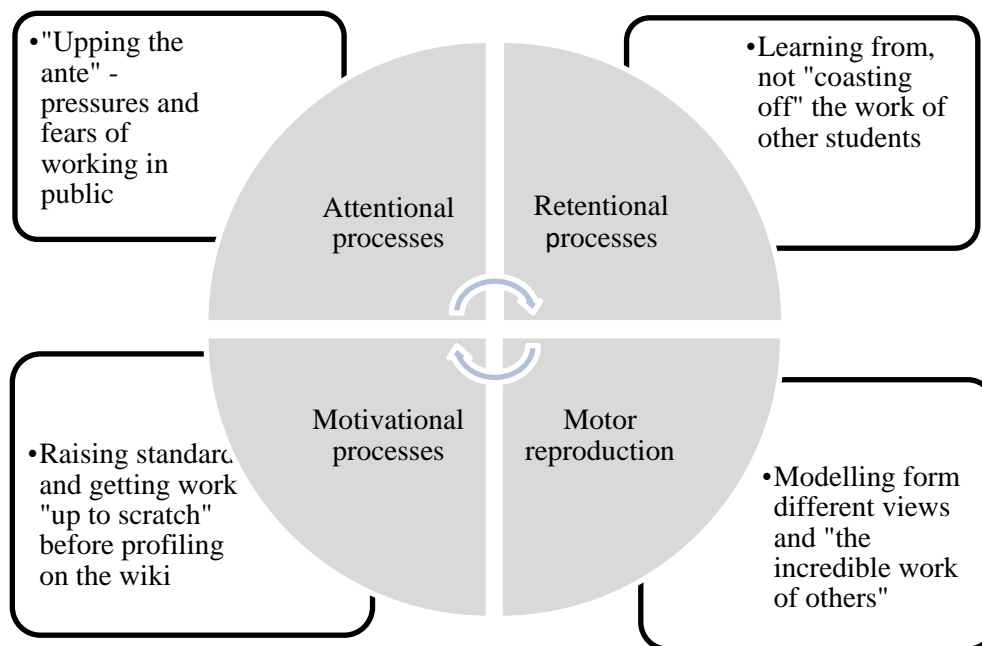


Figure 2.2: Collaboration and competition on a wiki: The praxis of social learning (Carroll et al. 2013:521)

Carroll et al.'s (2013:521-522) study shows that students do not readily engage in collaboration on a wikis unless through intentional attentional processes of goal setting and competition with each other which was "perceived as appealing or attractive" by the students; retentional processes where "cognitive processing around observing, asking, discussing and reflecting are highest"; motor reproduction, where students observe and model through self-reflection and self-regulation; and lastly, motivation. By directing students to exemplary writing, they are encouraged to continuously improve on their own work.

Zheng, Niiya and Warschauer (2015) conducted a design-based research study in a bid to create and improve strategies for designing wiki-supported collaborative learning projects. The study was designed using four iterations, which were revised to increase student participation, interaction and collaboration. From the initial iteration, the findings revealed that although "the use of wikis alone does not guarantee successful collaborative learning activities" (Zheng, Niiya & Warschauer 2015:371), "developing a learning community, supporting knowledge construction and enabling

cognitive apprenticeship” (Zheng, Niiya & Warschauer 2015:372), is critical to ensure the effective implementation of collaborative activities on wikis.

Using regulation activities, Cho and Lim (2017) engaged in a study that demonstrates ways to scaffold students to engage in collaborative writing on wikis. Regulation entails goal setting, monitoring and evaluation by both individuals and the group. Their findings indicate that although the regulation activities had a somewhat positive effect on collaboration, the “students actively participated in the writing process and showed high satisfaction with collaboration” (Cho & Lim 2017:60). The study also showed that student’s confidence in using writing strategies such as adding ideas, editing grammar, revising content, reviewing and editing format increased. Added to this, Ioannou, Brown and Artino (2015:41) established that feelings of frustration when using a wiki for collaboration were less prevalent in their study.

Ioannou, Brown and Artino (2015) conducted an experimental study to determine the level of collaboration in student discourse and actions when they used a wiki with a discussion thread and a forum with attachments. The findings indicate that a wiki is ideal for tasks that involve an analysis and evaluation of a problem in order to formulate and create new content. More so, the wiki enabled the students to delve expediently into composing the group essay, as the discussion page afforded the students to negotiate and evaluate the case problem. Their data also illustrates that wikis enhanced students’ critical thinking because “once the essay was started, complex statements directly evolved as part of the group essay, while other new ideas, elaborations, agreements, disagreement etc. continued to occur in the wiki discussion page” (Ioannou, Brown & Artino 2015:39). However, it is difficult to determine from the study how the critical thinking evolved over time.

Using wikis as an assessment tool may overcome challenges associated with traditional collaborative approaches. A significant advantage of using wikis is that individual student contributions can be tracked using the page history function, which becomes meaningful in managing and facilitating teamwork (Benckendorff 2009:104; Elgort, Smith & Toland 2008). The history page keeps a record of all contributions and edits made to the wiki as well as acting as a backup should work be erroneously deleted or lost (Ducate, Anderson & Moreno 2011:498). This feature becomes important in the assessment of student work as it enables one to track and evaluate the extent of individual student participation (Zheng, Niiya & Warschauer 2015; Kear,

Donelan & Williams 2014). Trentin (2009), and Warschauer and Grimes (2007) also used this feature in their studies to assess individual participation. Other studies such as Lai and Ng (2011) proposed a teacher rubric to assess the quality of student participation while De Wever, Van Keer, Schellens and Valcke (2011) made use of peer assessment for the evaluation of student participation and contribution.

2.4.2.3. Challenges of collaboration on wikis

The implementation and adoption wikis in higher education requires a paradigm and epistemological shift on the part of students and educators. Despite the affordances available for wiki collaboration, challenges on the adoption of wikis by students in higher education abound. Karasavvidis (2010:222) indicates that a number of studies grouped the main problems of adoption into two themes: student resistance and mode of work. This is primarily as a result of students being accustomed to traditional practises of teaching and learning, which is a behaviourist style of learning.

Findings relating to the theme of student resistance suggest students' fear of giving direct feedback, editing and openly critiquing the performance of others (Carroll et al. 2013; Karasavvidis 2010; Ioannou & Artino, 2009; Dalke, Cassidy, Grobstein, & Blank, 2007). Hadjerrouit (2012) and Karasavvidis (2010) found contributions to wikis superficial and lacking meaningful content and collaboration. While few students may contribute the most content on wikis, it is not always the case in instances of group work (Popescu 2014; Sampaio-Maia, Maia, Leitão, Amaral, & Vieira-Marques 2014).

With regard to mode of work, studies have shown that students are uncomfortable and hesitant to submit the first post by displaying uncertainty and nervousness in sharing their work on a publicly accessible platform (Chao & Lo 2011; Ertmer, Newby, Liu, Tomory et al. 2011; Zheng, Niiya & Warschauer 2015); negatively perceive the effectiveness of wikis indicating that its availability does not necessarily equate to collaboration (Cole 2008; Elgort, Smith & Toland 2008; Choy & Ng 2007; Ioannou & Artino 2008), and require assistance and support from their teachers (e.g., Foley & Chang 2008; Ioannou & Artino 2009). In addition, learning tasks must be designed for group interdependency and co-constructed knowledge and meaning (e.g., Bower, Woo, Roberts, & Watters 2006; Ioannou & Artino 2009).

In their studies, both Karasavvidis (2010:225) and Archambault, Beaupré, Bégin, Dupuis, Côté, and Légaré (2016:e18) found a distinct set of issues hindering wiki use

among their participants. According to Karasavvidis (2010:225), the problems students experienced with the wiki task relate to:

- Time and effort investment: tasks taking up too much time and energy
- Task requirements: creating pages and contributing to others' work becomes overwhelming
- Plagiarism: copy and paste strategies emerged
- Lack of communication: opportunities for communication were not utilised
- Lack of collaboration: competition among students undermined collaboration
- Validity of interpretations: concerns about the subjectivity of meaning making
- Reluctance to edit text:

The barriers to using wikis, as per the study concluded by Archambault, Beaupré, Bégin et al. (2016:e18), relate to:

- Organisation of information (e.g., "layout and visual presentation")
- Material resources - Slow speed of computers and access to wiki
- Open access wiki (e.g., "possibility that anyone can modify content")
- Lack of webmetric tool to present recent changes
- Time constraints to edit
- Lack of familiarity with the wiki (that is need to learn how to use the platform)

Wikis should not be seen as a panacea for the challenges faced by distance education institutions in ensuring equitable delivery of online learning. According to Abdekhodae, Chase and Ross (2017:28),

the wiki in itself did not facilitate student collaboration. Instead the wiki was used to allow students to cooperate and delegate tasks which they then worked on in relative isolation. Although collaboration was not an intended goal of the wiki assessment, we conclude that in order to encourage collaboration using a wiki, solid learning design is needed to scaffold and guide students to work constructively and efficiently together in a wiki group task.

Therefore, the successful implementation of wikis within a learning environment rests on the efforts of the instructors and the students who are enabled to use the technology.

2.5. CONCLUSION

This chapter provided a detailed account of the literature on using wikis for teaching writing in an open distance learning setting. Before delving into previous studies on technology as a teaching tool, with a focus on using wikis for teaching writing, the review of the literature was contextualised within a constructivist theoretical framework that explored technology use in distance education, theories on Web 2.0 adoption in distance education, and user participation in technology use for online learning. As such, the theoretical framework grounding the study is constructivism, with Vygotsky's sociocultural theory framing language learning, and the technology acceptance model for understanding users' perceptions and intentions for use and adoption.

Since the study investigates writing in distance education, a discussion on the process approach to writing reflected on the pedagogical shift from a behaviourist approach to a less prescriptive view of language learning. Linked to the sociocultural theory is collaboration and user interaction, which provides the linkage in the use of technology in distance education.

The literature review presented a balanced review of the important aspects of this study: teaching academic writing and technology. The section on technology as a teaching tool, with a focus on wikis, cognitive scaffolding and collaboration was used to merge these two components while the sections on distance education contextualised the study. The challenges associated with wiki adoption in higher education were also highlighted from previous studies.

CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

3.1. INTRODUCTION

The previous chapter presented a review of the scholarly insights and views relating to the use of wikis, highlighted developments in using the process approach to teaching academic writing and presented the affordances of wikis for teaching writing. The chapter also touched on literature relating to the constructivist approach for open distance learning (ODL) as it relates to the use of wikis as a teaching tool for academic writing.

As noted in the first chapter, the aim of this study is to explore undergraduate students' experiences of using a wiki as a computer-mediated tool for facilitating process writing in an ODL context. The study sought to address the following questions:

1. How do students perceive the use of wikis when a process writing approach is used?
2. What makes students find Web 2.0 technology, especially the use of wikis, suitable for tasks designed to teach academic writing?

This chapter will focus on the approach and methods that were used to respond to the research questions. The chapter further discusses issues relating to population, sampling, data quality, ethical considerations and data analysis. The chapter concludes by drawing a summary of the process followed in collecting data before introducing data collection and findings that will be discussed in Chapter 4.

3.2. RESEARCH DESIGN

Burns and Grove (2003:195) view research design as a road map to conducting research while taking cognisance of the factors that may hinder the validity of the findings. It is a high-level outline that allows for clear guidelines for collecting, analysing and synthesising data (Kothari 2004:31). Moreover, Leedy and Ormrod (2013:94) emphasise that the "methodology to be used for a particular research problem must always take into account the nature of the data that will be collected in the resolution of the problem".

In this vein, this study followed a qualitative research approach. The term qualitative research method refers to "a systematic interactive, subjective approach used to

describe life experiences and give them meaning” (Burns & Grove 2003:26). Qualitative research rests on the subjective, holistic, and linguistic nature of epistemological philosophy (Patton 2003; Dikilitas & Griffiths 2017). Both the research questions in this study are subjective and seek to understand the participants’ perceptions of the use of wikis for teaching academic writing. The qualitative approach is suitable for the study because only the participants can adequately describe their lived experiences as they inform their opinions and judgement of a learning situation. According to Dikilitas and Griffiths (2017:48) as well as Leedy and Ormrod (2013:96), the key characteristics of qualitative studies include:

- A wide range of data collection techniques, such as observations, interviews, case studies, narratives or an examination of document
- A search for themes and categories by looking at recurring themes in data sets
- Acknowledgement that analysis is subjective and potentially biased
- Context-bound with flexible guidelines
- An informative yet small sample

In this study, therefore, various techniques were used to collect data from an informative and small sample made of students who were not only registered for ENG 1513 but also made use of the reading and writing workshops⁴. Qualitative research is intended to capture in detail human behaviour; it describes and takes note of events as they unfold (Stangor 2011:15). The focus of such research is using verbal expressions to convey “feelings, values and attitudes” (Babbie 2010:35). The findings from qualitative research are communicated using narratives and individual quotes in a personal voice (Leedy & Ormrod 2013:96).

This approach was chosen because it enables the researcher to gain new insight on the use of wikis as a teaching tool in an ODL setting; to explore and discover the truth about the students’ perceptions regarding the use of wikis for a process writing approach in an ODL setting; and/or to discover any problems or shortcomings with the

⁴ The research project was originally conceived as a case study; the research material was sent to all students registered for ENG 1513, which is an online module. However, after two weeks of distributing the request for participation on the students’ online learning management system, only one response was received. Another request was distributed, but it also yielded one response. As such, the entire project was reconceptualised as an action research project with this sample – students registered for this course but who also used the reading and writing workshops.

use of wikis as a teaching tool for academic writing in an ODL context. In this study, particularly, the qualitative paradigm allowed the researcher to engage closely with the participants.

Although this study is situated within a distance education environment, the guidelines for implementing the wiki parameters are flexible enough to be adjusted to meet the needs of the participants. However, it is worth acknowledging that the analysis is subjective and potentially biased because the type of data required for an exploration of the topic (the use of wikis for teaching academic writing) and gaining an understanding of the meaning the participants ascribe to the topic (the students' perception) is dependent on personal interpretation.

This study is qualitative and explorative: it endeavours to offer a new and rich insight into an emerging and multifaceted phenomenon. A critique of this study could be its use of two research designs.⁵ Notwithstanding, it is purposed to provide a detailed description of the use of wikis in the teaching of academic writing through a task-based process approach; it is by no means an attempt to present generalisations. This detailed account is illustrated by means of a case study which later developed into action research. The challenges experienced in the first attempt at data collection necessitated an exploration of the reasons “why” and “how” (Yin 2004) the initial design failed and to provide a justification for the feasibility of using a wiki for teaching academic writing at a distance institution.

3.2.1. Action Research

The research methodology, determined by the purpose of the study, stems from the type of problem the study seeks to address (Yin 2003; Leedy & Ormrod 2013; Cresswell 2014). Also, the researcher's theoretical framework and research questions have a direct influence on the methodology selected.

This study was designed to examine the affordances of using wikis in teaching academic writing at a distance education institution. As such, an action research

⁵ Initially the study was designed for an online module and it was meant to be conducted by distributing an online questionnaire to students registered for the module ENG1513 in the second semester of 2015. However, responses were received from only 2 participants; subsequent attempts to get more participants failed. My supervisors then advised that I change the methodology, research design and population sample to include a larger pool of participants. Subsequent to an extension of the ethics approval period, the population sample was amended to include students registered for ENG 1501, ENG 1502 and ENG 1511 but not for ENG 1513. Recruitment used a blended approach of both online and face-to-face.

approach was selected as it is an integral part of evaluating research to document and analyse an implementation process (Yin 2003:xi). Sagor (2000; 2005) views action research as a “disciplined process of inquiry” undertaken by those – and for those – who are party to the action in order to improve or refine the action. McNiff and Whitehead (2006:13) advise researchers to use action research in determining the influence their actions have on their own practice or other people’s learning, or in determining corrective measures to ensure their actions are influential. In this context, lessons from the study are intended to advance knowledge and understanding of the given topic. With this in mind, the wiki as well as the criteria for selecting and screening participants became relevant variables of interest for the study.

This systematic process of action research includes collecting data, organising the data into meaningful clusters, making observations and analysing data to inform practice, interpreting the data, taking action and reflecting on the actions (Vaughn 2015; McNiff & Whitehead 2006). The cyclical, recursive and personal nature of action research allows the researcher to gain insights into his/her own practice in its natural setting. The research questions are specific to the teaching and learning context in order to improve writing instruction and students writing. The action research design becomes ideal when the phenomenon under study cannot be easily detached from its setting. The richness of the distance education context within which this study was performed presented unique technical challenges that will be discussed in chapter 4 of this dissertation.

With an emerging phenomenon, action research allows one to unveil idiosyncratic insight within its specific context. Furthermore, the “in-depth nature and emphasis on situationally embedded processes justify some level of causal inference” (Lee 2012: 504), which can be gleaned from unfamiliar environments (Leedy & Ormrod 2013:143). In this instance, there is a paucity of research in the area of using wikis for the teaching of academic writing within a distance education setting. Additionally, action research is relevant in seeking answers to the “why” and “how” type of research questions (Yin 2004). This is significant in developing critical thinking since action research studies tend to be selective and focused on fundamental issues in understanding the examined phenomenon. Lessons learnt from such studies advance knowledge and understanding of the phenomenon.

There are various types of methods and sources available for collecting data and evidentiary support. These include, among others, participant observations, open-ended questionnaires, structured and unstructured interviews, documents and archival records (Mackey & Gass 2005:305; Yin 2014; Stake 1995). Multiple data sources provide a well-rounded, inclusive understanding of the issue being examined (Baster & Jack 2008). This “holistic understanding” (Baster & Jack 2008:554) is created by the convergence of multiple sources in the analysis process. Yin (2014) refers to this strategy as the “converging lines of inquiry”, while Baxter and Jack (2008:554) add that “this convergence strengthens the findings as the various strands of data are braided together to promote a greater understanding”. As mentioned, in order to achieve this convergence, multiple methods namely participant observations, questionnaires and interviews as well as an analysis of the wiki and WhatsApp group chats were used in this study.

One weakness of conducting action research is applying generalisations drawn from a small sample to a larger population as this may cause unreliable and biased views (Baster & Jack 2008; Mackey & Gass 2005:305; Stake 1995). Latest developments in qualitative research suggest that qualitative research steers away from generalisability as a measure of quality and rigour towards transferability. A comparison of generalisability and transferability indicates that they are not mutually exclusive; however, a generalisable study can also be transferable (<https://writing.colostate.edu/guides/page.cfm?pageid=1376&guideid=65>). This means that although the results of a study may be applicable in a different setting – that is, transferable – it does not necessarily mean that the sample used is representative of the whole population under study. Generalisability, validity and reliability are used in quantitative approaches, while transferability (instead of generalisability), credibility, dependability, confirmability and transparency are used for research rigour (trustworthiness) in qualitative research. Bryman (2012:390) states that credibility, akin to internal validity, ensures that the researcher conducts his/her research correctly. This is achieved when the population confirms results of the study thus indicating that the researcher gained an understanding of the social world. Dependability relates to the researcher’s ability to maintain accurate records of the study as a means to illustrate proper procedures being followed. Dependability was satisfied by making explanations of the process of research clear, including the

methods of data collection, analysis and interpretation. A factor that relates to objectivity is confirmability as it ensures the researcher's objectivity in not allowing personal biases, values and perceptions to impact the conduct of the study and the findings. Transparency is determined by the soundness of the methodology used. At its core, it indicates how clearly the research process is communicated as well as sound and explicit argumentation that will ultimately determine the value of the findings. These criteria were first introduced by Lincoln and Guba (1985) who presented them as determinants of trustworthiness (rigour) in qualitative research.

Based on the above, the small number of participants does not affect transferability, which is "the degree to which the findings could be transferred to similar contexts" (<https://writing.colostate.edu/guides/page.cfm?pageid=1376&guideid=65>). It is achieved through thick descriptions of methodology because transferability has more to do with readers of the research who might want to transfer the knowledge to their contexts. To address this weakness, the strategy of using converging lines of inquiry was employed. This convergence is beneficial in the triangulation of data as well as strengthening the construct validity of the study. Therefore, readers are given as much detail as possible about a research situation in order to accurately transfer the results to their own setting.

Triangulation addresses the concern that action research as a research method is less desirable since it lacks rigour and generalisability. As a means to mitigate the risks associated with this method, multiple sources of data collection were employed in this research. In order to answer the abovementioned research questions, the unit of analysis for this study is the wiki itself as the primary source of data together with questionnaires, interviews and research observations. The literature review served as the secondary source of data upon which the themes and categories revealed in the review were used to analyse the data collected from the interviews, observations, questionnaires. As the study sought to understand the participants' perceptions about wiki use in academic writing within an open distance institution, it was necessary to have multiple sources of data to triangulate the findings in order to increase rigour and to ensure the findings are generalizable in different contexts. How these types of sources were used in the study will be detailed in section 3.3 of this chapter.

In addition, the researcher maintains that empathy and subjectivity assist in gaining a thorough understanding of human experience. Furthermore, this empathy and

subjectivity involves an interface with those being studied while communicating in both mother tongue code and English set against personal backgrounds and environments. It involves the analyses of narrative data in an organised but intuitive manner incorporating inductive and dialectic reasoning, and results in the development of a new theory (Burns & Grove 2003:27). Leedy and Ormrod (2013:141) indicate that sufficient detail surrounding the context of the study should be recorded; this may include the socio-economic factors that may affect the study outcomes.

In the planning and design of this study, the researcher acknowledged that within an ODL setting, there are confounding variables such as additional teaching and learning resources, time management, work-life balance, and other constraints that participants may experience that may cause a spurious correlation and impact on the study. However, the focus of this study will not be on these variables because it becomes difficult to isolate and attribute the effects to a specific individual variable thus complicating the data.

The richness of the context presented a unique challenge that required a refinement of the approach. The study participants had unique insights whose neglect would have left the study wanting. As such, an action research methodology, enlisting the collaborative help of the participants, was selected to achieve the learning objective. The participants thus became co-researchers in the planning, implementation and learning, and evaluation of the learning process (McNiff & Whitehead 2006; Vaughn 2015; Sagor & Williams 2017).

3.2.2. Constructive Action Research

This study followed an action research methodology through a constructivist theoretical lens. The constructivist view of learning places emphasis on the student as an active agent – practicing autonomy – in constructing his/her own knowledge and understanding, while action research is used to systematically address a question through planning, acting, observing and reflecting. In describing “constructive action research”, Ritchie (1995:319) states:

[...] approach can be seen as ‘constructive’ in other ways which parallel the ‘constructive’ dimension [...] As teachers support learners in actively constructing an understanding of the world around them, they themselves are actively constructing an understanding of the learner’s cognitive structures, and

current skills and attitudes. Their reconstructed understanding of the individual child's learning needs leads to decisions about appropriate interventions. These decisions are therefore 'constructive'.

Ritchie (1995:320) concludes that a constructivist epistemology enables one to "understand the nature of [one's] own professional knowledge and action research provided the tool to develop changes to [one's] practice.

Therefore, action research provides a true understanding of the researcher's practice. I began the study with preconceived ideas on the outcome of the intervention, but my enquiry was situational and required that I engage with the participants in a more collaborative, constructivist manner than I had anticipated. Constructive action research permitted me to re-construct the methodology as well as my knowledge and understanding of the phenomenon under study in order to generate new knowledge with the aim of removing the distance from distance education.

Described as a "process in which participants examine their own educational practice systematically and carefully, using the techniques of research" (Ferrance 2000:1), action research is commonly used in the education sector and social sciences as it promotes the active participation of people who are affected by the research (Bless & Higson-Smith 2000:56). In this setting, the researcher and the participants are seen as equal partners in the process of understanding the effect of an educational intervention by evaluating and assessing their practice to effect positive change within a specific environment. Action research is often pursued to add practical value, improve institutions, develop professions, and contribute to theory (Schuiling & Vermaak 2017). Moreover, the components of action research, as assigned by Borgia and Schuler (1996:264 cited by Western Oregon University), are commitment to understanding that action research takes time to observe practice; collaboration, consideration and concern between the researcher and participants as this type of research is reflective, critical and focused on behaviour; and requiring change as part of the development cycle.

Holwell (2004:354-355) proposes a cycle of action research (see Figure 3.1) that begins with the researcher, with specific research themes, stating his/her theoretical framework (F) and a way of applying methodology (M) within a specific situation/ area (A), which is the area of interest for the study. While systematically addressing

questions emanating from A, the researcher is drawn into the study context as a participant and through continuous reflection embedded in the acknowledged F and M, endeavours to effect change and improvement that will ultimately yield desired results. This cycle of action research is therefore iterative.

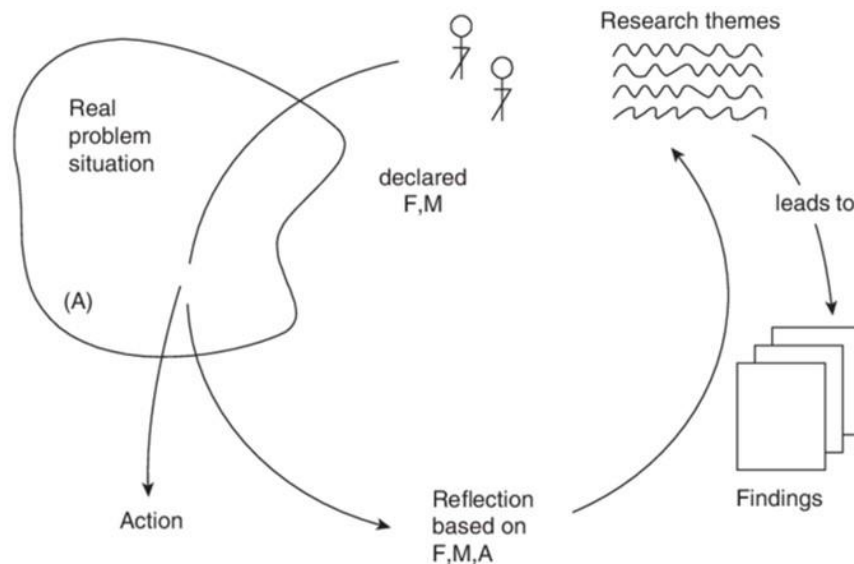


Figure 3.1: The Cycle of Action Research (Holwell 2004; adapted from Checkland and Holwell 1998b)

This study was, therefore, conducted and completed in three iterative cycles that were each developed from the lessons garnered from the previous iteration. By observing the participants and reflecting, the researcher's role is to create an environment conducive to effective learning by not only motivating the participants but also supporting and encouraging them to share and discuss each other's writing.

Although practiced widely in higher education, action research is not without criticism. One of the main critiques levelled against it is researcher bias and subjectivity, as well as the time-consuming nature of cyclical action research. Subjectivity is as a result of the researcher's over-involvement to the extent where personal biases affect the data collection and analysis of the findings. Since one of the contexts of action research is to improve institutions and to evaluate the practice of educators, a risk associated with such research is vulnerability to pressure to adjust findings to suit institutional objectives (Noffke & Somekh 2009). In addition, the cyclical process in action research can be perceived as time consuming (Ferrance 2000: Bless & Higson-Smith 2000).

Although these criticisms are levelled against the practice of action research, in this study the role of the researcher-as-participant was limited to observations of the

interaction between the participants and only to effect changes to the wiki intervention per iteration. The workaround on subjectivity and bias was to rely on different data collection tools, including literature on wiki affordances, to guard against the researcher's perceptions affecting the findings. Finally, in terms of the time-consuming nature of action research, each iteration was given a specific timeframe and guided by the stages of process writing, and the availability of the participants ensured that the research is not unending.

The details of each iteration and how the data was collected and analysed – including tools and procedures – will be discussed in detail in Chapter 4.

3.3. METHODOLOGY

Data collection is a means of gathering and aggregating information from multiple sources. According to Leedy and Ormrod (2013:152), “qualitative researchers typically draw their data from many sources”. Cooper and Schindler (2005) assert that it is incumbent on the researcher to ascertain which types of data are best suited to the nature of the study. In addition, the researcher must also choose appropriate methods to gather this data. In this study, data was collected from the participants' interaction with wiki, the WhatsApp group chats, a questionnaire, and semi-structured interviews and observations.

Leedy and Ormrod (2013:142) are of the view that a “researcher often begins the data analysis process during data collection”. They hold this view because conclusions drawn at the onset of data collection are likely to influence the type of data the researcher subsequently gathers (Leedy & Ormrod 2013:152). It is the conclusions drawn at the completion of Iteration 1 that informed the data collection of subsequent iterations.

3.3.1. Data Collection Instruments

Hofstee (2006:155) offers a simple description of research instruments as “anything that one uses to get the data one wants to analyse”. In this study, an assortment of data collection instruments was used which comprised in-depth interviews, an open-ended questionnaire and analysis of documents available such as text generated from the wiki and WhatsApp group chats.

3.3.1.1. Open-ended Questionnaire

A questionnaire is an effective way of gathering information and gauging participants' perceptions (Saunders et al. 1997; Hofstee 2006). Also, it is one of the ways that can be used to collect qualitative and/or quantitative data. Saunders et al. (1997:244) state, "questionnaires are one of the most widely used data collection techniques". The same set of questions were applied to each participant for conformity. The questions are intended to ascertain the validity of the observations, statements, and available data collected (Saunders et al. 1997). The questionnaire was based on the core constructs of the Technology Acceptance Model (TAM I and TAM II), which looks at the constructs of perceived usefulness and perceived ease to use within the social influence and cognitive instrumental processes (Davis 1989; Legris, Ingham & Colletette 2003; Usluel & Mazman 2009). Constructing the questionnaire was guided by the literature review and the research questions. Elgort, Smith and Toland (2008) designed a questionnaire with broad categories covering use of wiki, collaboration and wiki functions. However, this questionnaire was too long and was thus adapted to suit the design parameters for this study (see Annexure H).

The questionnaire, which comprised open-ended questions to elicit information, was sent out to all participants via the wiki site. This questionnaire was sent to the participants during the introductory phase of the wiki so as to frame the questions in the minds of the participants as they used the wiki. In collecting qualitative data and addressing one of the aforementioned research questions, on the students' perception of the use of wikis, this questionnaire will be used to describe the participants' perceptions and experience. The type of data required for this research question was gauged through the questionnaire.

The questionnaires and interviews were used to triangulate the data. Using the triangulation technique aids in ensuring the credibility, universality, confirmability and dependability of the findings (Mackey & Gass 2005). The questionnaire is included as Addendum H and the interview guide is Addendum I.

3.3.1.2. Interviews

The second data collection step involved interviews. They were based on the findings from the first data collection instrument. In order to gain insight to the thoughts and feelings of the participants, the researcher adopted a non-judgmental stance towards

the thoughts and words of the participants – that is, to explore the participants' experiences and understanding of the study.

When conducting interviews, participants can be questioned either as individuals or within a group. Babbie and Mouton (2011:289) recommend that qualitative interviews should be conversational and accommodating. They may follow various patterns, from very rigid, ordered and systematic to very flexible and unstructured. There are generally three types of interviews: unstructured, semi-structured and structured interviews. Structured interviews follow a pre-determined guide and each participant is questioned in the same, rigid manner; this type of interview does not allow for flexibility or deviation from the pre-determined guide. A disadvantage of conducting structured interviews is that they offer minimal information if “depth” is required (Gill, Stewart, Treasure & Chadwick 2008). According to Dikilitas and Griffiths (2017:78, 123-124), unstructured interviews do not proceed from a pre-planned schedule but arise spontaneously as interviewees offer information; on the other hand, semi-structured interviews are guided by pre-planned questions but may deviate from the interview guide as new insights come to the fore. Semi-structured interviews allow the researcher to elicit more information or clarity if needed. Unstructured interviews may be time-consuming as they flow and progress from the initial response; they are perceived to be difficult to manage and provide participants with no guidance as to what the discussion entails (Gill, Stewart, Treasure & Chadwick 2008).

The researcher selected semi-structured interviews for the benefit and detail that comes based on the depth required. According to Gill, Stewart, Treasure and Chadwick (2008:291), interviews “consist of several key questions that help to define the areas to be explored, but also allows the interviewer or interviewee to diverge in order to pursue an idea or response in more detail”. This divergence gives the researcher room to explore and discover new detail that was not considered during the development of the interview guide.

The researcher has to ensure that the chosen interview form will lead to collecting complete and accurate information in order to meet the study's objectives. With this in mind, the researcher prepared by creating an interview guide or schedule, which is a set of questions relevant to the study and touching on pertinent areas that will yield the best outcome.

As above, the interview guide was adapted from the questionnaire designed by Elgort, Smith and Toland (2008) because they addressed areas relevant to the study. A semi-structured interview guide of open-ended questions followed by probing questions was used to collect data. The questions were rephrased and clarified in instances where misunderstandings arose so as to obtain in-depth responses (Brink 2008:147). The interview guide is included as Annexure I.

The interviews serve as a source of additional information and clarification (Brink 2008:147); they were used to elicit information from participants. The interviews were recorded and transcribed. At the start of the interview, the researcher asked background questions about the students' interests, their reasons for participating in the study so as to put the participants at ease and to get the conversation flowing. It was not necessary to gather any personal, identifying detail about the participants as this was not an essential element to the study. Only the questions that pertained to the study's aim were included as part of the interview; they aided the researcher to delve deeply into areas of importance. In certain instances, the researcher would prompt and probe the participants into talking more about particular examples that arose in the interviews.

Because this study is divided into three iterations, different types of interviews were conducted with the participants to elicit information relevant to the iteration. For instance, telephone interviews were conducted with the two participants received from the first iteration. Telephonic interviews, in this instance, were advantageous because the participants were sourced online, meaning that they could have been geographically dispersed from the researcher and it was time efficient. Face-to-face interviews were held with a participant in the second iteration. All the participants (four participants) from the third iteration were interviewed to gain in-depth understanding of their experiences and perceptions of the wiki intervention.

3.3.1.3. Observations

Observations can be used for a variety of purposes in a research study; it is a strategy often employed in qualitative studies (Hatch 2002:72). The kind of observation used in this study is called "participant observation" (Hatch 2002:72) because it allows one to gain insight into community or society from the members' perspective. The researcher not only took note of the participants' behavioural patterns but was also

immersed and affected by the study setting. As such, both the participants and researcher had a shared lived experience. According to Gill and Johnson (in Saunders et al. 1997:187), “the researcher attempts to participate fully in the lives and activities of the subjects and thus becomes a member of their group”.

For Dikilitas and Griffiths (2017:78, 123-124), observations can be either structured or unstructured. Whereas structured observations are carried out with pre-set categories, checklists and objectives for observation, unstructured observations assess the participants’ human behaviour within the physical environment. In line with the components of action research – stating that this type of research is reflective, critical and focused on behaviour – unstructured observations formed part of the second and third iterations.

Participant observation is not without its criticism. Highlighting the limitations of observation, Kawulich (2005:np) warns that “participant observation is conducted by a biased human who serves as the instrument for data collection”. This means the researcher must acknowledge and be cognisant of how his/her biases, class and theoretical approach could impact the observation and analysis thereof.

Furthermore, drawing from other studies, Kawulich (2005) sums up the disadvantages of participant observation as follows:

- It inaccurately describes human behaviour because it is not representative of the culture under study, but merely a subset of the culture based on the researcher’s frame of reference (cf Johnson & Sackett 1998)
- It opens itself up subjectivity, familiarity and bias of participant selection and representation of events (cf deMunck & Sobo 1998). Total immersion and acceptance into an unfamiliar context is subject to human relation barriers such as language and trust with the participants.
- The researcher’s participation may hinder when to intervene in a study setting, interfere with the interpretation of the observations and findings of the study. This is because observation is viewed through an interpretative lens (cf. Schensul, Schensul & LeCompte 1999).

To mitigate this, the researcher practiced reflexivity to understand her biases and preconceived notions about the study that may interfere with her interpretation of the observation and findings.

3.3.1.4. Document analysis: wiki texts and WhatsApp group chat

According to Bowen (2009:27), document analysis is “a systematic procedure for reviewing or evaluating documents” often used in qualitative studies together with other research methods in a bid to triangulate data. This is done so that the researcher can corroborate his/her findings across various data sets. When selecting documents for evaluation, Bowen (2009) suggests that the documents must be assessed for completeness and that the data should be considered as “necessarily precise, accurate or complete recordings of events that have occurred” (Bowen 2009:33). Furthermore, the researcher must consider the subjectivity of the author and the personal biases he/she may bring to the research (O’Leary 2014) as well as the original purpose of the document in question.

The advantages of document analysis are:

- documents are relatively accessible and reliable sources of data which lead to an efficient way to source documents
- documents are “non-reactive and unobtrusive” (Bowen 2009:31) sources of data in that they may be readily available, can be accessed and reviewed multiple times without being impacted by the researcher’s presence
- documents provide a broad range of coverage and exact detail of events.

However, document analysis is not without its flaws. As most documents are produced for purposes other than research, they may lack relevant detail for the research goal. In other instances, documentation may be irretrievable or have low accessibility which means the researcher will have to gain rights and permission to use such documentation. Lastly, document analysis lends itself to bias and subjectivity.

The three types of documents include public records, personal documents and physical evidence (O’Leary 2014). For the purposes of this study, personal documents in the form of the wiki texts and WhatsApp group chats will be reviewed. A thorough analysis of the wiki and its history pages was conducted alongside cloze reading of the students’ WhatsApp group texts. The wiki pages were essential as students performed the tasks given and engaged with each other as they discussed and justified their revisions.

3.3.2. Population and sampling

Kotari (2004:155) defines sampling as “the deliberate choice of the number of people or elements who are to provide the study with data from which conclusions about the population from which they were drawn can be made”. When drawing a sample from the population, the researcher should ensure that the sample characteristics are shared by the total population in a manner that the same results would be achieved if the total population was examined (Johnson & Christensen 2010; Leedy & Ormrod 2013). The sample characteristics determined for this study were:

- For Iteration 1, students within the English department registered for ENG1513
- For Iteration 2, students within the English department registered for ENG1501, ENG1502 ENG1511 and ENG1511
- For Iteration 3, the same sample characteristics as Iteration 2 with an inclusion of students who make use of the reading and writing workshops offered at the regional hubs
- The participants were required to have access to their own personal computer and be competent users of word processors, including browsing the internet, using email and online chatting

3.3.2.1. Sampling techniques

Saunders, Lewis, Thornhill et al. (2003) categorise sampling techniques into two groups: probability or representative sampling, and non-probability or judgmental sampling. A non-probability sampling technique called purposive sampling was used because the researcher can use her discretion in choosing cases that will be most suitable to addressing the research questions and meeting the objectives (Saunders et al. 1997:145). In such cases, the sample cannot be taken as statistically representative of the total population, but the data and findings are still relevant as they can be used to guide the researcher on how to expand the sample for other cases (Anon, <http://research-methodology.net>).

The purposeful sampling strategy that was adopted for this study is homogenous sampling, which focuses on a subsection of a larger sample that shares similar characteristics. This is done so as to obtain in-depth information that is of central importance to the study and which the participants are most able to shed light on. Patton (2003: 230) observes that:

studying information-rich cases yields insights and in-depth understanding rather than empirical generalisations ... focus on selecting information-rich cases whose study will illuminate the questions under study.

Patton (2003:230) argues that the need for empirical generalisations is superfluous for exploratory studies; however, the preliminary findings (based on data collected and patterns drawn) from these studies must be confirmed by future studies. Furthermore, Patton (2003: 244) asserts, “there are no rules for sample size in qualitative inquiry”. He goes on to state that sample size is dependent on the researcher’s purpose and aims for the study within the available time and resources. While this rationale was advantageous for the current study, purposive sampling has been subject to criticisms such as being subjective and biased because the selected sample may be based on the researchers needs (Patton 2003). Furthermore, it may be difficult to defend the theoretical generalisability, inclusivity and representativeness of the sample. Omona (2013) notes that despite the criticisms levelled against qualitative research in terms of sampling design and sampling size, studies following a qualitative methodology are often “multidimensional” in terms of the units of data – interviews, observations, text and visual analysis – which are selected to provide “prolonged engagement and persistent observations” (Omona 2013:173) that will offer data that is rich and thick. As such, the researcher felt that the various units of data selected for this study were sufficient in their provision of rich and thick data.

3.4. ETHICAL CONSIDERATIONS

Whenever one undertakes research, certain ethical considerations must be borne in mind. Punch (2000:75) opines, “all social research involves consent, access and associated ethical issues, since it is based on data from people about people.” In practice, a researcher must seek permission and consent from potential participants, reduce the possibility of risk befalling the participants by protecting their identity and ensure confidentiality. Furthermore, the researcher must practise good governance by avoiding deceptive actions and permitting the participants the right to withdraw from the research (Lund Research 2012).

An application for permission to conduct research involving UNISA students and data was considered and granted by the Research Permission Subcommittee (RPSC) of the UNISA Senate Research and Innovation and Higher Degrees Committee

(SRIHDC) on 07 July 2015, which was subsequently extended in line with the changes of the study participants.

Prospective participants/students were invited to participate on a voluntary basis. They were informed verbally and in writing of the purpose, benefits and risks of participating in the study. The information was also provided in the participants' information leaflets attached to the consent form. They were requested to sign the consent form (see ANNEXURE G). Only prospective participants who had signed and returned informed consent forms could participate in the study and they were informed about the option to withdraw at any time.

However, Thomas and Pettitt (2016:279) contend that the conventional method of asking participants to "sign and date a consent form, printed on institutional letterhead, following oral explanation of its contents" does not adequately address L2 students' concerns when participating in a study. While noting that the risk of harm in L2 research is quite low, Thomas and Pettitt (2016) highlight that participants may feel singled out and that their competence would be exposed and scrutinised. They, therefore, propose an ongoing attempt to gain informed consent during the study. To mitigate this risk, ethical considerations were observed throughout the study, and will be elucidated on wherever they arose in the study.

3.5. CONCLUSION

This chapter identified and discussed the approaches and methods used for data collection and analysis, which were undertaken within a qualitative research methodology. This methodology was deemed an essential component of exploring and understanding the attitudes, behaviours and experiences of the population being studied.

The following data collection techniques were applied: in-depth interviews, an open-ended questionnaire and analysis of documents available such as text generated from the wiki and WhatsApp group chats. . The questionnaires and interviews were used to triangulate the data. Using the triangulation technique aids in ensuring the credibility, universality, confirmability and dependability of the research results.

CHAPTER 4: DATA COLLECTION AND ANALYSIS

As stated in the first chapter, the research aim was to explore undergraduate students' experiences of using a wiki as a computer-mediated tool for facilitating process writing in an ODL context. While there were a number of aspects of the wiki that could be explored in the study, the researcher's focus was on the students' perception of wiki use in an ODL institution, especially wiki's suitability for teaching academic writing.

This chapter will detail how the data was collected and analysed for the three iterations of the study. The findings that emerge from with data will be presented and summarised before a synthesised discussion based on the research questions ensues in Chapter 5.

4.1. THE INTERVENTION

The concept of a wiki was first introduced in 2001 by Leuf and Cunningham. They define a wiki as a "freely expandable collection of interlinked web pages, a hypertext system for storing and modifying information – a database where each page is easily edited by any with a forms-capable web browser' (Leuf & Cunningham 2001:14).

Before presenting data collection tools, it is crucial to discuss the design principles used when creating a wiki. These principles, discussed in the next section, are applicable when using any technology within the higher education space.

4.1.1. Design Principles Used for Creating the Wiki

The benefits of Web 2.0 – especially social software tools – can be used to influence student engagement, collaboration and social interaction in the learning process (Hadjerrouit 2011; Zheng, Niiya & Warschauer 2015). Web 2.0 tools such as wikis rely on user-generated content in creating value in learning spaces (Hadjerrouit 2011; Anderson 2012; Zheng, Niiya & Warschauer 2015). Designing the wiki learning space includes clearly written instructions for wiki use (such as support for any technology-related challenges that may be experienced), assigning privacy permissions, and creating pages for student contributions, among others (Anderson 2012: 303-304).

In their seminal work, Chickering and Ehrmann (1996) summarised seven principles for leveraging technology in higher education to achieve good teaching and effective learning: 1) student-faculty interaction 2) cooperation and reciprocity between students 3) active learning techniques 4) prompt feedback 5) time-on-task 6)

communication of high expectations and 7) support for diverse talents and ways of learning. These principles have remained valid for the past two decades as the research by Seifert (2019), Gronseth and Hebert (2018), Sadeghi, Bagnall and Jacobson (forthcoming 2020), Berry (2018), Jabar and Ablion (2016), and others in higher education and distance learning indicates. These principles were used to shape the analysis and discussion of the findings as will be discussed in the next chapter. Table 4.1 provides an overview of the principles and how the wiki realised the principles.

Table 4.1: Overview of the technology principles as they were realised in the wiki

Technology principle	Wiki design
1. Student-faculty interaction	The wiki enabled students to interact with the instructor (researcher). The researcher set instructions and activities which the students had to follow in completing the tasks.
2. Cooperation and reciprocity between students	The students were encouraged to develop relationships with each other in order to explore existing knowledge and expand their knowledge base together. An “ice-breaker” activity was set where students introduced themselves and could find common ground. Additional support in the form of the WhatsApp group allowed for student-student engagement.
3. Active learning techniques	The learning problem must be something the students are familiar with, as they engage their prior knowledge, and the new material. The learning activities were based on plagiarism in social media because of the high levels of plagiarism in students’ written work and their affinity for social media.
4. Prompt feedback	Prompt feedback is essential for the success of online learning interventions. Feedback allows the researcher to create an online learning community based on interaction among students and with the researcher.
5. Time-on-task	Each task in the process is given a timeframe for which it should be executed; this informs the students of when to expect feedback from the researcher.
6. Communication of high expectations	As part of the participants informed consent to participate in the study, the participants were given a broad overview of the study prior to engaging with the study. After agreeing to participate in the study, the researcher explained each phase and activity to the participants.
7. Support for diverse talents and ways of learning	Prior to starting the study, the researcher suggested the participants watch a few YouTube videos that would explain what a wiki is, particularly Wikispaces. A walk-through explanation of the Wikispaces site was provided by the researcher and support was given to the participants by creating a WhatsApp group chat once the study began.

Additional support was given where participants reached an impasse during the activities

Instructional design creates engaging and motivating learning environments that enhance knowledge acquisition by ensuring students develop significant understanding and knowledge of the learning material. Branch and Merrill (2012:10-11) assert that there are several characteristics that must be considered for instructional design efforts: it must be student centred, goal oriented, focused on meaningful performance, practical, iterative and self-correcting; it is a team effort with specific, measurable and reliable outcomes. Within the context of this study, the research design and methodology chosen – constructive action research – focus on student centredness and achieving a specific goal through meaningful performance. The participants, students themselves, give insight on their experiences using the wiki as a means to acquire appropriate academic writing by collaborating with their counterparts. The participants offer this insight by self-correcting so that the research can improve the study in the next iteration.

4.1.2. The Instrument

Selecting a wiki that is easy to use is important. Before embarking on the study, the researcher conducted a desktop review of available wikis that are most suitable for teaching purposes. Three of the most popular wiki sites for use in classrooms include PbWorks.com, Wetpaint.com, and Wikispaces.com⁶. Table 4.2 provides a comparison of the most popular wiki sites.

⁶ Wikispaces stopped operating on 31 July 2018 because infrastructure and software costs to keep the platform in operation were too costly. However, this closure did not affect the study as data collection had been completed by the time. While there are other wikis, none offer a comprehensive educational portfolio as was afforded by Wikispaces.

Table 4.2: A comparison of popular wiki sites for education – PbWorks, Wetpaint and Wikispaces*

	PbWorks (previously PBWiki)	Wetpaint	Wikispaces
Cost	<ul style="list-style-type: none"> Free basic services; additional charges for various plans 	<ul style="list-style-type: none"> Generally free, but additional professional services are charged 	<ul style="list-style-type: none"> Free basic services; additional costs for super usage and private label
Editing capabilities	<ul style="list-style-type: none"> text formatting including indent, bullets, tables, copy & paste, horizontal rules basic spellcheck hyperlinks, images, plug-in inserts ability to insert attachments but links in tables tend to be tricky 	<ul style="list-style-type: none"> very reliable spell check function text formatting including use of bullets, indenting, tables hyperlinks & images images 	<ul style="list-style-type: none"> text formatting including use of bold, italics, underlining, bullets, tables, special characters, font colours & style, horizontal rule links & images file insertions CodeText and visual editors, preview option
Styles	<ul style="list-style-type: none"> 5 skins available 	<ul style="list-style-type: none"> 24 styles available 	<ul style="list-style-type: none"> 4 customisable themes available, which require knowledge of HTML and CSS
Widgets	<ul style="list-style-type: none"> Calendar; event planner; spreadsheet; address links & any Google gadget Chat, photos & video including YouTube HTML, equations, recent changes Analytics 	<ul style="list-style-type: none"> YouTube Google Video RSS feeds Google Calendar Slideshare 	<ul style="list-style-type: none"> Wikispaces apps (TOC, RSS, tag cloud, etc.) Video, audio, chat, instant messenger, slideshow Calendar, spreadsheet, document, polls RSS feeds, html Map & bookmark
File storage & backup	<ul style="list-style-type: none"> 10MB for free account; 1GB to 5GB on various plans .zip backup files 	<ul style="list-style-type: none"> limit of 40 attachments not larger than 2MB each HTML to a .zip file for backup 	<ul style="list-style-type: none"> 2GB for a free account; from 2GB plus package to 40GB for private label package Windows .zip and Unix .tgz backup and export as HTML

Additional features	<ul style="list-style-type: none"> • PBWiki 2.0 transition • Invite key • RSS and Atom feeds • Notifications • Traffic and statistics 	<ul style="list-style-type: none"> • Discussion threads • Individual profile pages • Internal message system • Templates • What's New • Members • To-Dos • Invitation management 	<ul style="list-style-type: none"> • Invitations • Space badges • Statistics • Templates • Recent Changes
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*Created by 4RxT (<https://4rxt.wordpress.com/2008/04/03/wikis-wetpaint-pbwiki-and-wikispaces/>)

Research studies, such as Gitonga, Muuro and Nzuki (2014), found Wikispaces ideal in promoting knowledge building through collaborative learning. Wikispaces is user-friendly and free or low cost; it has been used extensively in education since it was launched in 2005. The developer (TES) also offers free webinars on the Wikispaces blog (<http://blog.wikispaces.com/>) to teach beginning and advanced tips and tricks. Liu's (2012) review of Wikispaces for *The Electronic Journal for English as a Second Language* observed that "Wikispaces is a great website to create wikis for teaching and learning. Anyone can create a wiki by following a few simple steps. It may take some time to set up a new wiki, but the potential benefits make it worthwhile" (Liu 2012: np). The researcher opted to use Wikispaces.com because it is designed specifically for use in the classroom as a social writing platform and has the added benefit of being a management tool that allows the teacher to track students (Lui 2012). Wikispaces differs from other wikis by being fully customisable through various widgets such as YouTube, news feeds, surveys, projects and assigning teams. Additionally, it provides templates and assessment tools and it was free to use for a larger storage capability (see Figure 4.1).

The built-in assessment tools allow the user to monitor and track students' contributions through its engagement feature that provides real-time statistics for how often a student has read, edited or saved a page within a 30 minutes range.

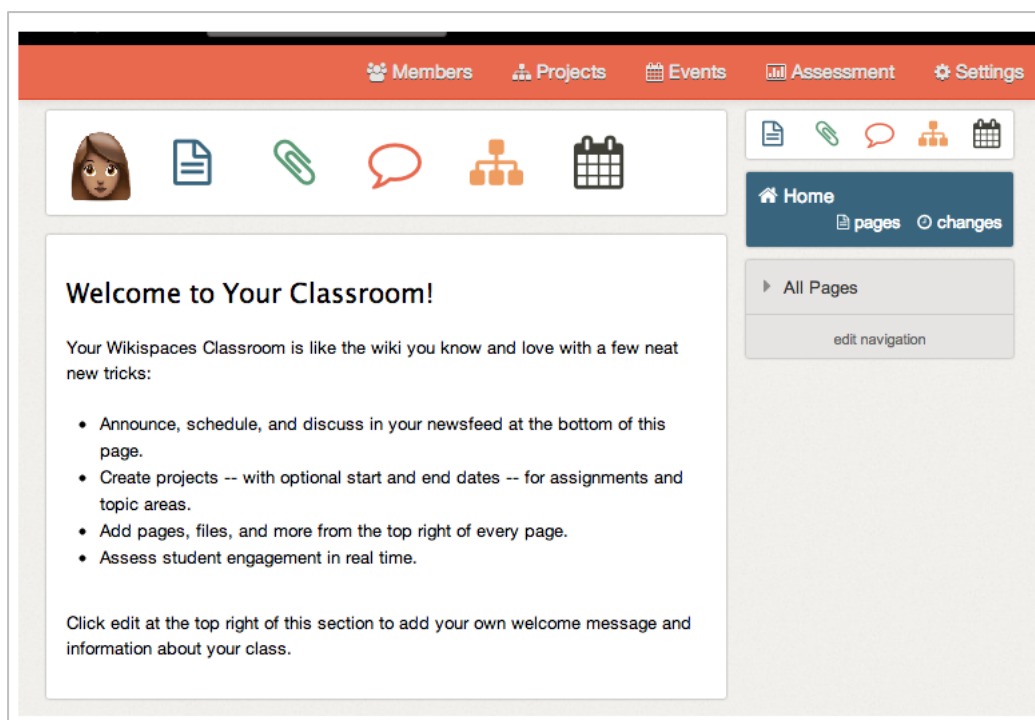


Figure 4.1: Wikispaces welcome page

Before setting up the wiki, the researcher also viewed YouTube videos such as “Wikispaces Tutorial” and “Wikispaces Classroom Tutorial (available on <https://www.youtube.com/watch?v=SBI-VzMR1jc> and https://www.youtube.com/watch?v=A_WdD-llewg, respectively).

In setting up the wiki for the study, the following steps were taken:

1. Upon landing on the home page, users are prompted to log on as students or educators/administrators first need to go the Wikispaces homepage and select the “Teachers” tab. For the purposes of this study, the researcher selected the “Teachers” tab.
2. By clicking on the “sign up and start your wiki”, users will be taken to a sign-up page to create the teaching wiki with the necessary information such as the name of the wiki. For this study, the chosen name was `ProcessWritingENG1513.wikispaces.com`. From this stage, the user/administrator is taken to the newly created teaching wiki to continue with the setup.
3. Wikispaces offers a virtual tour of how to navigate the portal, edit pages, add pictures, and add members as well as set accessibility permissions. The

researcher decided to take the virtual tour in order to fully grasp the capabilities offered by Wikispaces.

4. Upon arriving at the wiki homepage, the researcher created a welcome message for the participants. The welcome message reiterated the nature and purpose of this study and highlighted the potential benefits, risks and discomfort for participating in the study. Furthermore, the researcher explained the procedure to be followed by giving the participants guided steps on what to expect and reasonable response times to posts.
5. The participants were advised to view a number of YouTube videos such as “How to use Wikispaces for education”, “Welcome to Wikispaces classroom”, and “Wikispaces - How to Create a New Wikispaces Page and Use Basic Tools” on optimising and effectively using Wikispaces.

4.1.3. The Learning Task

Figure 4.2 is an example of a text taken from a social media platform called Twitter.



Figure 4.2: An example of a text paraphrased from Twitter, which was used in the learning task

From the images, it is clear that the tweets seem to share the same message – that of first-born children being the “trial and error” parenting. However, upon closer inspection of both tweets, especially the date and time they were posted, one can see that the tweet in the first frame is paraphrased from the tweet in the second frame. The

first tweet is inadequately paraphrased as the choice of words is far too similar to those in the second frame. These texts served as a springboard to invite students to consider the issue of plagiarism.

The task activities were to assess the participants' visual literacy skills and to determine their critical thinking capabilities based on the images. The task prompts given to them for analysing the tweets were:

- Task 1: Compare and contrast the two images above (Figure 4.2) by noting keywords that would suggest that the first tweet is plagiarised from the second tweet.
- Task 2: Use the keywords generated from the first activity, group similar ideas together using a mind map. You can work together to share ideas.
- Task 3: Use your mind map, write a short argumentative paragraph on whether the first tweet is an example of plagiarism.
- Task 4: Comment on each other' draft paragraphs and suggest areas of improvement. You can reorganise ideas that do not flow logically within the text.
- Task 5: Proofread your paragraph, focusing on language and argumentation.

Student writing in higher education is plagued by high levels of plagiarism (Adam 2016; Chen & Chou 2017); in some instances, this plagiarism is in the form of paraphrasing that is poorly unacknowledged or cited (Barry 2006; Wu 2018). According to PlagiarismToday.com, attribution and accountability are severely lacking in popular social media sites such as Facebook and Twitter.



Figure 4.3: Social media commentary on the similarities of the tweets

Figure 4.3 is an example of the social commentary on the pervasive nature of plagiarism in that it is not only evidenced in academic environments but also in popular social media sites. The tasks for the wiki were based on the above figure which highlights plagiarism in social media. These tweets relate to the study's methodology in that the participants would have to actively engage with the images to co-construct an understanding of paraphrasing and plagiarism by working through the five stages of process writing. Further, constructivism also advocates for "real life" learning tasks to engage students.

4.2. RESEARCH PROCEDURE: ITERATIONS OF THE STUDY

As stated in the previous chapter, the study followed an action research methodology. The cyclical, recursive and personal nature of action research allowed the researcher to gain insights into her own practice in its natural setting. The research problem, questions and aims of the study are specific to the teaching and learning context in order to improve on writing instruction and students writing. Further characteristics of action research are that the work under study is situational: descriptions and theories are built up by iteration within the context and are tested within the situation, and there is close collaboration and co-creation between the researcher and participants.

The details of each iteration such as how the data was collected and analysed are discussed in the next sections.

4.2.1. Iteration 1

The first iteration focused on students who were registered for English Proficiency for University Studies (ENG 1513). This module, offered by the Department of English Studies at Unisa, is purposed to develop students' proficiency in English to prepare them for university studies especially within the distance learning environment of Unisa. Furthermore, ENG 1513 aims "to develop learners' ability to read critically with comprehension and insight, improve their linguistic competence and develop their ability to write critically and logically" (ENG 1513 Tutorial Letter 101 2015:3-4). Moreover, students would be able to apply language structures and conventions in relation to their studies. The sections that follow detail the steps taken in collecting data for this iteration. The aim of the first iteration was to conduct a fully online wiki-writing intervention where students would use the process writing approach to determine whether two versions of the same tweet constitute plagiarism while also interacting with each other. The intervention was planned to last 5 weeks, with each week focusing on a different aspect of the process writing approach. However, the iteration did not progress to a point where participants interacted with wiki.

4.2.1.1. Participants

At the beginning of the study, an invitation for participation was sent to all students registered for ENG1513. As a fully online module, all communication with the students was conducted online. To this effect, the call for interested participants was broadcast on *myUnisa* through the Announcements tool, which was set to High Importance. This meant the announcement was also pushed to each student's *myLife* email – a free email service provided by the university to the students – in order to reach all students (a total of 4682⁷) registered for the module. The initial call was sent two weeks into the start of the semester. According to Venter, Jansen van Rensburg and Davis (2012:184), *myUnisa* is a web-based learning management system and student portal for "academic collaboration and tuition-related interaction ... [and] functions to develop and enhance academic interaction and improve communication between Unisa and

⁷ This information was provided by the Department of English registration statistics for the second semester of 2015.

its students". As an asynchronous technology, *myUnisa* mediates interactive responses between students and lecturers; it enables students to share their learning through blogs and discussion forums. It is also a message broadcasting forum, which is why it was used to send the invitations to the students.

4.2.1.2. Data collection procedures

The first call for participation, using the Announcements tool on *myUnisa*, yielded no responses. Two weeks after the initial call, two reminders were relayed to the students, spaced two weeks apart. These reminders were sent on *myUnisa* because the targeted students were all learning online and other module-related announcements were sent in the same way. These follow-up calls were also sent using the Announcement tool set on high importance. The subject line was amended to indicate that the call for participation was a follow-up to the initial request sent. It was at the third reminder for participation that two participants agreed to participate in the study by returning, on email, the signed participation and informed consent letters that had been distributed on *myUnisa*. Hoping to receive further responses, the researcher waited a further two weeks prior to contacting the participants. However, no further responses were received.

The researcher decided to proceed with the study with the two participants. Citing Ragin (1994:79), Aspens and Corte (2019:151) state that in qualitative methods, the focus is on in-depth data because "they aid the identification of key features of cases [...] as a means to *enhance data*" [source italics]. In order to complete the wiki setup, the researcher assigned aliases, in accordance with the confidentiality prescripts in the ethics approval, to ensure the participants' privacy. A follow-up email was sent to the participants' private email which they supplied when returning the informed consent letter. However, upon further prompting of the two participants, they did not reply to the emails. At this stage, the wiki comprised the welcome message and the aliases created for the participants. The intended activities for this iteration would have been completed online with instructions being given on the wiki page and limited support from the researcher.

4.2.1.3. Data collection instruments

The data collection instrument for this iteration was solely done by observation as the study did not progress to a point where the participants interacted with each other or

the wiki. The researcher's observations were based primarily on the students' use of the *myUnisa* portal and email correspondence, since they were used as vehicles for communicating with the students prior to the start of the intervention. While this summary is based on observations that were not designed for research, it is an indication why this variable might surface as significant.

4.2.1.4. Data analysis

There were two participants in this iteration. Both had shown an interest but failed to respond to further prompts to continue with the study. This meant that the attrition rate from this iteration was 100% of the two participants. Although participation was low and attrition high, the interest shown by the two participants suggests that the wiki intervention may be relevant and appealing to students who desire to improve their academic writing skills. Reading into the subtext and assumptions underlying the inability to attract participants may also suggest that the study and call for participation may need to be reformulated to address latent perceptions that may hinder the initial uptake.

Due to the paucity of data collected during this iteration, the researcher could only deduce that the participants' ability to respond to the call for participation suggests that they possessed adequate proficiency to use online collaborative tools (i.e. *myUnisa*) for accessing information.

4.2.1.5. Findings from Iteration 1

Although this iteration suggests that there was a paucity of data from which sound conclusions can be drawn, various researchers have found that attrition rates are significantly higher in online instruction than face-to-face instruction (Angelino, Williams & Natvig 2007; Boston & Ice 2010; Bawa 2016). Angelino, Williams and Natvig (2007) attest to a 10-20% drop-out rate for online courses taken at distance education institutions as opposed to face-to-face tuition. Furthermore, within the student-centred approach, it is critical to engage and integrate students into online communities as early as possible and frequently (Angelino, Williams & Natvig 2007).

In addition, the characteristics of online students, such as learning styles and socioeconomic demographics, must be borne in mind when addressing attrition rates as they may offer more insight and reasons for attrition. For instance, Bawa (2016) mentions social and family factors, motivational factors, technological expertise of

students and educators, lack of institutional support for students and educational, limitations in using educational technology for digital natives and digital immigrants. Boston and Ice (2010) found that for students enrolled for online course as an exploration of their options, they were prompted to complete the course through proactive engagement by the teacher and other students.

From this iteration, it was observed that lack of participation was the main finding. The initial call yielded no response and the subsequent calls (spaced two weeks apart) took four weeks to return only two participants. The researcher made the assumption that the timing of the call could have been problematic as the two-week intervals between follow-up requests resulted in limited interactions with the participants.

Therefore, the protracted delay in communicating with the available participants while waiting for more participants could be a cause for the high attrition rate. Based on the observed assumption that led to this high attrition rate (100% of 2 students), the researcher had to redesign the study.

4.2.1.6. Intervention/ programme/ Wiki refinement

What became clear at this stage of the study was that the researcher would have to work with the participants as soon as they expressed interest in the study. Secondly, it would be imperative to determine the students' pre-existing knowledge and familiarity with the wiki technology while also having a more elaborate orientation on the technology being used. Otherwise, familiarity becomes a variable that influences the use of the technology. In addition, since the participants were unknown to each other, the researcher would have to facilitate interactions among them as a foundation that would encourage participation and collaboration. The researcher could facilitate this interaction through informal online chats such as those provided by social media. This means taking the time to introduce the participants to ensure they are comfortable learning together. Ultimately, the focus had been on the wiki and the research; however, this iteration highlighted the need to incorporate the students as an important variable to the study. As a result, the approach was amended to address student engagement and integration. To this end, the researcher decided to use WhatsApp messenger. These changes were implemented in the second iteration of the study.

4.2.2. Iteration 2

Because of the limited responses from the ENG1513 population during Iteration 1, the invitation to participate in the study was extended to other first-year students within the Department of English Studies. Specifically, the population sample was amended to include students registered for ENG1501, ENG 1502 and ENG 1511.⁸ ENG1501: *Foundations in English Literary Studies* and ENG1502: *Foundations in Applied English Language Studies* are complementary in that both modules are intended to produce students who would “gain a firm background in the theories underpinning the use of the English language; be able to use the English language with confidence in all its functions; understand the structure and functions of the English language in the various discourses which include literature, media and others” (ENG1501 and ENG1502 tutorial guides). More so, reading and writing workshops and tutorial classes are available for students registered for these modules. Because of this, the researcher deemed the selection of these modules indispensable for providing a purposive sample from which to source participants.

4.2.2.1. Participants

Participant recruitment in Iteration 2 was thus revised to use a blended approach of both online and face-to-face approaches. The online approach was similar to that in Iteration 1, where a message was sent using the Announcements tool on *myUnisa*. The Announcement on *myUnisa* was sent at the start of the 2016 first semester once registrations were finalised so as to increase participation. However, the approach was different for the face-to-face recruitment. Despite Unisa being a distance institution, the university offers various student support initiatives through the regions, such as providing for computers and offering academic literacies services as strategies for student support. These academic literacies services include workshops and tutorials for reading and writing. The researcher used these workshops and tutorials to invite prospective participants.

Recruitment of participants took four visits to the Gauteng Regional Centre before the researcher identified ten participants. During these visits, the researcher would ask the tutors to make an announcement explaining the study and the process as a means

⁸ The total number of registered students for these modules amounted to 14 649, according to the statistics furnished by the Department of English.

of recruiting students. It is worth noting that the participants were initially reluctant to partake in the study. The researcher observed the participants' reluctance by taking note of their body language (shrugs and scoffs) while the tutors explained the purpose of the study. As a result, the researcher requested that the participants meet with her after the workshop so that she could explain in detail the study's aim and clarify any questions the participants may have regarding the study.

An information session was held with prospective participants to explain the purpose and objectives of the study. The researcher held an on-boarding discussion with the participants where they could personally address any concerns they had about participating in the study. Once the participants felt that their questions were dealt with adequately, they were each given a participation and informed consent leaflet that highlighted the purpose and benefits of the study. The participants agreed to be included in the study and signed the forms (See Addendum F).

4.2.2.2. Data collection procedures

The first meeting with the participants was a face-to-face meeting. The researcher explained that the study would take place over 5 weeks – with each week addressing a stage of the process writing approach. A number of the students showed discomfort with communicating online with “strangers”; they also shared fears of their work being judged and criticised by these “strangers”. However, the researcher informed the participants that they would be assigned anonymous usernames (for example, ODLWiki1) and passwords, which they could change once they logged onto the wiki site. This step is fully in line with the ethics approval certificate.

The researcher presented a walk-through of the Wikispaces site explaining each of the icons used on the site. To allay fears of unfamiliarity and discomfort, the researcher drew parallels and similarities with icons used in popular social media sites such as Facebook. As part of the Wikispaces demonstration, the students were shown that they could have an avatar (profile picture or avi) if they so wished, use the chat and discussion functions, and comment on other participants' posts. After this demonstration, the participants seemed relieved and ready to begin working on the wiki. They alerted the researcher, however, that the tail end of the wiki intervention would coincide with their exams. Students are expected to work under time constraints available for active tuition in a semester system that is 12-weeks long. During this time,

students have to complete two-to-four compulsory assignments prior to gaining entrance to the exams. The researcher assured the participants that the activities would be completed by the time they begin their exams. She informed the participants that some of the activity durations can be shortened as a means to ensure that the study activities do not interfere with their exam schedules.

Following the observations made during Iteration 1, the researcher set up a WhatsApp group chat to augment the support needed by the students. As indicated in Iteration 1, it is critical to initiate contact with students as early as possible and maintain this engagement frequently. The students were encouraged to develop relationships with each other in order to explore existing knowledge and expand their knowledge base together. The researcher code-switched in her interaction with the participants. In addition to using English, the researcher interacted with the participants using the L1 so as to encourage participation, and to explain the process to the participants. However, in a multilingual context such as South Africa, one is not likely to encounter a group with a common L1. In this instance, the researcher being proficient in SeTswana, SeSotho and SePedi – while having basic communicative proficiency in IsiZulu – could facilitate interaction with the participants in these languages. Additionally, the participants indicated that they were quite proficient in Setswana and SePedi, which are commonly used languages in the region where they resided. Although communication on WhatsApp was multilingual, the language used on the wiki was strictly English.

The researcher's tasks on the WhatsApp group involved setting up the virtual meetings, managing time, inviting comments, summarising and concluding. The tasks completed by the researcher on the wiki were to set-up activities, monitor progress, and engagement and interaction. Once the forming and norming stage was surpassed, these chats were limited to notification reminders of when new entries were posted; students were also permitted to ask for assistance with technical challenges faced while using the wiki and study skills.

Since activities were scheduled to change on a weekly basis, data was collected at the end of each week for the wiki activities which were assessed and analysed. Additional data was collected as face-to-face interviews with participants and from the observations made by the researcher.

At the end of Iteration 2, the researcher conducted face-to-face interviews with ODLWiki3, ODLWiki7 and ODLWiki9. The interviews were held at the Sunnyside campus of the Gauteng region; this was easily accessible to the participants as they made use of the resources such as WiFi, the library and the Reading and Writing workshops. The interviews, which were recorded on the researcher's cell phone and transcribed by the researcher, consisted of four open-ended questions. A group interview was conducted with ODLWiki3 and ODLWiki9 as this was the only time available for them to participate in a face-to-face interview. ODLWiki7 was interviewed separately as he had shown apprehension and anxiety about participating in the study. The other participants were unable to participate in the interviews due to conflicting exam schedules.

4.2.2.3. Data collection instruments

The activities – described above in section 4.1.3 “The Learning Task – for this iteration were based on the images in Figure 4.2 and were completed on the group wiki page. Data was collected through interviews and observations. The interviews served to elicit the participants' perceptions of using a wiki for academic writing, while the observations were to assess how the participants behaved within the study context. The observations corroborated what they said and what was happening on the Wikispaces. The prompts given to the participants by the researcher on the WhatsApp group chats also formed part of data collection.

4.2.2.4. Activities

Before embarking on the weekly process writing approach intervention, the researcher posted a wiki message welcoming the participants and thanking them for taking part in the study. Furthermore, the welcome message reiterated the procedures to be followed and encouraged the participants to get to know each other.

4.2.2.4.1. Prewriting / brainstorming

During the first week of the wiki intervention, the students were tasked with generating ideas based on whether the contents of tweets in Figure 4.2 above constitute plagiarism. They were guided to look at the similarities in both tweets. These similarities included, among others, the wording used, the time and date of each tweet. This brainstorming session yielded robust discussions on what constitutes plagiarism and whether social media posts can be regarded as plagiarism.

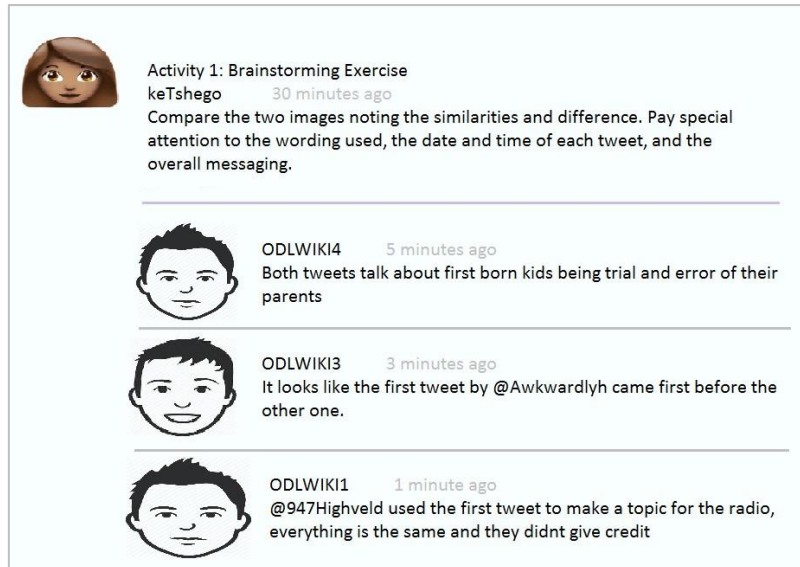


Figure 4.4: Screenshot of brainstorming activity from iteration 2

On the group WhatsApp, the researcher advised and referred the students to the TurnItIn (<https://www.turnitin.com/solutions/plagiarism-prevention>) and Writecheck (<http://en.writecheck.com/types-of-plagiarism>) websites to assist with the task as they disagreed on whether paraphrasing and reordering words was plagiarism.

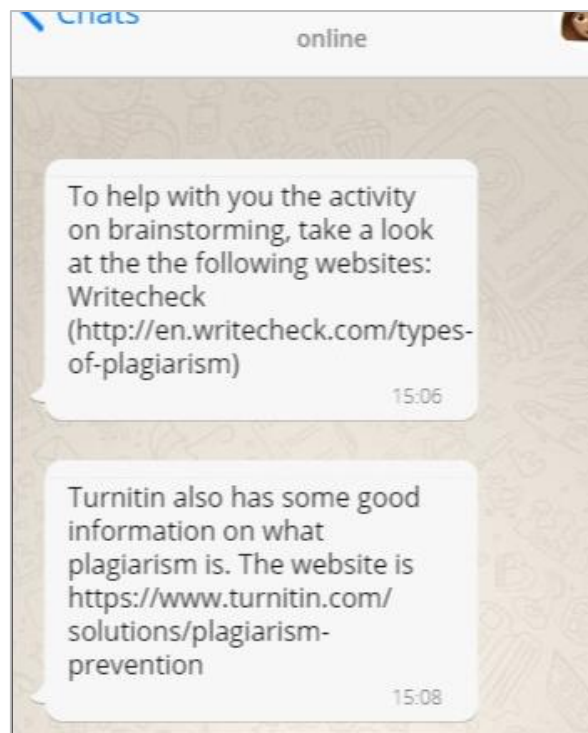


Figure 4.5: Screenshot of additional resources to assist participants with brainstorming activity

4.2.2.4.2. Drafting

In the second week of Iteration 2, the students were tasked with planning their writing based on the brainstorming held in the first week. The researcher advised the students to group the key terms drawn from the brainstorming week using a mind-mapping technique. This technique was selected because the students were familiar with its use as it formed part of their module assignments. The students completed the second week of the wiki intervention by producing mind maps of their views on the tweet.

4.2.2.4.3. Revising

At the start of the third week, the researcher posted the next task, which was to organise their mind maps into their first written draft. The interaction was beginning to wane – only one student acknowledged the task after two days.

The data collected from this iteration covered only the first two stages of the process writing approach: brainstorming and planning.

4.2.2.5. Data analysis

The data for Iteration 2 were collected from the participants' inputs on the wiki. As there were few contributions from the first two activities, the inputs were analysed by looking at the participants' engagement and interaction with the wiki and each other. Furthermore, the researcher observed and took note of common words and phrases used by the participants including any behavioural or attitude changes in the participants. The researcher noted them in a small notebook; the frequency of posts made on the wiki was noted and the themes related to engagement and interaction expressed in the posts were analysed.

Face-to-face interviews were the primary source of data collection to elicit the participants' perceptions and suitability of wikis for teaching academic writing. After each interview, the researcher would listen to the recording to get a general overview of the discussion and then manually transcribe the audio recordings. The draft transcription was later proofread to ensure that the transcription was an accurate account of the interview. The researcher took additional notes while proofreading the draft transcription, the researcher would take note of phrases or sentences that jumped out or appeared interesting in line with the areas of engagement and interaction. Following a deductive thematic analysis, the researcher was looking for

themes relating to perceived ease of use and usefulness that would affect the participants' voluntary acceptance of the technology.

Moreover, WhatsApp was used to prompt the participants into using the wiki when their interaction and engagement on the platform waned. The researcher reverted to the WhatsApp to enquire with the students as to why their interaction with the wiki had waned. The students' engagement even on the WhatsApp group chat was irregular and inconsistent. ODLWiki2 indicated that his exams had already begun, and he would try connecting with the group when he has time. He stated on the chat:

I have started exams already but I will finish them soon. I can be able to join again when I have a long gap between exams

Once ODLWiki2 made mention of his schedule, the rest of the participants also indicated that their exam schedule and assessments conflicted with their ability to participate in the study's wiki intervention (see Figure 4.6).

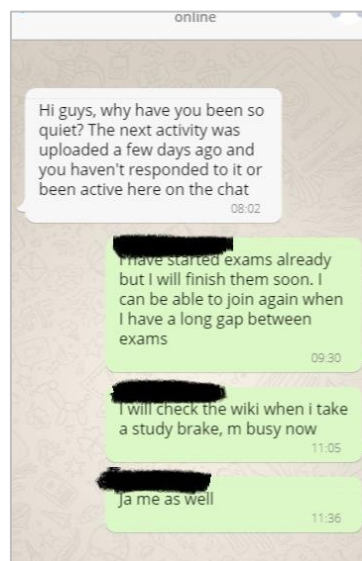


Figure 4.6: Screenshot of participants (identity redacted for anonymity) citing reasons for lack of activity on wiki

Based on Figure 4.6, the timing of the activities coincided with the participants' exams, as they had mentioned at the beginning of the study. This was accepted and noted as the reality – the students' lived experience – that added insight into interventions in ODL. As such, the participants shifted their attention towards their exams. In addition, the chat shows that the participants' apprehension at being the first to post about their

schedules. Unfortunately, the participants remained silent for the duration of the study despite prompts for them to continue with research.

4.2.2.6. Findings

4.2.2.6.1 Findings from interviews

The first question posed to the participants focused on what they found most interesting about partaking in the study. ODLWiki3 said:

I was surprised that I could learn from my friends especially while we were brainstorming why the tweets are the same thing.

According to ODLWiki9, the brainstorming and mind mapping activities were a fun and interesting way to learn the course content because it “forced” them to understand first what plagiarism is and how it can be avoided. ODLWiki9 said:

One of the questions in assignment 1 has brainstorming and it was interesting how we can brainstorm together and come up with different answers. At first I didn’t know exactly what is plagiarism but this exercise forced me to understand it.

When prompting ODLWiki9 on what being “forced to understand it” means, he indicated that the using the wiki allowed him to be more conscious of his analytical and critical thought processes when assessing the similarities between the tweets.

These interview statements support the notion of constructivism that asserts co-creation of knowledge through collaborative learning aided by peers. In addition, it can be seen that the participants are self-directed – albeit with involvement of the researcher – and because of the social nature of Web2.0 technologies, they are more engaged with the course content by drawing on their higher-order thinking and understanding skills to gain a mastery of the topic. Additionally, the brainstorming activity relates to the process writing approach as brainstorming is the first step in this writing approach for generating ideas linked to the topic.

Both participants mentioned that their least favourite feature of working on the wiki was not the wiki in itself but their concern that it requires having steady supply of data and internet connection. The participants tried using Wikispaces on OperaMini as a

means to compress the amount of data needed to use Wikispaces. However, Wikispaces was unable to run on OperaMini. Further probing of the participants revealed that the students tried accessing the wiki at their homes because the free WiFi available on campus had a slow download speed due to congestion of connected devices.

The participants mentioned that accessing the wiki on a separate platform was cumbersome for them as they already have to use *myUnisa*. This was captured as:

We have myUnisa for online learning where we must go onto the discussions and make comments with other students about our work. Now if we have to use a wiki it will be extra work. – ODLWiki3

At least with myUnisa everything is on the same place. I don't mind using the wiki but it's a lot of work. – ODLWiki9

Conversely, time management from the researcher's planning of the intervention and the participants' use of available time in their study schedule proved to be problematic in the execution of the study. Both ODLWiki3 and ODLWiki9 made their dissatisfaction known regarding the planning and timing of the wiki intervention. ODLWiki9 even went as far as saying that it was preferable for the intervention to be aligned to their coursework in a manner that will earn them credit or a mark allocation for participation and completion of the study. Upon further probing and clarification, ODLWiki9 said:

My time on campus is short and I don't have good network at home so I use the student network here to do my assignments and study but if we got marks for doing this, I would be more focused on it.

ODLWiki3 shared similar sentiments:

Exams are coming up so this isn't so important to me but if I got marks, I can be serious".

In addition, the researcher also had a one-on-one interview with ODLWiki7 to determine whether his fears of being judged and critiqued by his peers persisted

during the course of the wiki intervention. Because ODLWiki7 had initially shown discomfort in participating in the study, the researcher decided that it was prudent to gain deeper understanding of his feelings. The decision to have a separate one-on-one interview was not to single out ODLWiki7, but to create a space where he could express himself. He indicated that although his initial scepticism of the wiki was not as prevalent after participating in the study, he was concerned about the “real life” use of the wiki. When probed what he meant by this, ODLWiki7 said:

this was just a study and it's not real life. What will happen for the subjects I am registered for and I don't know what to do?

This anxiety about writing was studied by Olanezhad (2015) who found that students' anxiety about writing increased as they feared losing face. ODLWiki7's fears contradict Olanezhad's (2015) finding that using wikis reduced the writing anxiety as the prolonged use allayed fears of embarrassment and negativity towards writing.

4.2.2.6.2 Findings based on researcher observations and reflections

Due to unfamiliarity with the wiki, the participants were initially reluctant to post on the wiki. A welcome message was sent as an icebreaker to ease the participants into using the wiki. Once the introductory message was sent, the participation on the wiki increased with each participant posting their introduction messages on the wiki. However, the researcher noted that the participants did not initiate any posts; they waited for prompts from the researcher through the WhatsApp group chat. Interaction on the wiki increased shortly after each prompt from the researcher. Immediately after prompting, the first few posts were detailed complete sentences; but they dwindled out after two days. Communication on the WhatsApp group also slowed down after four days when the researcher would have to send repeated reminders to the participants. However, closer to when exams were scheduled to begin, participation on the wiki and WhatsApp group chat began to peter out with limited responses to prompts from the researcher.

Data from this iteration indicated that although participants understood that they were at an ODL institution, they still preferred introductory, guided face-to-face interaction especially with online collaborative tools. This suggests that they are still transitioning from mostly face-to-face prior education, mainly in high school to a distance learning

context. They agreed and saw the value in using wiki technology to promote collaboration and knowledge creation. However, the depth of that collaboration and interaction with the wiki varied. Because only one of the 10 participants acknowledged the third task of the intervention, there was a 90% dropout which could thus be attributed to the timing of the intervention coinciding with the examination period.

4.2.2.7. Intervention/ programme/ Wiki refinement

A key conclusion from Iteration 2 is limited time available to complete a 5-week intervention as a result of the semester tuition system being followed at Unisa. In order to complete each phase of the process writing approach, the researcher decided to reduce the duration of the intervention to 15 days, and to reduce the number of participants in order to complete all stages of the process writing approach timeously. In addition, the wiki tasks had to be amended to suit the new time and participant limitations.

4.2.3. Iteration 3

As a result of the participants' examination schedule compelling them to withdraw from the research study, data collection for Iteration 2 stopped. At the start of the 2017 academic year, the researcher pursued Iteration 3 of the study. The population sample for this iteration was similar as that for the Iteration 2. Specifically, the population sample was amended to include students registered for ENG1501, ENG 1502 and ENG 1511. ENG1501: *Foundations in English Literary Studies* and ENG1502: *Foundations in Applied English Language Studies*. The data collection process in this iteration also followed purposive sampling from the reading and writing workshops and tutorial classes, which were selected to meet the objective of the iteration. This was to complete all five stages of the writing process since the other iterations were incomplete due to participant attrition. The number of participants was also limited to ensure that each stage of the writing process would enable the participants to complete the entire process. As with the previous iteration, the researcher made use of WhatsApp as a supplementary data collection tool.

4.2.3.1. Participants

The participants for this iteration were selected through purposive sampling from the reading and writing workshops at the Gauteng Regional Centre and tutorial classes

available for students registered for the aforementioned modules listed in Iteration 2. The study participants were limited to four students.

Recruiting participants was done exclusively face-to-face. The researcher attended an evening reading and writing workshop and a Saturday morning tutorial class at the Gauteng Regional Centre. During these sessions, the researcher asked the facilitator to spare a few minutes at the start of the workshop to explain the process. Following the workshop, an information session was held with the participants to explain the purpose and objectives of the study. At the end of the information session, four participants agreed to participate in the study and completed the informed consent form.

4.2.3.2. Data collection procedures

Similar to Iteration 2, the first meeting with the four participants was conducted face-to-face. It was during this meeting that the researcher explained that the study would take approximately 15 days to complete, with each phase of the process writing approach planned to take at most three days. The rationale for allocating three days for each writing stage was informed by observations made in Iteration 2 that the participants' engagement on the wiki dwindled after two days. Additionally, the shorter activity durations were to ensure that the iteration would not interfere with the participants assignment and exam schedule as it was indicated in the second iteration that participant attrition resulted from a clash with their exam timetables.

As with the previous iterations, anonymous usernames were assigned to the participants to protect their identity (for example, ODL1Wiki). This step is fully in line with the ethics approval certificate (see Appendix E). A walk-through of the Wikispaces site was presented to the participants, including the use of icons, chat, comments and discussion functions. This demonstration was done to allay fears of unfamiliarity and discomfort that may be associated with using a new technology. Wikipedia was used as an example to establish understanding of what a wiki is and Facebook was used to guide the participants on the icons used on the Wikispaces platform. The researcher drew on the familiarity of these social platforms as scaffolding to aid in the knowledge creation process.

Following observations from the first two iterations, another WhatsApp group chat was created for additional support that may be needed by the students during the iteration.

The data collected from previous iterations has shown that it is imperative to establish and maintain contact and engagement with participants throughout the study. The researcher's interaction with participants was primarily in English, with instances where she would code-switch and use the languages commonly used in the Pretoria region.

4.2.3.3. Data collection instruments

This iteration was designed to complete all stages of the process writing approach on the wiki. As such, the wiki serves as the primary source of data, with supplementary data from the researcher's observations and texts from the WhatsApp group chats. Following the wiki intervention, an open-ended questionnaire was emailed to the participants to elicit further understanding of the students' perceptions. The areas addressed in the questionnaire covered the use of the wiki, group work and collaboration, and wiki functions. A question on possible technical problems was also included in the questionnaire. However, the researcher alerted the participants that Wikispaces does not work on OperaMini and other data compression sites, as was found in Iteration 2. Since the questionnaire only covered four aspects of the wiki intervention, the participants were given two days to return it to the researcher. By the end of the two days, all the participants had returned the completed questionnaire. Additional data was collected through the researcher's observation of the participants' interaction and engagement on the wiki and the WhatsApp group chat. The researcher took notes of the interaction and engagement on both platforms after each phase of the process writing approach.

4.2.3.4. Activities

The activities for this iteration were based on the images in Figure 4.2 (see below for ease of reference) and were completed on the group wiki page. The task activities were to assess the participants' visual literacy skills and determine their critical thinking capabilities based on the images.



Figure 4.2: An example of a text paraphrased from Twitter, which was used in the learning task

The task prompts given to them for analysing the tweets were:

- Task 1: Compare and contrast the two images above (Figure 4.2) by noting keywords that would suggest that the first tweet is plagiarised from the second tweet.
- Task 2: Use the keywords generated from the first activity, group similar ideas together using a mind map. You can work together to share ideas.
- Task 3: Use your group mind maps, write a short argumentative paragraph on whether the first tweet is an example of plagiarism.
- Task 4: Comment on each other drafts and suggest areas of improvement. You can reorganise ideas that do not flow logically within the text. As a group, you are to agree to the points raised in the group paragraph.
- Task 5: Proofread your group paragraph, focusing on language and argumentation.

4.2.3.4.1. Prewriting

In the same vein as Iteration 2, the participants had to brainstorm ideas on whether the tweets shown as Figure 4.2 above can be classified as plagiarism. They were directed to look at the differences and similarities in both tweets such as the language used and the times when the tweets were posted. In addition, Figure 4.3 (repeated below for ease of reference) was used as a scaffolding aid in the knowledge creation process.

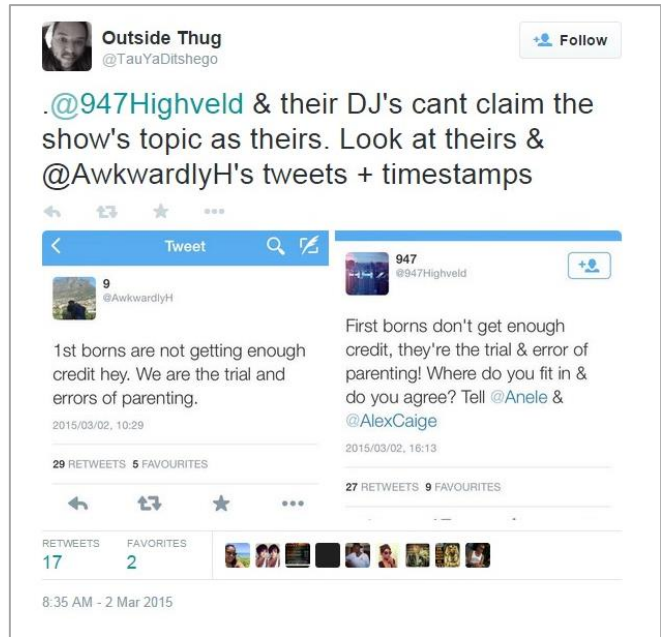


Figure 4.3: Social media commentary on the similarities of the tweets

Following from the participants from Iteration 2 disagreeing on whether paraphrasing and reordering words was plagiarism, the researcher advised and referred the students to the TurnItIn (<https://www.turnitin.com/solutions/plagiarism-prevention>) and Writecheck (<http://en.writecheck.com/types-of-plagiarism>) websites to assist with the task of prewriting.



Figure 4.7: Brainstorming activity discussions on the tweet

The participants were informed on these additional resources on plagiarism so that there would not be any time delays in the completion of the first activity. For this task, the researcher communicated to the participants that they were to plan their writing by

using the mind-mapping technique to organise the ideas generated in the first activity. As with Iteration 2, mind mapping was the preferred output for this activity because it was covered in their module as part of a comprehension task in their assignment. The output of this task was a group authored mind map (see Figure 4.8).

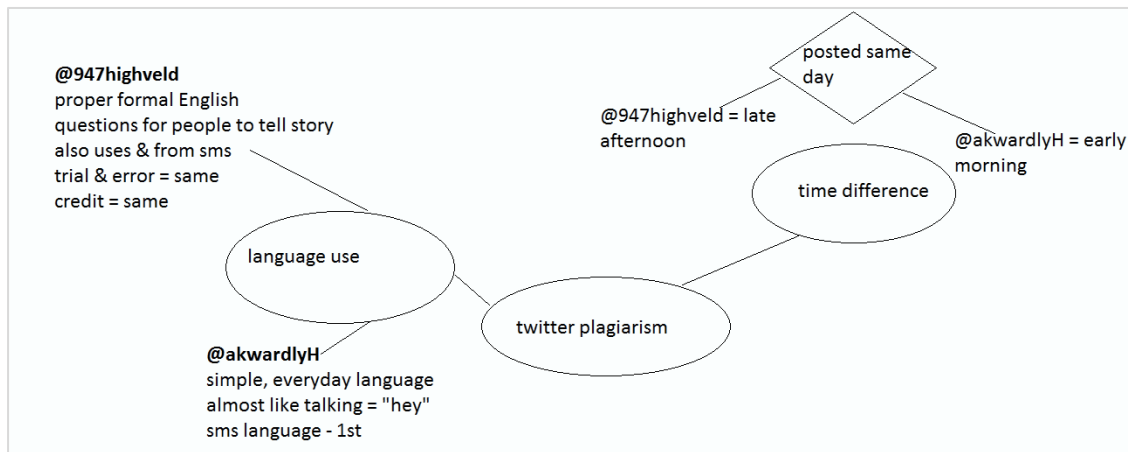


Figure 4.8: Group authored mind map based on tweets shown above

4.2.3.4.2. Drafting

For this activity, the students wrote a draft paragraph based on the mind map generated in the first activity. The researcher did not coordinate how this activity was to be carried out by the participants; the expected output was communicated to the participants and they had to organise themselves to ensure that a draft paragraph was produced. The participants alerted each other to their contributions on WhatsApp after each input was made on the wiki. The researcher decided on this approach to simulate a genuine distance education setting and to ensure that the participants practice self-regulation in their learning. As each activity was given a duration of three days, the participants produced the following draft (see Figure 4.9):

The tweets whereby first born children are the trial and error of parent look the sane and have the same message. Both tweets use the same language but the radio station use proper formal English and the other tweet uses language that is used with friends. Although the tweets are the same, they are placed on social media that is open for anyone to see and use meaning there is nothing wrong if you don't acknowledge the source. The main differences in the tweets is the time when they were both posted. The radio station copied the message from @AwkwardlyH and they should have given credit for the source. The radio station used the idea for a radio show

Figure 4.9: Extract of draft paragraph authored by participants

4.2.3.4.3. Revising

As can be seen from Figure 4.9, the draft paragraph was based on the brainstorming activity discussions (see Figure 4.7). The purpose of this activity allowed the participants to reorganise their ideas, amend their sentence construction and adapt their word choice to ensure their ideas are clearly communicated. The researcher, using the comments tool of Wikispaces, provided feedback to the participants to work more collaboratively in revising the paragraph. In addition, other feedback given to the participants was that they had to keep an academic tone in their paragraph. From Figure 4.9 above, it was clear that ODL3WiKi had a different perspective from the rest of the participants. The researcher informed the participants to explore the differing view raised by ODL3WiKi as a strategy to revising their paragraph. This was important because the participants had to argue and present their views as to why their points were valid. This step in the approach is an essential part of process writing as it allowed the participants to focus on the “process” of writing and their intended message.

The tweets posted by @AwkwardlyH and @947Highveld share the same idea and message about first born children being the trial and error of parenting. The main differences in the tweets is the time when they were both posted and the type of language being used. From the image given, @AwkwardlyH posted the tweet in the morning and @947Highveld later the same day. The early tweet uses everyday language between friends and the other is more formal English. Even though the tweets are on social media for everyone to see, the first person who came up with the idea must be given credit. @947Highveld has copied the idea and message of the original tweet by only changing the language and creating a radio show. Their tweet is a form of plagiarism.

Figure 4.10: Revised extract from participants

4.2.3.4.4. Editing

For this activity, the participants proofread their paragraph by paying attention to grammar, spelling and punctuation. Figure 4.11 is an edited extract:

The tweets posted by @AwkwardlyH and @947Highveld convey a similar idea that first-born children are not given credit for being the trial and error of parenting. The main differences in the tweets are the timing of each tweet and the choice of language used. From the images provided, @AwkwardlyH posted the tweet in the morning and @947Highveld later the same day. The earlier tweet uses everyday language commonly used between friends and the other uses more formal English. Even though the tweets are on social media for everyone to see, the first person who came up with the idea must be acknowledged. @947Highveld has copied the idea and message of the original tweet by only changing the language and creating a radio show. Their tweet is a form of plagiarism.

Figure 4.11: An edited extract

4.2.3.5. Data analysis

The data for Iteration 3 were collected from the participants' inputs on the wiki. For this iteration, the participants completed all stages of the process writing approach, which were analysed by looking at the participants' engagement and interaction with the wiki and each other. Furthermore, the researcher observed and took note of common words and phrases used by the participants including any behavioural or attitude changes in the participants which were noted in a small notebook; the frequency of posts made on the wiki was noted and the themes related to engagement and interaction expressed in the posts were analysed.

The questionnaire was based on the core constructs of the Technology Acceptance Model (TAM I and TAM II), which look at the constructs of perceived usefulness and perceived ease to use within the social influence and cognitive instrumental processes (Davis 1989; Legris, Ingham & Collette 2003; Usluel & Mazman 2009). The researcher followed a deductive thematic analysis to look for themes relating to perceived ease of use and usefulness that would affect the participants' voluntary acceptance of the technology.

4.2.3.6. Findings

The aim of this study was to explore undergraduate students' experiences of using a wiki as a computer-mediated tool for facilitating process writing in an ODL context. The objectives thereof related to the students' perceptions on the use of wikis and the suitability of wikis for tasks designed to teach academic writing.

4.2.3.6.1 Findings from questionnaire

In order to adequately address the aim of the study, the open-ended questionnaire administered to the participants covered the use of the wiki, group work and collaboration, and wiki functions. The extracts are copied verbatim from the participants responses – language errors are marked by an asterisk (*). Each of the questions will be individually addressed in the subsections below:

Identify aspects of the wiki that were of most value to you during the intervention. Make reference to group work and collaboration in your response:

This question addressed the participants' positive perceptions on the functions and use of the wiki. The participants' responses to this question can be grouped into categories of perceived ease of use exemplified by the theme of wiki functions and perceived usefulness shown by the theme of use of wiki.

The responses given by ODL1WiKi and ODL2WiKi relate to their perceptions of the chat and discussion functions. According to ODL1WiKi, the social element of the chat feature is ideal for creating rapport with others prior to working together. This is in line with social constructivist argument for the human need for “relatedness” as a result of a sense of belonging (Wong, Chen et al. 2011). The “open-ness” created by the use of the discussion page, albeit a cause of discomfort initially for ODL2WiKi, resulted in confidence in sharing his/her writing despite the work being publicly accessible.

I really liked the chat feature on the wiki page. It was nice that we started by chatting so we get to know each other before working on the writing exercises. This reminded me of using Facebook. – ODL1WiKi

The discussion page put everything on the open for all of us to see. It was a big* uncomfortable at first but after a while, it got better. I think it was good to see everyone's work because it pushed me to also put my work out there – ODL2WiKi

According to TAM, perceived usefulness relates to one's outlook and standpoint on technology, and their behavioural intention to use and actual use of technology. The responses given by ODL3WiKi and ODL4WiKi indicate their positive perceptions on the usefulness of the wiki. ODL3WiKi values the ability to refine his views and co-

create understanding based on group inputs. The collaborative nature of the wiki was highlighted by both ODL3WiKi and ODL4WiKi as being beneficial to their learning. While ODL3WiKi attributed this collaboration as “almost like groupwork [sic]”, ODL4WiKi found the sharing of ideas as “very cool”. ODL4WiKi felt encouraged by the use of the wiki as it aided in “assessing [his/her] own contribution and evaluating the work”. The edit function of the wiki allowed for scaffolding as it was through engaging with other participants’ views that ODL3WiKi and ODL4WiKi could refine and re-evaluate the quality of their work.

I liked that I could go back and change my mind on what I wrote especially after reading the other students* contribution. This was almost like we are working together, almost like groupwork*. I think that this group wiki activity was very helpful. This is like back to back feedback. – ODL3WiKi

I thought the use of the wiki was very innovative and encouraged my own learning. Sharing my ideas with the other participants was very cool. I found it useful in assessing my own contribution and evaluating the work of my group. – ODL4WiKi

The above responses relate to the participants most valued attribute of the intervention. Different aspects of group work and collaboration featured as valuable for each of the participants: the chat and discussion pages highlight the social constructivist nature of wiki use and the edit function of the wiki allows for new ideas to be co-created and assimilated during a learning social interaction setting (Woo & Reeves 2007:18). The next section will look at the features least valued by the participants.

Identify aspects of the wiki that were of least value to you during the intervention. Make reference to group work and collaboration in your response:

This question addressed the participants’ negative perceptions on the functions and use of the wiki. The participants’ responses to this question related only to the construct of perceived usefulness in relation to actual use of the system. In their response, the participants focused on their attitudes while using the wiki. Their responses show a concern of how the wiki will be incorporated in their actual learning:

Wikis are a great for working together and are really beneficial in incorporating group work and interaction into an online course. I think this wiki worked only because we were so little working on it. Some of my modules have a lot of students registered and it would be difficult to track everyone and follow each other. – ODL1WiKi

Even though this exercise was just a few of us, how will it work for all our modules? I'm worried that it will be too much work on top of all the work we have. – ODL4WiKi

From the above, both ODL1WiKi and ODL4WiKi are concerned about the actual use of the wiki within teaching and learning system. From ODL1WiKi's comments, it is clear that he/she finds the collaboration and interaction afforded by the wiki as "beneficial" and valued. However, the possibility of more people working on the wiki would make it "difficult to track everyone and follow each other". What can be inferred from this statement is that the participants place significant meaning on the knowledge sharing capabilities afforded by wiki learning communities which are absent in distance education.

Research has shown that if it is well structured, a wiki fosters critical thinking (Lee 2010:261) and enables student autonomy (Kessler, Bikowski & Boggs 2012). ODL2WiKi had a remarked dislike of interrogating his/hers and others' views in activity 3:

The part where we had to convince each other in activity 3 was really difficult for me. I didn't like it at all to be honest because I had to think hard and question myself and the reasons why the tweets was plagiarism* – ODL2WiKi

The statement, "I had to think hard and question myself and the reasons why the tweets was plagiarism" suggest that the task required higher-order thinking skills from ODL2WiKi. This self-interrogation necessitated critical thinking on the part of ODL2WiKi. As a result of ODL3Wiki's independent stance that posting similar ideas on social media is not plagiarism, albeit incorrect, shows student autonomy. While it is uncomfortable, the act of being "convinced" compels the participants to take ownership

of the learning process by also interrogating their views (students' quotes remain unedited*):

At first I was concerned about the use of the wiki. I have* heard of wikis before but I had never used one. Now, I wonder why I was concerned in the first place. I didn't like that I was alone to think different and the group wanted to convince me to be like them – ODL3WiKi

Because ODL3WiKi may have felt alienated by holding differing views from the group, it is necessary to support diverse ways of learning. Asking the participants to convince each other on their views is one mechanism for creating active learning as each participant had to rationalise and engage with the task to solve the problem.

The following section will address any technical issues that the participants experienced during the intervention.

Did you experience technical problems when using wiki? (Please specify, referring to wiki functions)

This question featured in the questionnaire based on the experiences of the participants from Iteration 2. However, since the researcher alerted the participants that Wikispaces does not work on OperaMini and other data compression sites, the participants' experience was limited to the wiki itself. The only participant who raised an issue with not being able to use a data compression site was ODL1WiKi:

We were told that Wikispaces won't work on Operamini* and it sucks because I could only work on campus using the free data we had. I don't have a laptop and using this wiki on my fone* wasn't easy and didn't want to use my own data so I only had to use the computers on campus – ODL1WiKi

This finding echoes the findings from Iteration 2 where participants raised a concern with the use of their own data to work on the wiki. Notwithstanding that Unisa provides unlimited WiFi on all its campuses, students' preference and comfort will affect their attitude towards the use of any technology intervention.

Although Wikispaces is touted as being user-friendly for both teachers and students, two of the four participants in this study struggled with using the technology. ODL2WiKi's curiosity to explore the platform was marred by his/her difficulty to "load graphics and other fun things like icons and images but it wasn't so easy". It is a missed learning opportunity that ODL2WiKi's curiosity could not be harnessed as it may have had a positive effect on the other participants.

I was curios* how to load graphics and other fun things like icons and images but it wasn't so easy so I just ignored it because it wasn't necessary for this. We had avi's to choose from and I wanted to use a cool pic but... – ODL2WiKi

Even though ODL4WiKi acknowledges that he/she is "not very technical", he/she also notes that it's "really difficult" and not "easy" to upload onto Wikispaces. This may be indicative of ODL4WiKi's computer literacy, which may be problematic for future online learning.

Some of the features of the wiki were really difficult to use. I am not very technical. Uploading the paragraph using attachment icon wasn't so easy.
– ODL4WiKi

ODL3WiKi, on the other hand, is rather indifferent:

Like I said for the last question I have head* of wikis and I was worried because I didn't use it before but this was fine, but I didn't use it much except for chat. I didn't try out the other things on website – ODL3WiKi

Based on the participants' responses, Wikispaces is not as user-friendly for students as anticipated. However, this may be due to the participants' unfamiliarity with the technology.

Do you have any additional comments or suggestions on using wiki in this study?

The participants generally had positive comments to share about their experience using the wiki. The participants "really like using this wiki" (ODL1WiKi), and found the

wiki “helpful”, “interesting”, valuing the “back-to-back feedback” (ODL3WiKi). However, they also raised concerns regarding the group sizes to make it more effective (ODL1WiKi), commenting that they are “not yet comfortable” and “a bit anxious” of the collaborative authoring and participatory knowledge-making process (ODL2WiKi):

I really liked using this wiki but think this wiki worked only because we were so little working on it. Maybe much bigger groups for our modules can be broken in manageable chunks that are bigger than our small group. – ODL1WiKi

I kinda* like this wiki thing but I’m not yet comfortable with it. I know you said that the Wikispaces was set on private so other outside people don’t see what we put out there but it makes me a bit anxious still that the group can see my work. – ODL2WiKi

I think that this group wiki activity was very helpful. This is like back to back* feedback. It was interesting to work on the wiki – ODL3WiKi

ODL4WiKi commented on the actual difficulty of the tasks, saying they were too easy:

The tasks was too simple maybe they must at university level – ODL4WiKi

The participants’ comments and suggestions show that they may be open to using wikis within their actual learning environment. Their responses to this question imply that they place a high significance on the perceived usefulness of the wiki as opposed to its perceived ease of use.

4.2.3.6.2 Findings from observations and reflections

The lessons learnt from Iteration 2 ensured that Iteration 3 faced minimal difficulties. From the onset, the selection of participants through purposive sampling ensured that the participants had a clear understanding of the study’s objectives and how to go about in achieving them. Furthermore, shortening the duration of the intervention to three days per activity meant that the study would not conflict with the participants’ study schedule. The elimination of the competing priorities implied that the participants could pay attention to the intervention without losing focus on their studies.

While a WhatsApp support group was created to provide additional support and to foster continued engagement with the participants, it did not play as significant a role in this iteration as it did previously. To keep the momentum, the researcher still posted reminders every three days that a new activity was posted. This helped create a subtle, background presence to give the participants confidence that the researcher was still managing the process. The researcher observed that the participants established a good rapport with each other and interacted amiably on wiki.

4.3. SUMMARY OF KEY FINDINGS

The findings of the iterations are summarised in Table 4.3 below:

Table 4.3: Summary of key findings from the iterations

Iteration type	Data collection and activities completed	Findings		
		Wiki data	WhatsApp group chats	Other (including observations, reflections and study refinements)
Iteration 1: Fully online	<ul style="list-style-type: none"> • Data collection: only by observation • Activities completed: none 	<ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • Lack of early engagement and interaction with participants led to high participant attrition • Elaborate and detailed orientation on wiki technology is necessary to familiarise participants to the technology • Intervention: facilitate interaction, engagement and participant integration as soon as possible • Intervention: create additional support by creating WhatsApp group chat to facilitate interaction
Iteration 2: Blended (online and face-to-face)	<ul style="list-style-type: none"> • Wiki data • interviews and observations • WhatsApp group chats • Activities: prewriting to revising 	<ul style="list-style-type: none"> • Only two stages of the process writing approach were covered: robust brainstorming and drafting, with minimal activity on revising • Engagement and interaction waned due to exam schedule constraints 	<ul style="list-style-type: none"> • Used initially to provide advice on additional resources • Researcher's tasks on initially entailed setting up the virtual meetings, managing time, inviting comments, summarising and concluding 	<ul style="list-style-type: none"> • Participants were initially reluctant to post on the wiki • Participants did not initiate any posts; they waited for prompts from the researcher • Scheduled to begin, participation on the wiki and WhatsApp group chat began to peter out with limited

			<ul style="list-style-type: none"> • For the first two activities, WhatsApp prompts were used to drive engagement and interaction • WhatsApp chats became irregular and inconsistent closer to the participants exam schedule conflicts 	<p>responses to prompts from the researcher</p> <ul style="list-style-type: none"> • Participants still preferred introductory guided face-to-face which suggests that they are still transitioning from mostly face-to-face prior education • Intervention: reduce activity duration so that it doesn't coincide with assignments and exams • Intervention: reduce number of participants in order to complete all writing stages
Iteration 3: Blended	<ul style="list-style-type: none"> • Wiki data • Open-ended questionnaire and observations • Activities: prewriting to editing 	<ul style="list-style-type: none"> • Duration of intervention was 15 days, with 3 days per activity • Positive, valuable aspects: chat and discussion functions are ideal for creating rapport among participants and fostered confidence in sharing work publication • Positive, valuable aspects: participatory knowledge-making processes were enabled participants to refine their views through an assessment of their own contributions and an evaluation of others' work • Least valuable aspects: concerned about the actual use of the wiki within teaching and learning system 	<ul style="list-style-type: none"> • Minimal activity from the participants 	

		<ul style="list-style-type: none">• Least valuable aspects: although self-interrogation necessitated critical thinking and taking ownership of the learning process some participants felt discomfort with the unfamiliar process• Participants suggested that Wikispaces is not as user-friendly as expected but this may be due to limited computer literacy		
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4.4. CONCLUSION

This chapter presented the data collection methods used to address the research questions, detailed three iterations in pursuit of the research objectives before presenting a comprehensive account of the findings, which were summarised in a concise table.

The findings of the study, gleaned from the participants' comments and suggestions, show that they may be open to using wikis within their actual learning environment. For instance, the participants indicated that the timing of the study is critical so that it does not coincide with assignment submission dates and examination dates. They also lamented that although Unisa provides free WiFi access while on campus, the speed of the connectivity is slow as a number of students are connected simultaneously affecting their available time to participate in the research and complete their studies. Different aspects of group work and collaboration featured as valuable for each of the participants: the chat and discussion pages highlight the social constructivist nature of wiki use, and the edit function of the wiki allowed for knowledge creation. Generally, wikis are perceived as innovative while encouraging learning. Their responses to the questionnaire imply that they place a high significance on the perceived usefulness of the wiki as opposed to its perceived ease of use.

The next chapter will provide a synthesised discussion of the findings.

CHAPTER 5: DISCUSSION OF THE RESEARCH FINDINGS

5.1 INTRODUCTION

This chapter provides a discussion of the findings presented in Chapter 4. It begins by framing the participant demographics and situating the study within higher education in South Africa. It is important to provide context on the type of student Unisa caters for because their lived realities will shape their perception of integrating technology in distance education. Furthermore, this context will guide the discussion as it relates to the first research question: how students perceive the effectiveness of using wikis in the teaching of academic writing using a collaborative process writing approach. In order to address the second research question, the seven principles of using technology, as developed by Chickering and Ehrmann (1996), are used to frame the discussion. The chapter concludes by summarising the key points of the discussion.

5.2 BACKGROUND

The integration of technology in education has inadvertently perpetuated the exclusion of previously disadvantaged students from higher education. This digital divide is worsened in South Africa where data connectivity remains higher than the rest of Africa. According to a 2017 position paper by *In On Africa* (<https://www.inonafrika.com/2017/08/07/>), the

“cheapest cost for a 1GB basket” in South Africa was US\$7.49, compared to significantly lower costs in Egypt (US\$1.41), Kenya (US\$4.92) and Nigeria (US\$3.21). High data package costs and out-of-bundle rates mean that mobile phone internet access is not an economically viable option for low-income users, which the majority of students are.

Despite South Africa having more internet users than other African countries, 47% of the population does not use the internet (Gillward, Mothobi & Rademan 2018:99) as data prices remain unaffordable for most South Africans. While the World Bank (2018:iv) asserts that “improving internet connectivity and low-cost broadband access can help increase connectedness”, the cost of being connected further perpetuates exclusion through a digital divide.

Percentage of Households With Access to Internet by Province

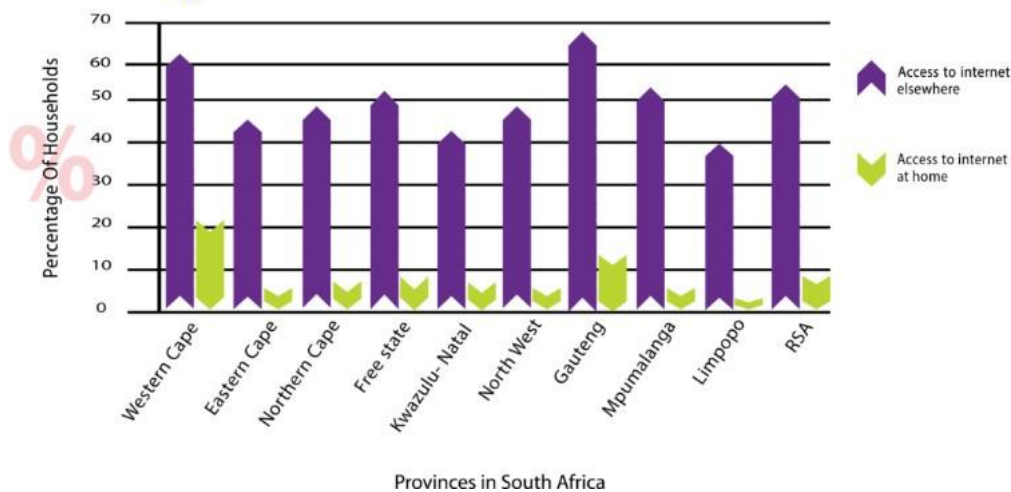


Figure 5.1. Percentage of households with access to internet by province

Source: <https://www.inonafrica.com/2017/08/07/digital-divide-south-africas-higher-education-sector-public-internet-access-important-context-tertiary-education/>. Adapted from: General Household Survey of Statistics South Africa, 2015

The above figure shows that in seven of the nine provinces, less than 10% of South African households have internet access. Although Unisa provides free data access on all its campuses, the bandwidth tends to be slow due to overuse and numerous connections. This affirms the findings that participants make use of the free internet for their registered modules because they do not have internet at home. Although there are data usage compression Apps such as OperaMini, Wikispaces failed to work effectively on OperaMini. This shows that despite the challenges faced, students make the effort to transcend the digital divide. The sections that follow will discuss the findings in relation to the research questions presented in the first chapter of this dissertation.

5.3. HOW DO STUDENTS PERCEIVE THE EFFECTIVENESS OF USING WIKIS IN THE TEACHING OF ACADEMIC WRITING USING A COLLABORATIVE PROCESS WRITING APPROACH?

In this section, the discussion will centre on students' perceptions on the effectiveness of using wikis in the teaching of academic writing using a collaborative process writing approach. Integrating students into online communities has the potential to impact students' perceptions of online learning. As noted by Angelino, Williams and Natvig

(2007), early and frequent engagement and integration of students into online communities is of critical importance. Furthermore, within the student-centred approach, it is critical to engage and integrate students into online communities as early as possible and frequently (Angelino, Williams & Natvig 2007). While the first iteration of the study failed to take off as a result of limited communication from the researcher, early and frequent interaction with participants from subsequent iterations proved beneficial. Comments from ODL1WiKi such as “it was nice that we started by chatting so we get to know each other before working on the writing exercises” support the notion of early integration of students. Interaction and proactive engagement has led students, who were weighing their options of online courses, to complete them as is evidenced by Boston and Ice (2010).

In addition, the characteristics of online students such as learning styles and socioeconomic demographics must be borne in mind when addressing attrition rates as they may offer more insight and reasons for attrition. Although it was not within the ambit of the study’s goals, the challenges experienced during the first two iterations pointed to a need to consider students’ contexts and realities (such as examinations) when student-support mechanisms are planned and implemented. In both the second and third iterations, participants were weary of using their own data for partaking in the study: ODLWiKi3 and ODLWiKi9 in Iteration 2 lamented the need for a steady supply of data and reliable internet connection, and ODL1WiKi in Iteration 3 confidently said, “I didn’t want to use my own data so I only had to use the computers on campus”. As such, it is important to stress the importance of the ODL principles of openness, flexibility and student support in considering the socio-economic standing of students in any learning intervention.

For instance, Bawa (2016) mentions social and family factors, motivational factors, technological expertise of students and educators, lack of institutional support for students and educators as limitations in using educational technology for digital natives and digital immigrants. Furthermore, the characteristics of online students should be borne in mind in the selection of appropriate platforms for online learning and designing tasks. Literature indicates that active student participation in collaboration does not occur automatically, especially on wikis. It cannot be taken for granted that all students at distance education institutions are keen to work collaboratively and that they are digital natives familiar with Web 2.0 technologies. The

characteristics of the student cohort can affect their views of using wikis for collaborative writing.

The factors attributed to participant attrition cannot be reduced to a single cause. Lee and Choi (2001) argue that attrition is a result of the “interaction of numerous factors that eventually lead to a student to complete or not complete a course”. This view prevailed in the study as participants cited a number of reasons including poor engagement and interaction from the researcher, the timing of the project (it coincided with exams), no credit for participation, technology access issues, an unfamiliarity with Wikispaces and discomfort with online communication with “strangers” and inconsistent participation from members. An area of anxiety that presented itself during the study is the fear participants had of their work being copied and ridiculed, and the need for the researcher to create a secure online environment for participants to display their work. This is similar to Cole’s earlier (2009) finding that many undergraduates are reluctant to be the first to post and feel a lack of confidence in sharing their writing on a wiki. One participant commented:

I kinda* like this wiki thing but I’m not yet comfortable with it. I know you said that the Wikispaces was set on private so other outside people don’t see what we put out there but it makes me a bit anxious still that the group can see my work.

From the first iteration, it is clear that constructing knowledge and building a shared understanding of online learning goes beyond merely distributing information, without guidance on how the information should be used; it entails cooperative engagement and a commitment to support the active learning as is evidenced from Iteration 3. These views are testament:

I thought the use of the wiki was very innovative and encouraged my own learning. Sharing my ideas with the other participants was very cool

I liked that I could go back and change my mind on what I wrote especially after reading the other students* contribution. This was almost like we are working together, almost like groupwork*

I think that this group wiki activity was very helpful. This is like back to back* feedback.

Addressing the issue of early integration and frequent engagement leaves room to tackle the task of collaborative writing and determining the effectiveness of using wikis to teach academic writing. Increased engagement positively affects student perceptions and satisfaction with online learning. Martin and Bolliger (2018) assert that regular announcements and email reminders from instructors are perceived as most beneficial. However, delaying communications with participants was seen as negatively affecting students' uptake of the wiki intervention and led to 100% attrition of participants in the first iteration of the study.

The researcher's prompt engagement with the participants through WhatsApp was beneficial, as per Martin and Bolliger's (2018) assertion, by advancing the participants' perception of wikis as can be seen in their continued consent to participate. Although the WhatsApp group chat was used to alleviate the participants' lack of confidence in writing on the wiki and their fears for correcting each other's work lingered. Järvelä et al. (2015) believe that a lack of confidence in writing coupled with high anxiety tends to have a negative influence on collaborative writing. This finding was echoed in the second iteration where one participant was hesitant to participate in the study.

Using smaller tasks to break down the process writing approach was effective in allaying the anxiety associated with writing and build the participants' confidence. These small tasks act as a form of regulation, self-monitoring and self-evaluation, which the participants can use to measure their performance (Järvelä et al. 2015). Additionally, it is ideal to use tasks that mirror learning tasks that students are likely to encounter in their classrooms. For instance, the participants had been exposed to creating mind maps and they had been confronted with the issue of plagiarism in their course modules. Therefore, the familiarity of the activities used in the study helped dispel the discomfort and uncertainty associated with tackling a new task on an unfamiliar platform.

According to Chiang, Yang and Hwang (2014: 362), "learning from learning scenarios that present relevant materials (e.g., images, texts, videos) in a well-integrated and

organised form can avoid creating incidental cognitive load, and hence benefits students in improving their learning performance”. The familiarity created by mirroring authentic learning tasks eases participants’ anxiety and in turn boosts their confidence towards the learning task.

5.4. WHAT MAKES STUDENTS FIND WEB 2.0 TECHNOLOGY, ESPECIALLY THE USE OF WIKIS, SUITABLE FOR TASKS DESIGNED TO TEACH ACADEMIC WRITING?

One of the aims of the study was to determine whether Web 2.0 technology, especially the use of wikis, is a suitable medium to teach academic writing. As explored in the chapter on the literature review, there are numerous studies on the use of wikis to mediate the teaching of academic writing. Web 2.0 technologies are most suitable for user-generated content and permit users to contribute, share, and collaborate with others. Through the study, participants were expected to collaborate towards creating new knowledge on plagiarism as a means to develop their academic writing skills.

One expectation that was contested by the study’s development through various iterations was that students are “digital natives” – a term coined by Prensky (2001) – who have been exposed to a wide range of digital technology and are proficient in the use of such technology (Brown & Czerniewicz 2010). Despite being familiar with using digital platforms and other social media tools such as WhatsApp, Facebook and wikis such as Wikipedia, the participants seemed to have limited knowledge of how Web 2.0 apps function. Selwyn (2011: 135) refers to “critical digital literacies” that are essential for using technology and gaining a critical understanding of the best uses of such technology. In addition, Selwyn (2014:3) warns against an “enchantment with technology and the desire to benefit from continued forward progress”.

Moreover, the 2017 Horizon Report on Higher Education calls for the “upskilling of digital prowess...for a particular context to deepen [the] learning outcomes and engage in creative problem-solving” (Horizon Report 2017: 24). Although autonomy and independent learning are necessary for distance education, the onus still rests on the educator to structure the learning task within a framework that permits students to make sense of the facts and ideas while also accounting for deficiencies in the students’ prior knowledge (Garrison 1993). From the study, it was evident that for an effective adoption of the wiki, the researcher had to be involved as a guiding participant

aiding the students towards creating an autonomous learning environment that supports their collaboration and knowledge co-creation.

The seven principles of using technology, as developed by Chickering and Ehrmann (1996), are used to frame the discussion on whether Web 2.0 technology is suitable for such a task as teaching academic writing.

5.4.1. Student-faculty interaction

The results of the first iteration show that introducing new technology requires proactive engagement and interaction with students. It is impracticable to claim that the wiki was ineffective as student-teacher and student-student engagement was non-existent. Fung and Ma (2013) found that low participation rates were due to lack of effort or support to ensure students' participation in self-paced online learning or students' acknowledgement of feedback from online discussions. It is worth noting that the students' initial curiosity to respond to the call illustrates a keen interest that must be bolstered and developed through student-teacher involvement. Once interaction with the researcher improved in subsequent iterations, the participants became more engaged and responsive to the intervention. In the theory of transactional distance, Moore (2007) explains that interaction in distance education involves student-to-instructor, student-to-content, and student-to-student interaction. The active involvement of the researcher in the online environment was seen by participants as critical to the success of the online intervention. This interaction, however, was supplemented by creating a WhatsApp support group chat as the participants were not fully conversant in the wiki technology.

The change to a focused blended approach suggests that there is a need for guided learning in order for the effective use of technology in distance education settings. Selwyn (2011:134) states that it is "better advised to focus on the 'blending' of student-centred and student-led modes of technology use with teacher-led, face-to-face instruction". Once the researcher was more involved in the process, the participants become more engaged not only in the use of the wiki but the creation of knowledge through peer scaffolding too.

5.4.2. Cooperation and reciprocity between students

While technology is important in enabling an efficient and effective delivery of distance education (Woo & Reeves 2007; Usluel & Mazman 2009), its success is dependent

on the cooperation and reciprocity between students. However, fostering and engendering a sense of cooperation and reciprocity among students must be driven by both students and educators. Constructivist views of learning suggest that active learning takes place as a collaborative effort with participants sharing their ideas with others to enhance their critical thinking and deepen understanding of concepts.

While being cognisant of the limitations of the Ethics Approval, the students were encouraged to develop relationships with each other in order to explore existing knowledge and expand their knowledge base together. Literature on distance education emphasises the need to provide social interaction in a learning community and that the success of online interventions is related to involvement with the online community (Malinen 2015). The first iteration echoes the importance of engagement and interaction not only between students, but also with the researcher. However, in ensuing iterations, some participants showed discomfort communicating online with “strangers” and feared their work being judged and criticised by these “strangers”. Creating an “ice-breaker” activity where the students introduced themselves on the wiki allowed them to find common ground. The creation of a WhatsApp group chat provided an additional support mechanism for the participants and was used to maintain student-researcher and student-student engagement.

5.4.3. Active learning techniques

Active learning as an approach requires students to engage the learning material by reading, writing, discussing, listening and reflecting in order to solve problems. The learning problem must be something the students are familiar with as they engage their prior knowledge and the new material. In order for active learning to take place, students must make use of higher-order thinking skills such as analysis, synthesis and evaluation (Chickering & Gamson 1987).

The learning tasks for this study related to plagiarism on social media. The rationale was premised on the high prevalence of plagiarism in students’ written work and students’ attraction to social media. Students must relate their current knowledge to the new knowledge for effective, active learning to take place. In order to assist the students in accessing and determining their prior knowledge on the subject, a brainstorming technique was used. Students are asked to explore what they know

about a subject, in this case plagiarism, and then required to make new creative connections in order to develop new possibilities.

The process writing approach also necessitates active engagement in the learning process. The stages of the process approach allow for effective interaction, flexible participation and collaboration. For instance, the students were guided to look at markers in the activity to help them generate ideas (which is the first stage of the process writing approach) on plagiarism and apply the content in a systematic manner by organising and planning their writing. The participants were able to discover (by drafting the initial written work as evidenced in the second and third iterations) and reformulate their ideas in an attempt to create meaning and ultimately learn collaborative in an informal setting. Using the process writing approach in this manner, students stretch their higher-order skills of analysis and synthesis.

5.4.4. Prompt feedback

Prompt feedback is essential for online learning. As can be seen in the first iteration, the limited interaction and engagement had an adverse effect on the progress made in the study which resulted in 100% participant attrition. In the second iteration, students required guidance from the researcher to determine whether they had understood the requirements of the task and to clarify expectations. In this instance, feedback was given weekly. However, the weekly interventions and feedback periods were ill-timed with the participants study schedule.

In the third iteration, the researcher engaged the participants every three days. This was done in line with the findings by Mendes, Thomas and Cleaver (2015) who found that student perceptions of prompt feedback related to feedback received within two weeks at most for first-year students, while third- and fourth-year students added that prompt feedback should be accompanied with quality. Whereas the participants in this study were first-year students, a two-week feedback window was impractical and unviable for this study especially in the first two iterations. The participants wanted feedback and sought the researchers' approval and acknowledgement with each stage of the writing process. Moreover, prompt feedback and interaction allow the researcher to create an online learning community among students and with the researcher. Incorporating additional support mechanisms in the form of a WhatsApp group chat was a means to encourage participation and advance critical thinking tasks.

5.4.5. Time-on-task

The issue of timing presented itself throughout all three iterations in various forms. From the onset, the delay in communicating with interested participants resulted in their withdrawal from the study before it began. Therefore, timing of the intervention determined the student's participation and the success of the wiki intervention. For successful language learning, students should be engaged in meaningful activities. However, this must be done in such a manner that the time spent on each task matches the complexity of the task.

As was evidenced in the second iteration, all tasks were given a week's duration to complete without considering the complexity or easing the students into the intervention. A key lesson from this iteration was that meaningful activities should be varied by starting with a short activity that instantly engages students and eases them into the lesson. Not only does the type of task influence how students interact with each other and engage with the learning material, but it becomes essential that the time-on-task be varied to match the level of engagement and difficulty required. Unfortunately, not all tasks could be completed during the second iteration as the intervention clashed with the participants' exam schedule.

During the execution of the second iteration, the most notable disruption to time-on-task was the university's semester system of teaching and learning. In planning for online learning, it is important to take into account students' learning schedules and workload. In this instance, students had limited time to focus on the intervention. As stated on the *myUnisa* website, students are advised to spend at between 6-8 hours per week on each semester module and between 4-6 hours per week for each year module, and require a minimum of 36 credits (3 modules at least) in order to proceed onto the next academic year. This means that distance education students have limited time available to participate in extracurricular activities. Within this context, it is crucial for tasks to be planned and implemented in such a manner so as to disrupt participants learning.

The insight gained in the second iteration was used to mould the third iteration. In this iteration, only a small number of participants were selected so as to reduce the time-on-task which would enable faster completion of the study. The iteration began with a short activity on brainstorming to ease the participants into the intervention while the

drafting and rewriting were given a duration of three days each as they required the students to apply their learning. The peer feedback task was also a short activity task. This variation not only assisted in the completion of the intervention, but also kept the students engaged and interested.

5.4.6. Communication of high expectations

During the call for participation, the researcher presented the participants with a letter explaining what the study entailed and what was expected of them. The researcher also held short briefing sessions detailing the goals and objectives of the study as well as clarifying any questions they had. Once this was done and the participants had a clear understanding of the study and expectations, they signed the informed consent letter.

This communication was also bi-directional: the participants also communicated their expectations of the researcher especially in relation to increased participation where the study directly linked to their ENG modules, how they will use their time on campus and their examination timetable. The WhatsApp group chat aided in ensuring that communication was maintained between the participants and the researcher. In instances where the participants could not understand the task at hand, they would reach out to the researcher and each other on the WhatsApp group chat.

5.4.7. Support for diverse talents and ways of learning

In the study, the researcher presented a walk-through explanation of the Wikispaces site and supported the participants by creating a WhatsApp group chat. Additional support was given where participants reached an impasse during the activities.

Additionally, research illustrates that a well-designed wiki promotes critical thinking (Lee 2010:261), cultivates student autonomy (Kessler, Bikowski & Boggs 2012) and contributes to a higher quality of writing (Storch 2005). The task-based approach employed in the iterations confirms views expressed in the literature. The robust discussions indicate that higher-order thinking skills were used during the brainstorming activities; the participants took ownership of learning by collaborating with each other and by following the stages of the process writing approach as it would benefit their writing.

Based on the above and by strictly following the principles, Web2.0 are suitable for teaching academic writing.

5.5. SUMMARY OF THE DISCUSSION

The study confirmed that early integration and frequent engagement with online students has a positive impact on students' participation in online learning. Furthermore, by creating authentic learning tasks, students' anxiety may be alleviated thereby boosting their confidence towards online learning. Additionally, by applying the seven principles of using technology, as developed by Chickering and Ehrmann (1996), it is not only possible to achieve higher-order thinking which can be used effectively to scaffold novice students towards effectively applying the process writing approach but also possible to achieve good teaching where deep learning takes place.

CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS

6.1 INTRODUCTION

Studies on distance education highlight the interface between education material and technology to support interactive teaching and learning (Mikropoulos, citing Wong 1999). In the two decades since Wong's research, asynchronous technologies – commonly referred to as Web 2.0 or social technology – such as wikis have been used effectively to support teaching and learning (Unisa ODL Policy 2008), while also creating a sense of engagement and “collective authoring and participatory webbing” (Alexander 2006). To this end, this study sought to explore undergraduate students' experiences of using a wiki as a computer mediated tool for facilitating process writing in an ODL context.

The first chapter of this dissertation provides a broad overview and a context that rationalises the purposes for pursuing a study on using wikis to teach academic writing. This is followed by a comprehensive review of literature that stipulates a theoretical framework on constructivism and foregrounds the use of the process approach to teaching academic writing by using wiki technology as a teaching tool. The research design and methodology were laid out in the third chapter. While the previous chapter provided an interpretation and discussion of the data collected and presented in Chapter 4, this chapter provides a summary of the findings, conclusions and recommendations of the study.

6.2 MAJOR FINDINGS

A prevalent learning that presented itself from the onset of the study until the completion of Iteration 3 was the importance of engaging and integrating students into online communities as early and frequently as possible. This limits the lack of participation among students and reduces attrition as a result of students being unfamiliar and uncomfortable with the online learning environment, especially the technology used for wikis. Furthermore, the characteristics of online students such as learning styles and socioeconomic demographics must be borne in mind when pursuing educational technology. The success of online learning is determined by students' social and family factors, motivational factors, the technological expertise of students and educators (such as whether they are digital natives or digital immigrants)

and institutional support for students that takes into consideration the education limitations for educational technology (Bawa 2016).

Constructivism asserts the co-creation of knowledge through collaborative learning. This can be effectively employed by mirroring authentic learning tasks that draw on higher-order thinking as a means of gaining mastery of the subject matter. The findings from the second iteration indicate that the participants were engaged with the course content through the use of activities such as brainstorming to generate ideas which is aligned to the coursework. However, given the constraints faced by the ODL participants, an alignment to the course content was unsatisfactory as the participants bemoaned being unable to gain extra credit or marks for participating in the study. Another point of contention raised is the “real life” use of the wiki. The participants expressed concern on the integration of wikis in their registered modules as they comprise large student numbers. This concern on the “real life” application of wikis resulted in a tempered perception of the suitability of wiki collaboration especially for large groups.

In the third iteration, the wikis were generally perceived as innovative and encouraging learning. The most valuable aspects of the wiki were the chat and discussion functions, which are ideal for creating rapport among participants and fostered confidence in sharing work publication, as well as the participatory knowledge-making processes that enabled participants to refine their views through an assessment of their own contributions and an evaluation of others’ work. Olanezhad (2015) claims that continued use of wikis reduces writing anxiety but one participant still had concerns of embarrassment and negativity about using wikis within a “real” setting. Conversely, they were concerned about the actual use of the wiki within teaching and learning system, and although self-interrogation necessitated critical thinking and taking ownership of the learning process, some participants felt discomfort with the unfamiliar process. Their responses to the questionnaire imply that they place a high significance on the perceived usefulness of the wiki as opposed to its perceived ease of use.

A significant challenge experienced during the study related to technical issues experienced largely by the participants and the researcher to an extent. The participants raised concern over data and connectivity issues when accessing and navigating the learning tool. They also found it inconvenient to use the wiki alongside their current workload while using the institutional learning management tool. The

technical problems that affected the researcher related to redesigning and redeveloping the wiki content in the subsequent iterations based on the design principles espoused by Chickering and Ehrmann (1996) for leveraging technology. This redevelopment was time consuming.

As evidenced in the first iteration, embedding a purely online learning approach seemed ineffective due to poor engagement and lack of appropriately timed feedback. As such, the learning intervention was redesigned to reflect a desirable learning mix. Employing a blended learning approach requires an appropriate learning mix that not only relates to the content but a combination of different learning styles. The low participation rate was due to a limited support that enabled self-regulated online learning and feedback. Changes made in the second iteration circumvented the low participation by providing additional support outside of the online learning tool. In this instance, a WhatsApp group chat was formed. Other obstacles that emerged were a concern for privacy and doubt on the effectiveness of blended learning as remedy for academic performance interaction.

6.3 RECOMMENDATIONS

To successfully implement online learning within an ODL setting will not only require competent, skilled staff but will also necessitate structures and systems that enable and facilitate effective learning. Moreover, staff would need to be trained in instructional design and developing ODL-specific content; this training must include an understanding of the various technology platforms including their optimal use for teaching and learning.

Furthermore, instructors must have the acuity to discern the technological maturity of ODL students in order to achieve optimal participation. This would require providing additional student support, by tracking student activity on online platforms to ensure that no-one is left behind as a result of limited skills or capabilities. One way of leveraging the constructivist nature of technology use in higher education would be to mimic the interactive instructor-student relationship by creating “communities of learners and support” (Sun & Chen 2012: 163; Lorenzetti 2014).

Having an appropriate technology platform is merely the start of creating a successful learning environment. Not only must Chickering and Ehrmann’s (1996) principles be at the forefront of using technology for learning but the ten critical success factors in

online learning must be used in monitoring and evaluating the efficient and effective delivery of distance education. These success factors are “ease of use, appearance, linkage, structure and layout, information, reliability, efficiency, support, communication and security” (Basak, Wotto & Belanger 2016: 2412).

According to Lorenzetti (2014), one of the key components to quality distance learning lies with course design that ensures content is accessible to all students and is available in multiple formats. Despite offering a single learning management system (*myUnisa*), it is advisable to create plug-ins from suitable Web 2.0 technologies that enable offering and enhancing information in a manner that accommodates “accessibility but provides for alternative access for the benefit of students with different learning modalities” (McClary 2013:2).

Effective and quality distance learning requires the instructor play a supportive role that would scaffold the students towards achieving learning objectives. This means that the instructors would face a more demanding role beyond merely creating course content but offer more substantive engagement and feedback. This is necessary to ensure student involvement and engagement as was evidenced in the study.

In addition to the above, it is imperative in a distance education setting to determine how students self-regulate in collaborative learning activities. This will be critical in providing support for students by determining how they perform in online collaborative learning tasks (Su, Li, Hu & Rose 2018). Furthermore, an understanding of the patterns of self-regulation may provide data to identify at-risk, low-performing students, which would be useful in providing timeous and relevant support to ensure successful throughput.

6.4 SUGGESTIONS FOR FUTURE RESEARCH

In order to effect positive change in distance education, an equitable distribution between teaching, learning and assessment must be achieved through impactful and frequent communication together with outstanding technical support of student and instructors. It is suggested that further research be undertaken in the following areas:

- A quantitative study using wikis to assess the impact of collaborative writing on students' written assignments

- The role feedback plays in ensuring the persistence of online students to complete the course
- Instructors' perceptions of designing effective wikis on academic writing with the aim of improving the user interface.

6.5. CONCLUSION

Web 2.0 technology creates an opportunity to work collaboratively, provides a community for social interaction and enables learning by scaffolding lesser-abled students with competent students. The challenges experienced in the study can be addressed by adapting Chickering and Ehrmann's (1996) principles to frame the development of online learning. The applicability of these principles was evidenced in the various iterations of the study and further emphasised in the discussion chapter of this dissertation. As such, it is necessary to adopt these principles in order to reap the rewards of investing in online learning tools. While technology in distance education provides for the effective delivery of online education without the limitations of time and space, it is not without its challenges. Foremost of these, is early and frequent engagement and interaction with students.

A prevalent issue that presented itself during the study was the role of students in determining their own success. Distance learning students must negotiate multiple epistemologies which necessitates that they are provided with additional time to transition to ODL in order to ensure success. Fostering autonomy in learning is essential in a distance education setting as it enables students to take ownership of the learning process. From this study, students experienced wikis as being innovative and encouraging learning while also emphasising the usefulness of the wiki within a "real" learning environment.

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ADDENDUM A: COMPLIANCE WITH RESEARCH ETHICS OF THE UNIVERSITY OF SOUTH AFRICA



MEMORANDUM

From: Prof FA Kalua
Chair: Higher Degrees Committee,
Department of English Studies

To: Ms Tshego Sehlodimela
MA (TESOL) DFTES95, student no: 46832599

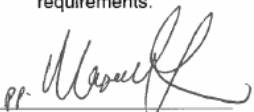
Date: 15 August 2014

SUBJECT: COMPLIANCE WITH RESEARCH ETHICS OF THE UNIVERSITY OF SOUTH AFRICA

This letter confirms that Ms Sehlodimela has complied with the requirements of the Higher Degrees Committee in the Department of English Studies. Her proposal was approved and was granted ethical clearance by the Higher Degrees Committee of the Department and this was confirmed in an e-mail from Prof Byrne (the then chair of the Higher Degrees Committee) dated 14 January 2014. She is now working on a research study entitled 'Using wikis to teach academic writing in an ODL institution: A task-based approach'.

The department confirms the following:

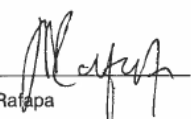
- Ms Sehlodimela is a registered MA student in the Department of English Studies at UNISA
- She is expected to work closely with her supervisors, Prof Spencer and Ms Shandu.
- She is aware of the Unisa Ethical Research policy and is expected to adhere to the policy requirements.


Prof FA Kalua
Chair: Higher Degrees Committee

Date: 21 August 2014

B.Spencer
Prof. Brenda Spencer
Supervisor: English Studies

Date: 14 August 2014


Prof L Ratapa
Chair of Department English Studies

Date: 21 / 08 / 14

ADDENDUM B: RESEARCH PERMISSION SUB-COMMITTEE APPROVAL – ITERATION 1



RESEARCH PERMISSION SUB-COMMITTEE OF SRIHDC

14 July 2015

Ref #: 2015_RPSC_061
Ms. Tshegofatso Sehlodimela
Student #: N/A
Staff #: 90165160

Dear Ms Tshegofatso Sehlodimela,

Decision: Research Permission
Approval for the period July 2015 to
30 November 2015

Principal Investigator:
Ms. Tshegofatso Sehlodimela
College of Human Sciences
School of Arts
Department of English Studies
UNISA
sehloct@unisa.ac.za
(012) 429-8333/ 073 753 8690

A study titled: "Using wikis to teach academic writing in an ODL institution: A task-based process approach."

Your application regarding permission to conduct research involving UNISA staff and data in respect of the above study has been received and was considered by the Research Permission Subcommittee (RPSC) of the UNISA Senate Research and Innovation and Higher Degrees Committee (SRIHDC) on 07 July 2015.

It is my pleasure to inform you that permission has been granted for the study to:

1. Distribute an online questionnaire to the students registered for the module ENG1513 in the second semester of 2015.
2. Conduct interviews with some of the students who are willing to take part in the interviews voluntarily.
3. According to the Protection of Personal Information Act, (POPI Act), No. 4 of 2013, the RPSC does not grant researchers permission to access personal information without



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prior consent of the owners of the information. For this reason, the RPSC cannot grant you access to the students' assignments. It is suggested that you incorporate this request in the online questionnaire, so that the students themselves give you permission to access and use their de-identified assignments and the texts generated from their wikis.

You are requested to submit a report of the study to the Research Permission Subcommittee (RPSC@unisa.ac.za) within 12 months of completion of the study.

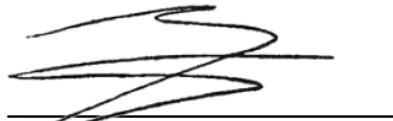
The personal information made available to the researcher(s)/gatekeeper(s) will only be used for the advancement of this research project as indicated and for the purpose as described in this permission letter. The researcher(s)/gatekeeper(s) must take all appropriate precautionary measures to protect the personal information given to him/her/them in good faith and it must not be passed on to third parties.

Note:

The reference number 2015_RPSC_061 should be clearly indicated on all forms of communication with the intended research participants and the Research Permission Subcommittee.

We would like to wish you well in your research undertaking.

Kind regards,



PROF L LABUSCHAGNE
EXECUTIVE DIRECTOR: RESEARCH

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ADDENDUM C: RESEARCH PERMISSION APPROVAL – ITERATION 2



RESEARCH PERMISSION SUB-COMMITTEE OF SRIHDC

17 November 2015

Ref #: 2015_RPSC_061_AR
Ms. Tshego SehloDIMELA
Student #: N/A
Staff #: 90165160

Dear Ms Tshego SehloDIMELA,

**Decision: Research Permission
Approval for the period July 2015 to
30 November 2016**

Principal Investigator:

Ms. Tshego SehloDIMELA
College of Human Sciences
School of Arts
Department of English Studies
UNISA
sehloct@unisa.ac.za
(012) 429-8333/ 073 753 8690

Supervisor:

Prof Brenda Spencer
spencb@unisa.ac.za/ (012) 429-6849

A study titled: “Using wikis to teach academic writing in an ODL institution: A task-based process approach.”

Your request for extension of the population of the study and the data collection period in respect of the above study have been received and were considered by the Research Permission Subcommittee (RPSC) of the UNISA Senate Research and Innovation and Higher Degrees Committee (SRIHDC) on 12 November 2015.

It is my pleasure to inform you that permission has been granted for the study to:

1. Recruit the students registered for the following modules through MyUnisa and during workshops as set out in the application:
ENG1501, ENG1502 and ENG1511;
2. Conduct interviews with the selected students who are willing to participate voluntarily in



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the interviews.

According to the Protection of Personal Information Act, (POPI Act), No. 4 of 2013, the RPSC does not grant researchers permission to access personal information without prior consent of the owners of the information. For this reason, the RPSC cannot grant you access to the students' assignments. It is suggested that you incorporate this request in the online questionnaire, so that the students themselves give you permission to access and use their de-identified assignments and the texts generated from their wikis.

You are requested to submit a report of the study to the Research Permission Subcommittee (RPSC@unisa.ac.za) within 12 months of completion of the study.

The personal information made available to the researcher(s)/gatekeeper(s) will only be used for the advancement of this research project as indicated and for the purpose as described in this permission letter. The researcher(s)/gatekeeper(s) must take all appropriate precautionary measures to protect the personal information given to him/her/them in good faith and it must not be passed on to third parties.

Note:

*The reference number **2015_RPSC_061_AR** should be clearly indicated on all forms of communication with the intended research participants and the Research Permission Subcommittee.*

We would like to wish you well in your research undertaking.

Kind regards,



Dr. Retha Visagie (pp. Prof L Labuschagne – Chairperson: RPSC)

Email: visagrg@unisa.ac.za

Tel: (012) 429-2478



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ADDENDUM D: DEPARTMENTAL ETHICS REVIEW COMMITTEE



DEPARTMENT OF ENGLISH STUDIES

Theo van Wyk Building, 6th Floor Tel: +27 12 429 6356

Fax: +27 12 429 6222

MEMORANDUM

DATE : 23 June 2017
FROM : Dr A Kreuter: Chair Departmental Ethics Review Committee
VIA : Professor M Lephala: Acting CoD Department of English Studies
VIA : Professor A Mavhandu-Mudzusi: Chair College Research
Ethics Committee (CHS)
To : Professor L. Labuschagne: Executive Director Research

SUBJECT: REQUEST FOR RESEARCH EXTENSION 2015_RSPC_61

Attached please find the documentation requesting an extension for ethical clearance permission (2015-RSPC_61) for Ms T. Sehlohimela's research towards her M.A. degree.

The original permission granted by the sub-committee of SRIHDC was for the time frame July 2015 to 30 December 2015. A further extension was then applied for and granted for the time frame July 2015 to 30 November 2016. The current requested extension period is from the 1 July 2017 to 1 July 2018. Unfortunately, Ms Sehlohimela was unable to gain a sufficient data sample size and now needs to diversify her sample data collection to include any student attending the reading and writing workshop offered by the DFTL regions.

The English Studies Departmental Ethics Research Committee has assessed Ms Sehlohimela's request and is hereby requesting that SRIHDC appraise the application.

Sincerely

Dr A.D. Kreuter
Chair English Studies Ethical Review Committee

Professor M.M Lephala
CoD: English Studies

Prof A Mavhandu-Mudzusi
Chair College Ethical Review Committee (CHS)

PP
ON BEHALF OF
PROF A MAVHANDU-MUDZUSI

Prof L. Labuschagne
Executive Director Research

ADDENDUM E: RESEARCH PERMISSION APPROVAL – ITERATION 3



RESEARCH PERMISSION SUB-COMMITTEE OF SRIHDC

17 November 2015 (1st Amendment)

7 August 2017 (2nd Amendment)

Dear Ms Tshego Sehlodimela,

**Decision: Research Permission
Approval for the period 7 August
2017 to 6 August 2018**

Ref #: 2015_RPSC_061_AR
Ms. Tshego Sehlodimela
Student #: N/A
Staff #: 90165160

Principal Investigator:

Ms. Tshego Sehlodimela
College of Human Sciences
School of Arts
Department of English Studies
UNISA
sehloct@unisa.ac.za
(012) 429-8333/ 073 753 8690

Supervisor:

Prof Brenda Spencer
spenb@unisa.ac.za/ (012) 429-6849

A study titled: “Using wikis to teach academic writing in an ODL institution: A task-based process approach.”

Your request for extension of the population of the study and the data collection period in respect of the above study have been received and were considered by the Research Permission Subcommittee (RPSC) of the UNISA Senate Research, Innovation, Higher Degrees and Commercialisation Committee (SRIPCC) on 17 July 2017.

It is my pleasure to inform you that permission has been granted for the study to:

1. Recruit the students registered for the following modules through MyUnisa and during workshops as set out in the application:
ENG1501, ENG1502 and ENG1511 as well as any student attending the reading and writing workshops offered by the Department of Facilitation of Tuition and Learning in the different regions, even though they may not be registered for an English module.



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www.unisa.ac.za

2. Conduct interviews with the selected students who are willing to participate voluntarily in the interviews and also conduct focus group discussions with the students.

According to the Protection of Personal Information Act, (POPI Act), No. 4 of 2013, the RPSC does not grant researchers permission to access personal information without prior consent of the owners of the information. For this reason, the RPSC cannot grant you access to the students' assignments. It is suggested that you incorporate this request in the online questionnaire, so that the students themselves give you permission to access and use their de-identified assignments and the texts generated from their wikis.

You are requested to submit a report of the study to the Research Permission Subcommittee (RPSC@unisa.ac.za) within 3 months of completion of the study.

The personal information made available to the researcher(s)/gatekeeper(s) will only be used for the advancement of this research project as indicated and for the purpose as described in this permission letter. The researcher(s)/gatekeeper(s) must take all appropriate precautionary measures to protect the personal information given to him/her/them in good faith and it must not be passed on to third parties. The dissemination of research instruments through the use of electronic mail should strictly be through blind copying, so as to protect the participants' right of privacy. The researcher hereby indemnifies UNISA from any claim or action arising from or due to the researcher's breach of his/her information protection obligations.

Note:

*The reference number **2015_RPSC_061_AR** should be clearly indicated on all forms of communication with the intended research participants and the Research Permission Subcommittee.*

We would like to wish you well in your research undertaking.

Kind regards,



Dr Retha Visagie – Acting Chairperson

Email: visagrg@unisa.ac.za, Tel: (012) 429-2478

Prof A Davis – Acting Executive Director: Research

Email: davis@unisa.ac.za, Tel: (012) 429-8357



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ADDENDUM F: PARTICIPATION AND INFORMED CONSENT

Participation and informed consent leaflet

Researcher's name: Tshego SehloDIMELA

Student Number: 46832599

Department of English Studies

University of South Africa

TOPIC: A wiki-based process writing approach to academic writing in an ODL institution

Dear Participant

I am a Master's student in the Department of English Studies at the University of South Africa. You are invited to volunteer to participate in our research project regarding the use of wiki group page in process writing approach to academic writing in an ODL institution.

This letter contains information to help you with your decision to take part in this study. Please read through the letter carefully in order to make an informed decision. If the information is unclear or if you have any other questions, do not hesitate to ask me. You should not agree to take part in this study unless you fully understand the content of this letter.

NATURE AND PURPOSE OF THIS STUDY

The aim of this study is to determine whether using a wiki as a computer-mediated tool enables a process writing approach within a distance education institution. You, as a participant, are a very important source of information on determining whether wikis are suitable for such a task as teaching academic writing as well as benefitting from a task-based approach using wikis. You are an indispensable and worthy partner in this research. Your rights and interests will be respected at every stage and level of research.

EXPLANATION OF PROCEDURE TO BE FOLLOWED

You will be expected to actively participate in the group wiki page. I will have a training session illustrating to you how to make use of the wiki and will start a WhatsApp "support group" that will address any queries you may have on the use of the wiki. This will involve you contributing to discussions, reviewing your peers' written work and making recommendations to improve their writing on the wiki. You are expected to complete a research questionnaire detailing your perceptions and experiences of the study. By completing and returning the questionnaire, you give consent that the information can be used for the research. The

researcher will be available to answer questions you might have regarding the questionnaire. Follow up interviews may be held to elicit further information from you that may add to the data collected from the group wiki page.

RISK AND DISCOMFORT INVOLVED

Except for the time it takes to participate in the group wiki page and complete the questionnaire, there is no known discomfort or inconvenience related to this study. Your time and active participation in this study is highly appreciated and invaluable to the successful completion of the study.

POSSIBLE BENEFITS OF THIS STUDY

Writing assignments makes up a significant part of the work while studying at Unisa and students not only receive new knowledge in a subject but also learn a new language – an academic and subject-specific language. The difficulty is that students not only have to come to terms with academic language and writing but also have to do so in an ODL context. The results of this study will be used to equip students with the necessary writing skills for successful completion of their studies.

WHAT ARE YOUR RIGHTS AS A PARTICIPANT IN THIS STUDY?

Your participation in this study is voluntary. You can refuse to participate or stop at any time during the course of the intervention.

COMPENSATION

Your participation is voluntary. No compensation or contribution towards your transport expenses or other expenses will be given for your participation. Your data costs will not be reimbursed. As this is an online study, it is advisable that you make use of the free wifi available to Unisa students at all campuses.

CONFIDENTIALITY

All information obtained during the course of this study is strictly confidential. Data that may be reported in the final dissertation and further outputs, ie journals, will not include any information that can identify you as a participant in this study.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

The study proposal was submitted to The Higher Degrees Committee of the Department of English Studies in the College Of Human Sciences at the University of South Africa. Written approval to conduct the study has been approved. Because participation involves human subjects, further approval was granted by the Research Permission Sub-committee of SRIHDC.

INFORMATION AND CONTACT PERSON

If you have any questions during this study, please do not hesitate to approach the researcher.

Researcher: Tshego Sehlodimela

Contact details: tshegos786@gmail.com

Supervisor: Prof Brenda Spencer

ADDENDUM G: PARTICIPANT'S CONSENT FORM

PARTICIPANT'S CONSENT FORM

TOPIC: A wiki-based process writing approach to academic writing in an ODL institution

I.....hereby agree to participate in a study with a title "A wiki-based process writing approach to academic writing in an ODL institution". I hereby acknowledge that I am participating in this research voluntarily, and am aware that I may withdraw from the research at any time. I agree that the results be recorded on condition that anonymity and confidentiality will be maintained.

I understand that agreeing to take part means that I am willing to:

- Participate in a group wiki page facilitated by the researcher, a student from the University of South Africa (UNISA).
- Allow the interview to be recorded.
- Make myself available for further interviews should that be required, and
- Be informed about the research results.

The purpose of this research is to fulfill the requirement for the Master's Degree in Teaching English to Speakers of Other Languages.

I understand that the information provided by me shall remain confidential:

- My participation is voluntary,
- I can choose not to participate in part or all of the study, and
- I can withdraw at any stage without being penalized or disadvantaged in any way.

Name of participant

Signature

Date

ADDENDUM H: ADAPTED QUESTIONNAIRE

Dear ODL Wiki participant

Thank you once again for participating in the study, please could you complete the open ended questionnaire below. I have included statements adapted from a similar study conducted by Elgot, Smith and Toland (2008) as an appendix with statements that may guide you when answering the questions.

Please give your wiki username at the end of the questionnaire

Identify aspects of the wiki that were of most value to you during the intervention. Make reference to group work and collaboration in your response:

Identify aspects of the wiki that were of least value to you during the intervention. Make reference to group work and collaboration in your response:

Did you experience technical problems when using wiki? (Please specify, referring to wiki functions)

Do you have any additional comments or suggestions on using wiki in this study?

Wiki Username: _____

Appendix statements on wiki use

Wiki use: the questions below are adapted from Elgot, Smith and Toland (2008)

USE OF WIKI	I found the group wiki useful in completing the team task
	I found the group wiki easy to use
	Using wiki encouraged better participation of each group member in the assignment
	Group wiki worked well as a tool for collecting and organising information for the assignment
	Group wiki worked well as a tool for presenting the results and findings of the group assignment
	I found that using wiki has advantages in learning about academic writing
	This wiki is easier to use than the wiki I've used before
	This wiki is not as effective as the wiki I've used before
	Never used wiki before
	I found the wiki useful to document information related to the assignment
	I found the wiki useful in evaluating the work of my group
	I found the wiki useful in assessing my own contribution to the assignment
	I feel positive about the idea of my peers viewing my course wiki
	Using wikis provided me with an opportunity to give and receive peer feedback
I do not want my peers to be able to post comments on my course wiki	
GROUP WORK/ COLLABORATION	The wiki we used in this course is easier to use than other online learning platforms that I used before
	I would have preferred to do all the group work off-line rather than using online facilities
	Our group worked well together in an online environment
	The group assignment provided me with a valuable learning experience
	I could have done this assignment better on my own
WIKI FUNCTIONS	I am satisfied with our group's effort and input in completing this assignment
	Using the wiki encouraged me to participate equally in all discussions
	I found the Group Discussion Board in Blackboard useful in completing the group assignment
	I found the Edit page useful as I could write, rewrite and edit my input
	I found the Discussion page effective in learning and completing the task
	Tracking the groups changes in the Recent changes page was useful as I could track my group's contributions

ADDENDUM I: INTERVIEW GUIDE

Semi-structured interview questions:

According to Patton (2003), there are six types of questions that must be covered when collecting data. The interviews will cover only four of the six areas:

Behaviour or experience.

- If wikis were implemented as part of your studies, would you be keen to use it? Why/why not?
- Describe your experience of using the wiki.

Opinion or belief.

- Do you think wikis are helpful in teaching academic writing?
- Do you think that wikis will work for your modules at Unisa? Give reasons for your answer
- If you had a choice to use wikis in your studies, would you use them? Why/ why not?
- What would you change about the wiki intervention?

Feelings.

- How did using the wiki make you feel?
- Were you comfortable working on an open platform where other students could see your work?

Knowledge.

- Did you learn anything new about academic writing while working on the wiki?
- What did you learn about yourself while working on the wiki?
- Did you benefit from working as a group on the wiki?
- What would you change in the wiki intervention to make it beneficial to you?

Note to self: Do not forget to ask the participants if they want to add anything that you have not covered with the above questions. Also, if they are not forthcoming with any answers, rephrase the question so that they understand and probe for more information.

ADDENDUM J: REGISTRATION STATISTICS

XMO\STXRES\HISTORIC STATS #29552

From year: 2015
Module List: ENG1511
college: 2
department: 239
report output: registered
Report Type: per_module

[notes](#)

```
col          CHS
department  ENGLISH STUDIES-239
MODULE      ENG1511
2015/1      3
2015/6      5950
2015/10     4682
2016/1      1
2016/6      1806
2016/10     685
2017/1      1
2017/6      1526
```

XMO\STXRES\HISTORIC STATS #29552

From year: 2015
Module List: ENG1501
college: 2
department: 239
report output: registered
Report Type: per_module

[notes](#)

```
col          CHS
department  ENGLISH STUDIES-239
MODULE      ENG1501
2015/1      4
2015/6      11069
2015/10     12197
2016/1      4
2016/6      11932
2016/10     9755
2017/1      2
2017/6      15654
```

XMO\STXRES\HISTORIC STATS #29552

From year: 2015
Module List: ENG1502
college: 2
department: 239
report output: registered
Report Type: per_module

[notes](#)

```
col          CHS
department  ENGLISH STUDIES-239
MODULE      ENG1502
2015/1      1
2015/6      7565
2015/10     9489
2016/1      6
2016/6      8647
2016/10     8322
2017/1      2
2017/6      10637
```

ADDENDUM K: EDITING CERTIFICATE

Address: 624 Pretorius Street, 403 Francisca Flat, Arcadia, Pretoria
Call: +27 72 233 9433
Email: info@bangwadi.co.za | Website: www.bangwadi.co.za



Bancon Independent Editors

REF: EDITING OF DISSERTATION

DATE: 27 January 2020

TO WHOM IT MAY CONCERN

This letter serves to confirm that Sehlodimela Catherine Tshegofatso (Student Number: 46832599) submitted her Master of Arts in TESOL dissertation entitled "A WIKI-BASED PROCESS WRITING APPROACH TO ACADEMIC WRITING IN AN ODL INSTITUTION" for language editing to the undersigned. Hence, the document has been duly proofread and edited for grammatical and technical errors. It is hoped that if all the editorial aspects addressed and recommended therein are to be meticulously attended to, the target readers of this work will find the document free from error, enjoyable to read and easy to understand.

FOR ANY ENQUIRIES RELATING TO THE ABOVE, PLEASE CONTACT ME DURING OFFICE HOURS.

Kind regards,

Mafeye Morapedi (Director of Bangwadi Consultant)
(MA English Studies, Editing: Principles & Practice, BAH Applied Language & Multilingual Studies, BA Contemporary English & Multilingual Studies)

Reg No: (2018/091620/07)