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University of applied sciences students' perceptions on engagement and spoken interaction in blended learning language studies

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Abstract

The aim of this doctoral dissertation is to gain a deeper understanding on the aspects that contribute to higher education students' social and academic engagement when language studies are implemented with the blended learning approach. Another aim is to discover the elements to enhance spoken interaction in the foreign language in blended learning language courses.

Based on the results of sub-studies I-III, I argue that students' academic and social engagement are intertwined, alternating, and nurturing one another during the learning process. Similarly, teacher engagement and student engagement are reciprocal phenomena nourishing one another and depending on each other. In addition, I argue that university of applied sciences students' foreign language spoken interaction can be activated and enhanced in blended learning courses given the learning material, learning activities and digital tools are meaningful, relevant, timely and aligned with the learning objectives.

This dissertation comprises three original studies; they focus on one language course each in the context of universities of applied sciences. Each sub-study experiments various opportunities that digital technology provides for language learning: social networking sites, gamification, telecollaboration and multimodality. Regardless of the course design all courses are based on the ecological language learning approach and the notion of engagement. In addition, authentic learning and students' collaboration are in the focus; the target is that the students are producers rather than consumers of digital media and they act as active learners within authentic learning activities. All three courses were implemented with the blended learning approach.

Sub-study I investigated first-year health care students' (n=23) perspectives on a gamified professional English course regarding particularly engagement, enjoyability and language learning. The course was a three-credit, field-specific English course which duration was 10 weeks, including five face-to-face sessions. The course aimed to prepare students for communicating in multi-professional and intercultural situations within the health care sector. The course implementation was based on gamification with a background storyline. The students' reflective learning diaries and a post-course questionnaire formed the data which were analysed via content analysis method. The results indicate that gamification and appropriate digital applications augmented student engagement, enhanced language learning,

and provided enjoyable learning experiences for the students. Further, students' collaboration and a tolerant stress-free course atmosphere had a positive impact on learning and engagement according to the students' self-reflections.

Sub-study II explored the opportunities a telecollaboration project provided for online collaboration, language learning and student engagement. The participants were 26 higher education German language students, 12 in Finland and 14 in New Zealand. The students used a closed Facebook group for posting on given topics. The required five posts combined videos, photos, audio, and text. The duration of the project was six weeks, and it formed a part of the German course in both countries. The course design was informed by social networking sites in language learning and telecollaboration. A mixed method approach was used to collect quantitative and qualitative data. The qualitative data were analysed by content analysis method, and they included pre- and post-project questionnaires, interviews, and Facebook-logs. The results suggest that the students regarded Facebook as an appropriate tool for community building. In addition, collaboration, the use of communication tools, authenticity, enjoyment, and teachers' support fostered student engagement and had a positive impact on students' language learning and intercultural competence.

Sub-study III discovered the impact multimodality and regular in-pairs conducted video calls had to spoken interaction in the target language and to student engagement. The research was conducted, and the data were collected in a 5-credit Business English course for 1st-year business administration students (n= 22) in a university of applied sciences. The course was divided into 16 weeks and 8 topics; during the course there were 5 face-to-face sessions. The students deployed various digital tools and particular attention was given to spoken interaction; hence the students were instructed to complete spoken discussions using an online video call system once a week according to the week's topic using English in authentic, business-related situations. The data included students' learning diaries and a post-course online questionnaire mapping students' perception. The data were analysed according to the content analysis method. The findings indicate that students' academic and social engagement were fostered by teacher's actions, course design with authentic assignments and study material as well as students' activity and collaboration with peers. Further, collaboration, students' own activities and digital technology contributed the most to spoken interaction.

To conclude, the three sub-studies reflect universities of applied sciences students' perception on the aspects that enhance engagement in digital learning environments and the methods to activate their spoken interaction in the foreign language. On the bases of the sub-studies, it became apparent that teacher role is paramount prior, during and after the course. Besides timely knowledge on digital tools, teachers need to master the traditional teacher competences such as subject content, pedagogy, guidance, facilitating and interaction. In addition, students' own activities contribute immensely on their engagement and learning. Regarding

spoken interaction, the data indicate that with relevant peer and teacher support and regular interaction students' self-compassion and error-tolerance in terms of their own competences grow which leads to enjoying the regular spoken activities in the target language, and finally contributes positively to spoken interaction. Similarly, students' self-reflection ability increases which enables targeted rehearsal of the language skill which in turn activates and enhances spoken interaction.

Digitalisation offers myriad opportunities for individual and flexible learning paths regardless of time and place but does not decrease students' nor teachers' role. On contrary, students need to be active learners and teachers need wider range of competences in creating optimal learning experiences for their students.

Kirsi Korkealehto

Ammattikorkeakoulun opiskelijoiden käsityksiä kiinnittymisestä ja suullisesta vuorovaikutuksesta vieraiden kielten monimuoto-opinnoissa

Tiivistelmä

Väitöstutkimukseni tavoitteena oli selvittää, mitkä seikat ammattikorkeakoulu-opiskelijoiden mielestä tehostavat heidän akateemista ja sosiaalista kiinnittymistään kieliopintoihin, sekä edistävät suullisen vuorovaikutuksen harjoittelemista monimuoto-opinnoissa.

Väitöskirjani osatutkimusten tuloksiin perustuen väitän, että akateeminen ja sosiaalinen kiinnittyminen kietoutuvat toisiinsa, vuorottelevat ja kasvattavat toisiaan oppimisprosessin aikana. Samoin opettajien ja oppilaiden kiinnittyminen on vastavuoroista, jolloin ne ovat riippuvaisia toisistaan ja ruokkivat molemminpuolisesti toisiaan. Lisäksi väitän, että ammattikorkeakouluopiskelijoiden vieraan kielen suullinen vuorovaikutus aktivoituu ja vahvistuu monimuoto-opinnoissa edellyttäen, että oppimisaktiviteetit ja –materiaalit ovat kiinnostavia, alakohtaisia ja linjassa oppimistavoitteiden kanssa. Lisäksi digitaalisten sovellusten täytyy olla relevantteja, ajanmukaisia ja sopivia kyseisiin tehtäviin.

Tämä väitöstutkimus koostuu kolmesta osatutkimuksesta; jokainen niistä kohdistuu yhteen kieli- ja viestintäopintojaksoon ammattikorkeakoulussa. Osatutkimukset tutkivat digitaalisen teknologian tarjoamia mahdollisuuksia kieltenopetukselle kuten pelillistäminen, sosiaalinen media opetuksessa, etäyhteistyö ja monikanavaisuus. Tutkimuksen teoreettisena viitekehyksenä on ekologinen kieltenoppiminen ja opiskelijoiden kiinnittyminen. Opintojaksojen suunnittelussa kiinnitettiin erityistä huomiota opiskelijoiden yhteisölliseen ja autenttiseen oppimiseen. Tavoitteena oli, että opiskelijat eivät pelkästään ole digitaalisten välineiden käyttäjiä, vaan pikemminkin he itse tuottavat materiaalia toimien aktiivisina oppijoina. Kyseessä olevat opintojaksot toteutettiin monimuoto-opintoina.

Osatutkimuksessa I tutkittiin ensimmäisen vuoden terveysalan opiskelijoiden (n=23) kokemuksia pelillistetystä ammatillisen englannin opintojaksosta etenkin kiinnittymisen, viihdyttävyyden ja kielenoppimisen kannalta. Kyseessä oli kolmen opintopisteen alakohtainen ammatillinen englannin opintojakso, jonka kokonaiskesto oli kymmenen viikkoa sisältäen viisi lähiopetusjaksoa. Osaamistavoitteena oli terveysalan viestintäosaaminen moniammatillisissa ja monikulttuurisissa tilanteissa. Opintojakson toteutus perustui pelillistämiseen ja kehyskertomukseen, jossa suomalainen vaihto-opiskelija toteuttaa opintoihin kuuluvan työssäoppimisjakson Espanjassa. Tutkimusaineisto koostui opiskelijoiden oppimispäiväkirjoista

ja opintojakson jälkeen täytetystä kyselystä. Laadullinen aineisto analysoitiin si-sällönanalyysin avulla. Tulokset osittavat, että pelillistäminen ja sopivat digitaa-liset sovellukset tehostivat opiskelijoiden sitoutumista ja kielenoppimista sekä tar-josivat miellyttäviä oppimiskokemuksia. Yhteisöllinen oppiminen sekä opiskeli-joita arvostava ja rento oppimisilmapiiri vaikuttivat positiivisesti oppimiseen ja opiskelijoiden kiinnittymiseen.

Osatutkimuksessa II tarkasteltiin, miten etäyhteistyöprojekti (telecollabora-tion project) vahvisti opiskelijoiden yhteisöllistä kielenoppimista ja kiinnittymistä opintoihin. Tutkimuksen osallistujat olivat korkeakouluopiskelijoita Uudessa Seelannissa (n=14) ja Suomessa (n=12) ja he opiskelivat saksaa vapaasti valitta-vina kieliopintona. Opiskelijoille luotiin suljettu Facebook-ryhmä, jonne he lähet-tivät viestejä annetuista viidestä aiheesta monikanavaisesti käyttäen valokuvia, vi-deoita, äänitteitä ja kirjoitettua tekstiä. Projektin kesto oli kuusi viikkoa ja se muo-dosti osan opiskelijoiden saksan opintojaksosta kummassakin maassa. Opintojak-son suunnitelma perustui sosiaalisen median käyttöön kieltenopetuksessa ja etäyhteistyön viitekehykseen. Monimenetelmäinen aineisto koostui kyselylo-makkeiden vastauksista, Facebook-käyttölogista sekä opiskelijahaastatteluista. Tulokset osoittavat, että opiskelijoiden mielestä Facebook soveltuu hyvin oppi-misyhteisönrakentamiseen. Lisäksi yhteistyö, autenttinen oppiminen, opintojen viihdyttävyys sekä opettajien tuki vahvistivat opiskelijoiden kiinnittymistä ja ne vaikuttivat positiivisesti kielenoppimiseen ja kansainvälisyystaitojen kehittymi-seen.

Osatutkimuksessa III selvitettiin monikanavaisuuden ja säännöllisten parin kanssa tehtyjen videopuheluiden vaikutusta vieraan kielen suulliseen vuorovaiku-tukseen ja opiskelijoiden kiinnittymiseen. Tutkimus toteutettiin ja aineisto kerät-tiin ensimmäisen vuoden liiketalouden opiskelijoiden (n=22) ammatillisen eng-lannin opintojaksolla. Opintojakson pituus oli 16 viikkoa, ja siinä oli viisi kasvok-kain tapahtuvaa opetuskertaa; opintojakso oli jaettu kahdeksaan teemaan. Opiske-lijat käyttivät erilaisia digitaalisia sovelluksia ja erityistä huomiota kiinnitettiin suullisen vuorovaikutuksen aktivoimiseen. Koko opintojakson ajan opiskelijat keskustelivat parin kanssa kerran viikossa videopuhelun välityksellä liiketalou-teen ja työelämään liittyvistä autenttisista aiheista ja tehtävistä. Tutkimusaineisto koostui opiskelijoiden oppimispäiväkirjoista sekä opintojakson jälkeen kerätystä kyselylomakevastauksista. Laadullinen aineisto analysoitiin sisällönanalyysin keinoin. Opiskelijat kokivat, että autenttiset tehtävät ja opintomateriaali, opiskeli-joiden oma aktiivisuus ja yhteistyö vertaisten kanssa sekä opettajan panostus pa-ransivat akateemista ja sosiaalista kiinnittymistä. Samoin opiskelijoiden välinen yhteistyö, digitaalinen teknologia sekä opiskelijoiden oma panostus edistivät suul-lisen vuorovaikutuksen harjoittelemista.

Yhteenvetona voin todeta, että osatutkimuksien tulokset kuvaavat seikkoja, jotka ammattikorkeakouluopiskelijat kokivat vahvistavan heidän kiinnittymistään kieliopintoihin monimuoto-opinnoissa, sekä metodeja, jotka opiskelijat kokivat

edistävän vieraan kielen suullisen vuorovaikutuksen harjoittamista. Osatutkimukset osoittivat, että opettajan rooli on tärkeä niin ennen ja jälkeen kuin opintojakson aikanakin. Sen lisäksi, että opettajalla on hallussaan traditionaaliset opettajan taidot, kuten aineenhallinta, pedagogia, ohjaaminen, fasilitointi ja vuorovaikutustaidot, hänellä täytyy olla kattava osaaminen digitaalisuuden oikeanlaisesta pedagogisesta käytöstä, sekä ajankohtainen tieto digitaalisista sovelluksista. Lisäksi opiskelijan oma rooli on merkittävä kiinnittymisen kannalta.

Suullisen vuorovaikutuksen osalta tulokset osoittavat, että säännöllisellä vertaistuella ja vuorovaikutuksella opiskelijoiden itsemyötätunto ja virheidensietokyky kasvaa, mikä puolestaan lisää innokkuutta tehdä suullisia harjoituksia vieraalla kielellä. Lisääntynyt kielen käyttö puolestaan luo varmuutta suulliseen vuorovaikutukseen. Samoin opiskelijoiden itsereflektiotaito kasvaa, minkä perusteella opiskelijat osaavat harjoitella tiettyä suullisen kielitaidon osa-aluetta, esimerkiksi ääntämistä.

Digitalisaatio tarjoaa runsaasti mahdollisuuksia yksilöllisille ja joustaville, ajasta ja paikasta riippumattomille oppimispoluille. Kuitenkaan digitaalisuuden valjastaminen opetuskäyttöön ei vähennä opettajan ja opiskelijan roolia – pikemminkin päinvastoin. On tärkeää tukea opiskelijoiden aktiivisen oppijan roolin rakentumista ja vastuun ottamista omasta oppimisprosessista. Opettajien pedagogiseen osaamiseen sisältyy useita osa-alueita, joita he tarvitsevat luodessaan opiskelijoilleen optimaalisia oppimiskokemuksia.

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I dedicate this dissertation to my beloved daughters Taika and Sade. You are my brightest stars – I believe you will find your own arenas to flourish in your lives, I love you to the moon and back!

At home, November 2021

Kirsi Korkealehto

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List of original publications

This doctoral dissertation is based on the following original publications and they are referred to in the text by their numbers (Sub-studies I-III)

Sub-study I
Korkealehto, K. & Siklander, P. (2018). Enhancing engagement, enjoyment and learning experiences through gamification on an English course for health care students. SeminarNet, International Journal of Media, Technology, and Lifelong Learning. 14(1), 13-30.

Sub-study II
Korkealehto, K., & Leier, V. (2021). Facebook for engagement: Telecollaboration between Finland and New Zealand in German language learning. International Journal of Computer-Assisted Language Learning and Teaching, 11(1), 1–20. https://doi.org/10.4018/IJCALLT.2021010101

Sub-study III
Korkealehto, K., Lakkala, M., & Toom, A. (2021). Enrolled or engaged? Students' perceptions of engagement and oral interaction in a blended learning language course. The JALT CALL Journal, 17(1), 1–22. https://doi.org/10.29140/jalt-call.v17n1.268

1 Introduction

You request the teacher for the self-enrolment key - just one click and you become a student in the language course. It is easy to enrol yourself in a blended learning course in the learning management system, but what does it require from you as a student, the course itself and the teacher that you learn and finally completed the course - and above all - stay engaged?

The aim of this dissertation is two-fold: firstly, to gain a deeper understanding of student engagement in foreign language learning studies implemented with the blended learning approach and secondly, to explore means to initiate and improve spoken interaction in blended foreign language learning studies. The context of this research is language and communication studies in universities of applied sciences in Finland.

Student engagement is fundamental in online and blended learning language courses where the risk to suspend the studies is higher than in face-to-face teaching. Contemporary tertiary education students work alongside with their studies, in accordance, higher education institutions offer increasingly online and blended learning studies. Online learning appeals to a great number of students by providing them with flexibility, accessibility and convenience and enables studying regardless of time and space. The challenge in online and blended learning approaches is the fact that attrition rates remain high, as the students' persistence is lower than in face-to-face language teaching (Friðriksdóttir, 2018). Online learning requires student engagement because of myriad distraction which can lead to multitasking and diminished engagement.

The rapid technological chances of 21st century transform foreign language learning and teaching landscapes; its innovative use creates new conditions for learning and communication in higher education. Digital technology has become ecological and normalised part of language learning in higher education. On contrary to traditional teaching, digital technologies enable communication and multimodal interaction in online environments and connects language learners with the real world with authentic context.

Versatile communication and interaction skills are increasingly necessary in today's global working life. The purpose of language and communication teaching in universities of applied sciences is to provide students with the language and communication skills needed in specialist posts of their field in working life. The communication and interaction studies focus on the students' communication competences in intercultural context within their own professional development. The studies emphasise both spoken and written language skills. Hence, the working life communication skills are a combination of many skills: professional ability, general competences, and language competences. Language competence in

turn consists of linguistic knowledge (grammar and vocabulary), sociolinguistic knowledge including idiomatic expressions and polite rules and pragmatic knowledge with the ability to construct text and speech. Douglas (2000) bases the notion of communicative competence on the framework of Bachman and Palmer model (1996), and claims that in languages for specific purposes, communicative language ability includes two components: language knowledge and strategic competence (Douglas, 2000). The field-specific professional knowledge and language knowledge are mediated by strategic competence which consists of assessing the communication situation, setting its goals, planning, and implementing. Interaction is a result of all these components (Douglas, 2000).

Despite working life needs, and the fact that versatile language skills form a part of student's professional competence, in Finland higher education institutions have decreased their language course offering, or language teaching is implemented as online or blended learning approaches. In addition, the students in universities of applied sciences have diverse educational backgrounds, the requirements are either matriculation examination or vocational qualifications. These factors create challenges for learners and language teachers in the universities of applied sciences.

Engagement in higher education studies has been investigated quite extensively. However, engagement as a holistic phenomenon especially in the context of language learning has only recently started gaining research attention (Henry & Thorsen, 2018; Mercer & Dörnyei, 2020; Mystkowska-Wiertelak, 2020; Hiver, et al., 2021) in comparison to the earlier research where engagement was interpreted rather narrowly as an engagement with the language (Svalberg, 2009; 2018) or the task (Philp & Duchesne, 2016; Stockwell, 2018).

The motive for the present study was practice driven. The purpose was to increase language teachers' knowledge about technology-enhanced language learning and to provide them with research-based insights of the benefits digital technology offer for language learning. In accordance, various solutions to apply digital technology to cover particularly spoken language competence were investigated to provide educators with examples of creative ways to harness digitalisation in their own teaching. Another aim was to provide language teachers with research-based knowledge of the elements that contribute to student engagement in online and blended language learning.

In the following sections I present the theoretical framework and core concepts of the study; first I describe the language and communication studies in universities of applied sciences, then sociocultural and ecological language learning approaches, after that I discuss student engagement and particularly engagement in language learning and finally, I explore technology-enhanced language learning and the pedagogical designs I applied in the three sub-studies of this dissertation.

1.1 Language and communication studies in universities of applied sciences

In Finnish universities of applied sciences, language studies are the only studies in which the learning objectives are regulated by law. In other studies, the universities of applied sciences are autonomous actors in defining the learning objectives and contents of the studies and degree programmes (Kantelinen et al., 2016). Besides law regulations, the language and communication studies are guided by the working life requirements, as versatile language skills are a significant part of professionals' competences in the globalised working environment. The aim of language and communication studies in universities of applied sciences is to provide students with competences to communicate skilfully in written and spoken interaction situations in their professional field.

Arene - The Rectors' Conference of Finnish Universities of Applied Sciences founded a language working committee to investigate the stage of language teaching in universities of applied sciences and to develop the teaching. Based on the Universities of Applied Sciences Act, the committee created practical recommendations for language teaching. In 2008, the universities of applied sciences language and communication expert team, called KIVI-forum (Kivi-foorumi, n.d.) was established. The members of the KIVI-forum are 8 language teachers from universities of applied sciences, and they are nominated for three years at a time. KIVI-forum holds meetings 4-6 times annually with the aim to editorialise to topical issues related to language and communication studies.

According to the *Universities of Applied Sciences Act 1129/2014*, the students in Bachelor's Degree Programmes conducted in Finnish language in the universities of applied sciences must achieve: firstly, a level of Finnish and Swedish which, according to the Law on Language Proficiency Required of the Personnel of Public Organisations, is demanded in public office positions requiring a university degree in a bilingual region of public office and needed for practicing a profession and enabling professional development. Secondly, the level of proficiency in writing and speaking one or two foreign languages needed for practicing a profession and enabling professional development. To summarise, in bachelor's degree programmes, students are required to demonstrate a defined proficiency in the national languages, Finnish and Swedish, and at the minimum in one foreign language.

Language teaching in universities of applied sciences is languages for specific purposes (LSP) and vocationally oriented language learning (VOLL). Language skills form one basis of the professional competence, and the content and terminology covered in languages for specific purposes are typical of a particular field of studies (Robinson, 2000; Airola & Kantelinen, 2008; 2009; Kantelinen &

Heiskanen 2004). Language studies have an instrumental role, field-specific language skills enable students' success in their professional interaction situations, during their work placements and working life (Vogt & Kantelinen, 2013). Jaatinen (2007) argues that in vocationally oriented language learning, professional competence and language competence are intertwined and cannot be separated; the vocational competences need to be developed holistically parallel with language learning.

Kantelinen and Heiskanen (2004) have created a frame for language learning in universities of applied sciences. The frame comprises four elements: European reference for language learning, universities of applied sciences pedagogy, language education and LSP/VOLL. In the frame, the language learners are perceived as independent, autonomous, responsible students who make their own choices related to their learning. In addition, the language education aims to support the learner as a self-regulated and goal-oriented person. Besides language learning and intercultural competence, one aim is to foster student's self-reflection, self-knowledge, and self-regulation skills as well their abilities to learn. Further, the frame includes general skills such as critical thinking and the perspective of life-long learning (Kantelinen & Heiskanen, 2004; Siekkinen, 2017). In universities of applied sciences, the level of English required of first-year students is B2, according to the Common European Framework of Reference for Languages (CEFR).

Kantelinen et al. (2016) emphasise that besides language skills required in the working life the language studies in universities of applied sciences aim to enhance students' personal and professional development in terms of lifelong learning. Language learning is an individual, lifelong process, and the students are encouraged to embrace lifelong learning and the aligned attitude, knowledge, and competences (Jaatinen 2007; Kantelinen et al., 2016). Additionally, the language and communication studies highlight the importance of multilingualism.

In this dissertation, the target language in sub-studies I and III was English and in sub-study II German; in the following I discuss the position of these two foreign languages in Finland in general and particularly in universities of applied sciences. Thereafter I discuss spoken interaction as a language competence area.

English

English language functions globally as a lingua franca in diplomacy, tourism, culture, science, technology, and business. In international trade, most of the communication occurs in English between non-native speakers, therefore mastering English is an essential part of professional competence (Kantelinen et al., 2016). In Finland, English language has a special position; it is the most learnt foreign language as an A-language which begins in the third grade. In the year 2019, the most learnt A1 or A2 language in grades 1-6 in basic education was English (83%) followed by Finnish (5.7%), Swedish (4.2%) and German (3.9%) (Vipunen,

2020a). Likewise, in grades 7-9 in the same year, pupils learnt as A-language English (99.5 %), Swedish (7%), Finnish (5.8%) and German (5.1%) The high amount of Finnish is due to the fact that in Swedish speaking schools, Finnish is commonly started as A1 language (Vipunen, 2020b).

Furthermore, English is the most important foreign language in everyday life, media, and business (Leppänen & Nikula, 2007). Finnish students learn English in formal education, informal and non-formal contexts which creates a solid foundation of English skills before higher education studies. Especially university of applied sciences students with matriculation exam taken after upper secondary school are assumed to possess English language proficiency at the B2 level with reference to CEFR. B2 language user is an independent user in the CEFR scale with the abilities as follows: Can understand the main ideas of complex text on both concrete and abstract topics, including technical discussions in their field of specialization; Can interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible without strain for either party; Can produce clear, detailed text on a wide range of subjects and explain a viewpoint on a topical issue giving the advantages and disadvantages of various options (Council of Europe, 2018).

In the CEFR self-assessment grid, (Council of Europe, 2018) the language skills are divided into *reception*, including listening, and reading; *production* including spoken production and written production; *interaction* with spoken interaction and written and online interaction and finally, *mediation* in mediating a text, mediating concepts and mediating communication (Table 1).

The updated version of 2020 (Council of Europe, 2020) uses the term oral comprehension instead of listening, and oral production instead of spoken production, but in this research, I use the term spoken interaction.

University of applied sciences students with vocational school background commonly have lower proficiency level in English, since they have studied less courses in foreign languages compared to students with upper secondary school background. The students' language level is tested at the beginning of their studies at universities of applied sciences; students not yet possessing the B2 level are commonly offered a brush up English course or recommended to study independently prior to professional English courses. Even though students have a good command of general English at the beginning of their studies in higher education, their transition to study field-specific, professional English might be challenging.

Table 1. B2 level of language proficiency in the CEFR self-assessment grid scale (Council of Europe, 2018).

RECEPTION	
Listening	I can understand extended speech and lectures and follow even complex lines of argument provided the topic is reasonably familiar. I can understand most TV news and current affairs programmes. I can understand the majority of films in standard dialect.
Reading	I can read articles and reports concerned with contemporary problems in which the writers adopt particular stances or viewpoints. I can understand contemporary literary prose.
INTERACTION	
Spoken interaction	I can interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible. I can take an active part in discussion in familiar contexts, accounting for and sustaining my views.
Written and online interaction	I can interact with several people, linking my contributions to theirs and handling misunderstandings or disagreements, provided the others avoid complex language, allow me time and are generally cooperative. I can highlight the significance of facts, events, and experiences, justify ideas and support collaboration.
PRODUCTION	
Spoken production	I can present clear, detailed descriptions on a wide range of subjects related to my field of interest. I can explain a viewpoint on a topical issue giving the advantages and disadvantages of various options.
Written production	I can write clear, detailed text on a wide range of subjects related to my interests. I can write an essay or report, passing on information or giving reasons in support of or against a particular point of view.
MEDIATION	
Mediating a text	I can convey detailed information and arguments reliably, e.g., the significant point(s) contained in complex but well-structured, texts within my fields of professional, academic, and personal interest.
Mediating concepts	I can encourage participation and pose questions that invite reactions from other group members' perspectives or ask people to expand on their thinking and clarify their opinions. I can further develop other people's ideas and link them into coherent lines of thinking, considering different sides of an issue.
Mediating communication	I can encourage a shared communication culture by adapting the way I proceed, by expressing appreciation of different ideas, feelings, and viewpoints, and inviting participants to react to each other's ideas. I can communicate the significance of important statements and viewpoints on subjects within my fields of interest, provided speakers give clarifications if needed.

German

Besides compulsory English and Swedish language and communication studies, several additional foreign languages such as Spanish, French, German, Russian, Italian, Chinese and Japanese, are offered as optional language studies at universities of applied sciences. These foreign languages are taught either in Finnish, Swedish or English. The variety and amount of the optional course is decreasing,

and the tendency is to offer them as online courses in collaboration with other higher education institutions (see e.g., KiVAKO-project, KiVAKO, n.d.) or totally suspend the optional courses. For this reason, I chose to conduct one sub-study of my dissertation in a setting where German was the target foreign language.

According to The Ministry of Education and Culture report (Pyykkö, 2017) on the current state of the Finnish language reserve and language levels, language learning in Finland is becoming increasingly one-dimensional with the English language hegemony. Pyykkö (2017) suggests several actions to widen the language reserve in Finland and the follow-up report (Vaarala et al., 2021) explores if the situation has improved. According to Vaarala et al. (2021) language offering in universities of applied sciences is in general still rather limited and narrow. The follow-up report states that language skills are respected even less than before, and it is commonly assumed that English language skills are enough.

In higher education, the students' interest for other foreign languages is high, but the offered language studies concentrate on elementary level, when the language proficiency remains at the beginner level. Even elementary language proficiency is considered beneficial and can be used as an icebreaker in professional interaction situations (Airola, 2014). However, elementary language skills are not sufficient to improve students' employability. Higher education students would be keen to study more languages, but many institutions do not have resources to offer language studies enough.

Even though English is indisputably perceived as the most significant language for the world of work in Finland, there is a clear demand for other languages as well. The globalised working life requires professionals with skills of diverse languages (Kantelinen et al., 2016). The corporations might use English internally, but for successful business the necessity of mastering clients' languages remains crucial (Piekkari et al., 2013). According to the national survey conducted by the Confederation of Finnish Industries (2009), the most needed languages in the Finnish world of work are English, Swedish, and Russian; the fourth important being German.

Kolehmainen (2018) states that the role of Germany has been influential in Finland even though the amount of proficient German speakers has decreased. According to the Breckle and Rinne (2016), German language has maintained its solid position in Finland; Finnish corporations use German in their communication with German speaking business partners. The employees read and write emails, brochures, instructions, and contracts in German. Further, they need spoken German skills on phone, in customer service situations, negotiations and various kinds of meetings and encounters.

German is one of the most studied optional languages in higher education for several reasons. In Finnish universities of applied sciences in terms of country of destination for exchange study period, Germany was in the year 2018 by far the

most popular with 1278 students, Spain was at the second place with 613 and the Netherlands as the third with 611 students (Kolehmainen, 2018) In foreign trade, Germany is Finland's most important partner, in terms of export (15.1 %) and import (15.5 %) (Confederation of Finnish Industries). In addition, German language skills are important in tourism sector, because Finland as a travel destination attracts the most tourists from Russia, Germany, Great Britain, Sweden, and China (Business Finland). Further, the German companies based in Finland face difficulties in finding qualified personnel with adequate German language competences and therefore the need for German language studies in higher education is justified (German-Finnish chamber of commerce). Mastering German language improves employability in various branches such as industry (Breckle & Rinne, 2016) tourism and foreign trade.

1.2 Sociocultural and ecological language learning approaches

This study is grounded in the sociocultural approach (Vygotsky, 1978) which is a widely utilised frame in language education research (see e.g., Lantolf, 2000; Hampel, 2019) and ecological language learning approach (van Lier 2000; 2010). In this research the research settings were language courses which were crafted and implemented following ecological language learning approach. Accordingly, language competence is understood as a skill that gradually emerges through interaction and participation (Kramsch, 2002; 2008; van Lier, 2000).

According to Vygotsky (1978; 1986), the initial developer of sociocultural theory, social contact is vital for the development of thinking. He suggests that learning occurs on two levels: first on the social level (interpsychological) and thereafter on the individual level (intrapsychological). The sociocultural frame comprises three pillars: 1) social sources of individual development 2) semiotic mediation in human development such as languages, textual literacies, signs, and symbols and 3) genetic or development analysis (Vygotsky, 1986; Lantolf et al., 2015). Hence, learning is mediated through artefacts that help learners in their learning process. This mediation exploits the use of tools which Vygotsky sees essential for learning.

Further, Vygotsky (1978; 1986) introduces the term zone of proximal development (ZPD), which refers to the idea that learners have the actual level of development and a potential one that can be reached with appropriate support. In other words, the tasks that can be done with guidance or help from peers or teachers, are in ZPD and precisely such tasks extend learners' development in learning. Cognitive processes are social and after being internalised they become cognitive resources of the learner (Lantolf et al., 2015).

Sociocultural theory is a suitable frame for technology-enhanced language learning, as it provides an appropriate approach for investigating the impact digitalisation has for language learning, communication, and interaction (Hampel, 2019; Stickler & Hampel, 2019).

Sociocultural research tradition and the ecological learning approach have a common basis. The ecological approach to learning was modified for language learning acquisition purposes by van Lier (2000, 2004) and Lantolf (2007). In the ecological approach, language learning is seen as a non-linear, dynamic, complex process in which the learner faces opportunities, and through actions and interaction the language learning emerges (van Lier 2000; 2004). Ecological language learning approach emphases social interaction and learners, their social activity, interaction with others and the environment, but the active learner is at the centre (van Lier 2000; 2010). Learning is mediated through artefacts and tools that help learners in their learning process. These tools act as buffers between the person and the environment; digital technology can serve as such a tool by mediating activity and supporting learners' engagement (Hampel, 2019; Lantolf &Thorne, 2006).

The term affordance is central in ecological language learning, Van Lier (2000) introduced the term to replace the previously in cognitive language acquisition approach used concept of input - output. In the concept of input - output, the target language is perceived as a fixed code to be learnt whereas an affordance is the opportunity the learning environment offers for the learner. Originally the term affordance is defined related to animal behaviour by Gibson (1979) as "what the environment offers the animal, what it provides or furnishes, either for good or ill" (p. 92). He describes the affordances as possibilities for action in the environment. It is essential, how the learner perceives, observes, and exploits the available opportunities i.e., the affordances (van Lier, 2000). That refers to the individual's relationship with the affordances and the capacity to deploy them, which are determined, on the one hand, by the objective properties of the environment and, on the other hand, by the human's action capabilities.

In ecological language learning, individuals are part of ecosystems - the environments are defined as eco-compartments (niche) (van Lier, 2004; Kramsch, 2002; Steffensen & Fill, 2014). These eco-compartments cover the environment with affordances and the other language users; learning is part of an individual's many activities including communication and problem solving. Further, the key concepts are social interaction, dynamism, and the relationship between learners and their environment and other people, such as peers, experts, and novice language learners.

The notion of agency i.e., the learner has ownership of their learning is significant in ecological language learning approach. The notion of agency describes how active learners use affordances or resources in the environment or those provided by the teacher to enhance their learning, according to their own needs and

goals (van Lier, 2004). The degree of learner agency is described with corresponding adjectives and degrees as follows: 1) learners are unresponsive or minimally responsive, they are described as passive; 2) learners execute the teacher's instructions, they are described as obedient; 3) learners volunteer to answer teacher's questions, they are described as participatory; 4) learners voluntarily ask questions, they are described as inquisitive; 5) learners volunteer to assist, instruct or collaborate with other learners, they are described autonomous; 6) learners who voluntarily enter into debate and collaboration with peers are described as committed (van Lier, 2008). Van Lier describes the highest degree of agency as committed, and the second highest stage as autonomous, yet in this research, I interpret these two highest levels of agency as manifestations of student academic and social engagement.

Agency is entwined with the idea of authenticity which refers to contextualised learning environments. Authentic learning in higher education incorporates theoretical understanding with real-life, authentic settings (Herrington & Oliver, 2000; Lakkala et al., 2017). Hence, the learning material and the learning activities are meaningful for the student personally because they can be applied in situations which are relevant for them. In language studies, authenticity is referred also to authentic native in-put, that is, using written or spoken learning material and showing language in real use such as in films, songs, literature, newspapers, and advertisement. However, in this study, authentic learning means designing learning activities in a manner, which enables the learners to transfer and apply their knowledge in real-life (Ozverir et al., 2017). Herrington et al. (2003) state characteristics for authentic learning activities as follows: real world relevance, requiring students to define the tasks and sub-tasks needed to complete the activity, comprise complex tasks to be investigated by students over a sustained period of time, provide the opportunity for students to examine the task from different perspectives, using a variety of resources, provide opportunity to collaborate, provide opportunity to reflect, can be integrated and applied across different subject areas and lead beyond domain specific outcomes, are seamlessly integrated with assessment, yield polished products valuable in their own right rather than as preparation for something else, allow competing solutions and diversity of outcome.

Through agency, the learner can use the resources or affordances offered by such environments to advance their own skills. Moreover, collaboration, that is, meaningful social action to achieve common goals promotes learning. Not only is it recommended that learning material is authentic but that it stimulates interaction between learners to produce a genuine transferable response for real-life situations (Blin, et al., 2016; García-Sánchez & Luján-García, 2016). These characteristics and aspects were applied when applicable in designing the learning activities in the language studies which form the context of this research.

1.3 Spoken interaction and spoken language learning

Language learning can be defined as second language learning or foreign language learning. In second language learning, the learnt language has an institutional position in the learning environment, e.g., as English has in the English-speaking countries (Ellis, 2008). In second language learning, the learner has an opportunity to practice and learn the language in genuine interaction situations in everyday life (Ilola, 2018). In comparison, in foreign language learning, the learning mainly occurs in schools, and the language has no official status in the society (Ellis, 2008). In Finland, English and German are learnt as foreign languages. However, as the importance and use of English increases constantly in the Finnish society and globalised world of work, learning English has traits of second language learning (Ilola, 2018). In this dissertation, language learning is regarded as foreign language learning.

Language educators use the concept of four basic language skills: reading, writing, speaking, and listening. Listening and reading are the processes of receiving, whereas, writing and speaking are processes of production. In spoken interaction both production (speaking) and receiving (listening) are required. Nunan (1991) argues that for most language learners, mastering speaking is the most significant factor of learning a second or foreign language and its success level is evaluated by the ability to carry out a conversation in the language. Further, spoken interaction is in general regarded as the most demanding competence to acquire and master, for that reason it is one focus of this dissertation and in the following I discuss it more in detail.

Bygate (1987) defines speaking as a production of auditory signals to produce verbal responses in listeners. As for spoken language skill, research commonly focuses on indicators such as fluency and coherence, lexical resources, grammatical range, and accuracy, as well as pronunciation. Also, in the CEFR (Council of Europe, 2018) spoken performance is assessed according to range, accuracy, fluency, interaction, coherence, and phonology.

Even though a comprehensive, united framework of spoken language skill is missing, the generally used theories are based on the notion of communicative competence (Ilola, 2018). Chomsky (1965), Hymes (1972), Canale and Swain (1980), as well as Bachman and Palmer (1996) were the researchers on whose theories the Common European Framework (CEFR, 2003) was developed. The CEFR understands communicative language competence as a holistic phenomenon which comprises various components such as linguistic, sociolinguistic, and pragmatic components. In the CEFR self-assessment-grid (Council of Europe, 2018), the basic language skill speaking is divided into spoken interaction and spoken production; at the level B2 (see Table 1) regarding spoken interaction the person should be able to interact without strain i.e., express oneself and understand the counterpart rather fluently and spontaneously.

 In the process of learning spoken language skill, learners often experience insecurity. While speaking a language that learners do not master entirely, they feel exposed and insecure in their production (MacIntyre et al., 1997). The main characteristic which makes speaking in a foreign language demanding is the time pressure; the speaker has limited time for processing their expression (Bygate, 1987; Ilola, 2018). Speaking occurs in real time, it is processed and produced simultaneously, therefore errors, corrections and reframing of the utterances as well as redundancies are common (Bygate, 1987; Tiittula, 1993).

As Bygate (1987) indicates, the ability to speak the foreign language is not enough. Spoken language skill and particularly spoken interaction skills require in addition to learner's own production also receiving the counterpart's information. Spoken interaction and spoken production are intertwined and involve turn-taking and turn-giving. In interaction the counterparts need to collaborate as turn-taking occurs rapidly, reception and production alternate and they can overlap. When the listener is receiving the message, they already prepare their own production as a response (Leino, 2017). Further, the capacity to interact depends on the language user's ability to use the language in specific contexts (Celce-Murcia, 2007) and their intention to engage in the communication which can be influenced by their self-confidence level (MacIntyre, 2020).

As described in chapter 1.1., due to the fact that students are admitted to universities of applied sciences from various educational backgrounds or after several years in working life, it multiplies diversity in their previous competences (Kantelinen & Heiskanen, 2004). This indicates a long gap between previous language studies or language use and therefore lower language proficiency, which in turn hampers students' participation in language studies in universities of applied sciences, particularly in spoken interaction activities.

Leino (2017) argues that in working life, professionals face stress, anxiety, and frustration if they have difficulties in expressing themselves verbally in English. That is influenced by the fact that in the contemporary world of work many actors are fluent in speaking English; in professional interactions limited spoken language skills hinder interaction significantly. Further, professionals are assumed to master spoken interaction in English in current globalised working life (Kantelinen & Heiskanen, 2004; Leino, 2017).

Furthermore, in their future work, university of applied sciences graduates face situations where spoken interaction competences are imperative. Airola (2011) describes the results of a survey conducted in Northern Karelia; the survey revealed that the industry searches for people with solid spoken interaction skills. They emphasise language and interaction competence, negotiation, and collaboration skills as well as sales skills. Likewise, in the report of Confederation of Finnish Industries (2014) regarding working life needs, it became apparent that also in health care sector the professionals need to be able to interact in English when conducting and describing nursing procedures for multicultural clients and

when communicating in multinational professional teams at their workplace. The report confirms that versatile language competences are required in all branches, particularly spoken interaction skills. Ideally, the employees have self-confidence to interact beyond the absolute minimum i.e., to have the ability to initiate small-talk discussions. In addition, according to the report, working life emphasise communication instead of perfection in grammar.

The university of applied sciences graduates aim to B2 language skill level. Regarding spoken interaction, CEFR (Council of Europe, 2018) describes the skill level as follows: in the aspect of range, the learner should have a sufficient range of language to describe objects clearly, express viewpoints without searching for words and be able to use some complex sentences. In the aspect of accuracy, the learners should demonstrate relatively high degree of grammatical control and not make mistakes which cause misunderstandings, and they can correct most of their mistakes themselves. In fluency, the learners can produce stretches of language with a fairly even tempo, they may be hesitant when searching for patterns or expressions, but only few long pauses occur. In the qualitative aspect of interaction, the learners can initiate discourse, can take their turn when appropriate and end conversation when needed, but not always elegantly. During the discussion, they can e.g., confirm understanding or invite others. In coherence, the learners can use a limited number of cohesive devices to link their utterance into a clear discussion, however some jumpiness may arise. In phonology, the learners are able to use correct intonation and stress, they can articulate sounds clearly, but accent might be influenced by the learners' other languages, but it does not affect intelligibility.

To meet the working life needs of spoken interaction and to increase learners' self-confidence in interaction, learning activities where language learners interact in the target language are significant. Spoken learning activities foster students' communication competence, therefore CEFR suggests that communicative language competence is achieved through language activities which include reception, production, interaction, and mediation, both in spoken and written format.

Previous research in technology-enhanced language learning pertinent spoken language skill and spoken interaction indicates that digital technology provides means to support the language skill development. Some activities can be conducted traditionally in-class, but via digital technology use, the learning opportunities in a safe environment can be increased (Melchor-Couto et al., 2018). Plethora of research shows that technology use in foreign language learning for spoken interaction activities decreases reluctancy to interact in the target language and supports the skill development and results to better learning outcomes (Nobre, 2018). Video recording and voice recording afford learners increased planning time for their spoken production and spoken interaction, thereby improving accuracy, increasing linguistic complexity, and promoting fluency, provided that the tasks are well designed and do not overwhelm the students (Guillén & Blake,

2017). Similarly, video calls with appropriate tasks promote spoken interaction among language learners (Taillefer & Munoz-Luna, 2014). In addition, students' proficiency and self-confidence in foreign language spoken interaction can be enhanced through virtual worlds, such as Second Life, where students can interact as avatars. Particularly the anonymity of virtual worlds seems to enhance foreign language spoken interaction (Melchor-Couto et al., 2018).

Instead of measuring spoken interaction improvement or spoken performance quality aspects per se, the focus in my research is on the means to inspire and encourage the students to interact in the foreign language. This dissertation investigates the aspects students perceive enhancing their spoken interaction in the foreign language.

1.4 Student engagement

1.4.1 Student engagement in higher education

In the context of higher education, student engagement has been investigated extensively in the past decades; researchers have exhibited interest on the construct and its definitions, and how student engagement affects various aspects, such as student retention rates, student academic performance (Speke & Leach 2010; Fredricks et al., 2004), students' satisfaction and wellbeing (Salmela-Aro & Reid, 2017; Korhonen & Toom, 2017); also, quality of learning has been found as an outcome of student engagement (Kuh, 2009). Further, researchers have been interested in how the university as institutions or curriculum design or campus environment contribute to student engagement (Coates, 20007; Kuh, 2009). In addition, researchers have addressed student engagement through concepts such as self-determination theory (Deci & Ryan, 1985; Vansteenkiste et al., 2010) and self-regulated learning concepts (Wolters & Taylor, 2012; Mercer, 2019). Järvelä et al. (2016) created a concept of collaborative engagement on self-regulated learning theory in which engagement is built within a student group through collaborative interaction.

The notion of engagement is multidimensional and dynamic; in the extant literature, the concept has been defined in various ways, depending on the researchers' discipline orientations or research paradigms. In the context of higher education, Kahu (2013) identifies four approaches in the previous research to understand engagement: on teaching focused behavioural perspective, on individual's internal process focused psychological approach, a socio-cultural perspective, and a holistic approach, which aims to conclude all aforementioned aspects into the perspective. In addition, she proposes a new conceptual framework which views student engagement as a psycho-social process, in which institutional and personal

factors as well as a wider social context influences the process. As the core concept in her model as well is the widely agreed-upon three-part typology, student engagement comprises behavioural, affective, and cognitive components (Fredricks, et al., 2004).

Behavioural engagement entails participation and involvement in academic or social activities through time and effort spent on learning activities and interactions with peers and teachers (Kahu, 2013; Kuh, 2009). Affective or emotional engagement covers students' affective reactions to learning (Fredricks et al., 2004) and includes reactions and attitudes that students have related to teachers, peers, studying habits, subjects, and institutions at large. Cognitive engagement includes willingness and motivation to invest effort in comprehending complex ideas and mastering high-level skills (Fredricks et al., 2004).

Reeve and Tseng (2011) added agentic dimension to this three-part typology. Agentic engagement regards students' involvement in the current of the instruction that is presented to them. They argue that agentic engagement is deliberate and initiated by the student, hence it is proactive and intentional. The students are responsible for enrichening and elaborating their own learning experience instead of passively following the given guidelines.

Further, Bowden et al. (2019) introduce a model including four pillars: behavioural, affective, social, and cognitive engagement; they added social engagement to the widely accepted three-part typology, but omitted the agentic element (Fredricks et al., 2004; Ryu & Lombardi, 2015).

Parallel with integration and development of technology in educational settings, the concept of engagement within technology-based learning has been modified accordingly. Kearsley and Shneiderman (1998) developed an engagement theory for technology-based teaching and learning, where the technology facilitates engagement. According to their theory, student engagement is achieved by relating, creating, and donating. Relating focuses on peer interaction, during which students can learn from each other; creating, refers to the application of ideas to a specific context; donating, regards the use of authentic learning environment and material. According to the engagement theory, the learning activities should be meaningful in order the learners to be engaged through interaction with each other and worthwhile assignments. Technology facilitates the engagement, but engagement could occur without the use of technology (Kearsley & Shneiderman, 1998).

Redmond et al. (2018) argue that the three-dimensional concept with behavioural, affective, and cognitive components is suitable for traditional educational settings, but they introduce a modified version for online learning environments in higher education. They suggest a framework comprising five elements: social, cognitive, behavioural, collaborative, and emotional engagement. The emotional engagement overlaps with social engagement, which means students' social in-

vestment in the collegiate experience compassing academic and non-academic activities outside the classroom as well as social discussions (Coates, 2007). In addition, the sense of belonging to the learning community can be a part of emotional engagement (Fredricks et al., 2004; Kahu, 2013) or social engagement. Social engagement is equally important with the academic one since it enhances students' social-emotional wellbeing. Social engagement is essential for pair and group assignments, and it provides a basis for discussions on personal issues (Sinha et al., 2015). According to Pekrun and Linnenbrink-Garcia (2012), the factors that affect social engagement are mutual respect, supporting relationships, fairness as well as challenging and rigorous tasks and positive and safe learning environments.

Bond and Bedenlier (2019) discuss the role of digital technology in facilitating student engagement and they identify the need for a conceptualised model. They suggest a model focusing on the macro, exo, meso and micro levels with various aspects. Pérez-López et al. (2020) propose a model in the context of technology-enhanced learning in which collaborative learning utilising social networking sites acts as the cognitive dimension of the student engagement process. They interpret student engagement as a process where students enjoy and collaborate conducting the learning activities with the help of technology. Consequently, they state that the students are engaged with the learning process which fosters their satisfaction and academic achievement. Bond and Bedenlier (2019) and Pérez-López et al. (2020) summarise digital technology having an essential influence in student engagement in contemporary education.

1.4.2 Student engagement in language learning

This dissertation concentrates on language learning in higher education, therefore discipline specific engagement requires investigation. In language acquisition the shift from learner motivation focus to student engagement has only recently started gaining research attention (Mercer & Dörnyei, 2020; Henry & Thorsen, 2018; Mercer, 2019). Mercer (2019) states that the difference between engagement and motivation is the action aspect; she describes motivation as hidden phenomenon whereas engagement can be observed. Mercer and Dörnyei (2020) claim that the significance of student engagement in language education is even bigger compared to other disciplines, because students need to be actively participating in the learning process in order to acquire communicative competence in the target language. In pursuing automatic language skills, the practice period might be long, hence persistence and engagement are required (Mercer & Dörnyei, 2020). Particularly, the spoken language skill mastering demands student involvement and repetition which might be stressful with limited language competences. Language skills emerge gradually with the learning by doing method (Kramsch, 2002; van

Lier, 2000; Mercer & Dörnyei, 2020) which requires repetition, persistence, and engagement.

In the context of language learning, the earlier research has concentrated on engagement with the language (Svalberg, 2009) or the task (Philp & Duchesne, 2016). Particularly in traditional face-to-face language learning, interaction and participation are manifestation of engagement and learners' activity is central (Philp & Duchesne, 2016). Svalberg (2009) explores engagement in the frame of language awareness. She views learning as a process, where the language is an object and the learner an agent, and engagement is interpreted as a cognitive, affective, or social state in the process. She later (Svalberg, 2018) claims that language awareness is developed through a process and she clarifies as follows: "Cognitively, the engaged individual is alert, pays focused attention and constructs their own knowledge; Affectively, the engaged individual has a positive, purposeful, willing and autonomous disposition towards the object (language, the language and/or what it represents); Socially, the engaged individual is interactive and initiating" (Svalberg, 2018).

Philp and Duchesne (2016) view task engagement as a wider concept comprising behavioural, cognitive, emotional, and social dimensions. They concentrate on tasks with the primary focus on meaning. Similarly, Stockwell (2018) states that task engagement can be viewed as behavioural engagement, as the focus is on the time the learners spent on tasks. According to Stockwell (2018), in the context of second language acquisition, this kind of engagement research has been predominant, but he invites studies containing cognitive, emotional, and social aspects in terms of active and meaningful utilisation of study material. Still, his aim is to increase research on the aspects of task engagement. Further, some research in language acquisition in terms of student engagement have concentrated on tasks which promote peer interaction (see, e.g., Baralt et al., 2016; Van Phung, 2017; Nakamura et al., 2020).

In general, cognitive engagement means students' targeted intellectual effort in the learning process (Helme & Clarke, 2001) and students' ability to act as self-regulated learners, owing their learning process (Philp & Duchesne, 2016). In foreign language learning research, cognitive engagement appears as verbal interaction with peers and teacher, such as eagerness to answer questions or initiate speaking acts voluntarily or as non-verbal indicators of interaction such as body language or facial expressions (Helme & Clarke, 2001). Additionally, instances when students discuss about the target language or correct themselves or peers in the language use are manifestations of cognitive engagement (Svalberg, 2009).

In the context of language learning, behavioural engagement is conveyed by students' active participation, persistence and time spent on tasks (Philp & Duchesne, 2016). Further, behavioural engagement is manifested by the amount of language use e.g., produced words or sentences Lambert et al. (2017).

Language learner's emotional reactions and perceptions indicate their emotional or affective engagement during their involvement in learning activities. The characteristics of an emotionally engaged language learner are positive, willing, and meaningful attitude regarding the language and the learning activities (Svalberg, 2009). Emotional engagement has an essential contribution to other dimensions of engagement because learners' personal perception and attitude towards the target language affect all their actions throughout the learning process (Henry & Thorsen, 2018). Regardless of the necessity of the affective aspect of engagement, Dao (2019) claims that on its own it does not improve learning; cognitive engagement needs to be involved. Having fun and enjoying the interaction with the peer in the target language do not necessary lead to learning the language.

Philp and Duchesne (2008) argue that the social dimension of engagement is fundamental in language learning as using the target language is a social action involving peers and teacher. Social engagement is manifested by students' willingness to interact and collaborate with the other learners and the teacher. Besides the learners' own participation and active language use, social engagement includes learners' ability to listen to peers and the teacher. The reciprocal aspect of interaction is central in social engagement (Hiver et al., 2021).

Additionally, Svalberg (2018) states that in language learning, student engagement has a connection with students' perception on how purposeful, useful, and enjoyable tasks or activities are experienced on linguistic, social, or individual level. Lambert et al. (2017) concludes that students are more engaged in learning the target language when the learning activities are learner-generated in comparison to teacher-generated assignments.

The setting of this research is higher education blended language learning courses including distance and face-to-face sessions; hence I adapt the three-dimensional frame of academic engagement including behavioural, affective, and cognitive with additional social engagement as it is essential in language learning (Philp & Duchesne, 2008). In comparison to the earlier research in terms of language learning where engagement was interpreted rather narrowly as an engagement with the language (Svalberg, 2009) or the task (Philp & Duchesne, 2016), I comprehend engagement as a holistic phenomenon, where student engagement covers wider repertoire of aspects. The various aspects of engagement are overlapping and intertwined. In addition, I view engagement as a reciprocal process where the students and the teacher are in a dialog with each other (Mercer, 2019). This doctoral dissertation contributes to the gap in the research literature by investigating how, according to the students, their engagement and spoken interaction competence rehearsal can be enhanced in blended learning language studies in higher education.

1.5 Technology-enhanced language learning

In contemporary language learning in higher education, it is self-evident that technology is integrated into the learning processes. Under the umbrella terms Computer-assisted language learning (CALL), and technology-enhanced language learning (TELL) a substantial body of research has been conducted to investigate the impact digital technologies have on language acquisition. In technology-enhanced language learning the research has focused on acquiring the four language skills – listening, speaking, reading, and writing as well as vocabulary, grammar and pronunciation. In their literature review, Chang and Hung (2019) discover that of the research conducted until 2015, almost the half concentrate on vocabulary learning, or mixed language skills (17.9 %), followed by reading and writing skills (10.7% each). To compare, less than 5% of the research explored listening or grammar skills; pronunciation 2.4% and only 1.2% of the studies focused on speaking skills. Thus, the research area spoken interaction has been rather neglected until 2015.

In their literature review, Shadiev and Yang (2020) covered the articles published in technology-enhanced language learning specified peer-reviewed journals from 2014 to 2019. They discovered that in terms of the number of published articles, writing and vocabulary training still remain the most researched skill areas, but speaking has started to gain increasingly research interest and is on the third place far ahead before articles focusing on reading, listening, grammar or phrases. Still, pertaining spoken interaction in digital environments there is a clear need for further research.

Among the researchers there is a shared understanding that technology enhances language learning in all language skill areas, thus there is not a general agreement of the ways the educators should utilise technology in their implementation. However, previous literature shows that learners have positive attitude towards technology in language learning and they perceive the use of technology enhancing their learning and triggering interest and motivation (Shadiev & Yang, 2020; Golonka et al., 2014).

Shadiev and Yang (2020) state that use of technology is beneficial from both students' and teachers' perspectives. For students, besides motivating and engaging them in learning the language, technology immerses them within the target language and offers means for leaners' own language skills to emerge by their own production and peer interaction with the help of technology. For teachers, technology eases guidance, feedback and interaction with students and enables a means to organise their courses and produce their own learning materials.

The designs of the three courses in the sub-studies of this dissertation were informed by several considerations, comprising foreign language acquisition theories, sociocultural theory, and ecological language learning approach as well as different prospects of technology-enhanced language learning. The basic idea was

to provide the students with a plethora of opportunities for interaction with their peers, as the particular focus besides engagement was on spoken interaction. In the following, the pedagogical concepts of the courses are described. As depicted in Figure 1, blended learning approach and multimodality are the core approaches in all sub-studies and besides them gamification was used in sub-study I, telecollaboration and social networking site Facebook in sub-study II and social networking site WhatsApp in sub-study III.
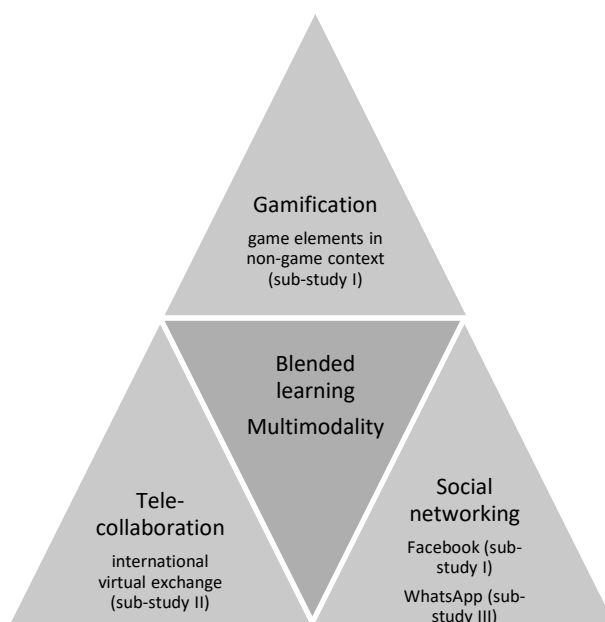
Figure 1. The learning designs of the researched courses.

1.5.1 Blended learning in language learning

Blended learning approach has been a widely used learning mode in higher education. The learning mode combines face-to-face teaching and online phases with the use of digital technology. With this combination, the versatile approach exploits the benefits of both online and face-to-face learning; in distant learning periods the students can experiment with innovative technology and in in-class sessions the physical presence of the instructor and the peers adds extra value to the course compared to a pure online learning mode (Wichadee, 2018).

According to Thorne (2003), blended learning mode could be one of the most important educational invention of this century, but language teachers have recognised the merits of the blend face-to-face and online teaching since the beginning of computer-assisted language learning (CALL) (Neumeier, 2005). Blended learning mode allows teachers to expand their traditional teaching and offer students more versatile and effective learning experiences (Garrison & Kanuka,

2004; Dziuban et al., 2018) and similarly enhance flexibility, students' autonomy and individual study paths (Trinder, 2016; Im & Kim, 2015). According to Wichadee (2018) students' satisfaction with the blended learning method depends on their digital literacy and self-regulation skills, time management abilities, their attitudes regarding blended learning methods as well as online tools' quality and face-to-face guidance and support.

In the context of communication and language studies, blended learning can enhance interaction and engagement, provided it is carefully designed with the utilisation of appropriate digital technology, authentic learning material and assignments. To achieve a successful learning environment, the students should be encouraged to collaborate and participate, in this manner the learners benefit the most from this approach (Wichadee, 2018).

Previous literature manifests that in online and blended learning approaches, students perceive the meaningful and authentic learning activities and appropriate digital tools (Richards, 2013) as well as sufficiently provided support, feedback and teacher presence (Lee, 2016; Nielson & González-Lloret, 2010) to promote student autonomy and result to better language learning experience. In addition, the blended learning approach facilitates students' learning process which in turn influences positively to learning, participation and motivation (Miyazoe & Anderson, 2010; Lopez-Perez et al., 2011; Law et al., 2019).

1.5.2 Multimodality in language learning

Multimodality is an interdisciplinary approach in which communication is understood to include versatile resources in addition to language. Multimodal language learning approach (Kress & van Leeuwen, 2001) utilises different modes in learning materials as well as activities and assignments: visual, audio, text and speech. In face-to-face communication and language learning, multimodality is naturally included, and currently digital technology enables increased multimodality in online learning as well. Today's communication in informal settings utilises multimodality via digital devices as people read and create texts that are often combined with photos, videos, and sound. Still, in formal settings, such as in education the main mode for providing learning material or assignments is the traditional writing or text-based mode (e.g., Kress, 2010; Hampel & Hauck, 2006; Magnusson & Godhe, 2019). However, online learning environments allow language teachers to provide learning material in various modes and the combination of modes supports learning and leads to improved learning results (Moreno & Mayer, 2007). Further, contemporary technology with handheld devices makes multimodality easier to implement (Wrigglesworth, 2019) and creates opportunities for informal and non-formal language learning as well (Kukulska-Hulme & Traxler, 2019).

In multimodal language learning, various media and methods are selected according to their suitability to the learning activities (Jalkanen & Taalas, 2013). Activities and communication situations cannot replicate the conventional face-to-face settings and contribute only to the number of resources and activities. Instead, online activities and resources need to be adjusted to suit the online learning environment (Hampel & Hauck, 2006). Multimodality is especially suited for language learning because the tasks are aimed to be authentic, in accordance with the ecological learning approach. Particularly spoken interaction research has benefitted from multimodal approach (Bueno-Alastuey, 2013).

The three sub-studies of this research were implemented with the blended learning approach including face-to-face and online sessions utilising multimodality. Additionally, the courses explored various implementation methods: gamification in sub-study I, in sub-study II telecollaboration and social networking sites and in sub-study III social networking sites. In the following chapters I discuss gamification, telecollaboration and social networking sites in language learning.

1.5.3 Gamification in language learning

Gamification (Detering et al., 2011) is a concept of applying game mechanism, game elements and game design in a non-game context. Gamification does not imply game creation, but any task, activity, topic or context can be gamified (Figueroa, 2015). In addition, there is a need to differentiate gamification from other gaming concepts: game-based learning, serious games and simulations. Game-based learning refers to actual games which can be used in the class, whereas serious games are games which are designed particularly for learning for example spoken interaction (Reinders, & Wattana, 2014; 2015), and finally, simulations simulate real word occurrences, and are used for training (Mohamad et al., 2018). In educational settings, by gamification, students learn academic material with the use of game elements, and it caters various kinds of learning.

Gamification is constructed to include elements from game mechanics, divided into individual self-elements such as points, levels, trophies and virtual goods and social-elements such as leader boards, storyline and interactive cooperation; game characteristics such as fun, uncertainty, fiction, play, governed by rules, choice, engagement and reflection and finally from game dynamics such as rewards, status, self-expression, achievement, emotions, constrains, progression and relationships (Mohamad et al., 2018).

Gamification aims to promote student engagement in an enjoyable way by adding game-like techniques into learning (Hamari et al., 2016). Gamification fosters collaboration and interaction with peers; mundane activities become attractive and

appealing with the game-like approach (Basten 2017). Gamification generates positive, relaxing learning atmosphere (Huang & Soman, 2013; Figueroa, 2015) which in turn empowers and engages students. Gamification can be implemented analogically, but the rapid development of technology, social media and mobile applications create fruitful and versatile environment for digital gamification (Kim, 2015).

Regarding learning and teaching, gamification can be categorised in six sub-categories according to the implementation method: 1) course without online support (setting is in physical classroom with boardgames of handouts), 2) massive open online course (the material or assignments are gamified such as interactive video presentation) 3) blended or flipped learning (with learning management system such as Moodle) 4) e-learning (a gamified site) 5) gamified platform (a gamified database) and 6) mobile learning (mobile device) (Dicheva & Dichev, 2017).

In the context of language learning, gamification has predominantly a positive impact on motivation, engagement, learning experience and learning results. Gamification enhances language learning in general (Sevilla-Pavon & Haba-Osca 2017); by gamified elements vocabulary and grammar (Gellar-Goad, 2015) mastering can be intensified. Figueroa (2015) states that also writing, reading and speaking skills can be enhanced by gamification. Additionally, gamification can be deployed via particular mobile applications, such as Duolingo (Figueroa 2015; Munday, 2016), Kahoot or Quizlet (Bueno-Alastuey & Nemeth, 2020) to expand vocabulary, or improve grammar and different language competences (Gellar-Goad, 2015).

Higher education language learning research clarifies that gamification improves motivation and engagement, and as a result enhances the positive learning experience (Sevilla-Pavon & Haba-Osca, 2017; Gellar-Goad, 2015). However, gamification has also been criticised, because some game elements appeal only to a part of the learners, which can decrease engagement, e.g., competitive elements can alienate students. Similarly, lack of time, lack of game elements or different competence level as well as monotonous or inappropriate task types and technical defects demotivate learners. Likewise, entirely online gamified courses have issues related to motivation and engagement. (Hanus & Fox, 2015)

In our study, we integrated gamified elements into a blended learning professional English course; the aim was to attract several kinds of learners by offering various types of gamified elements. The course included individual self-elements in the form of points and trophies, social-elements in the form of leader boards, storyline and pair work; game characteristics in the form of fun, fiction, play, rules, engagement and reflection and finally from game dynamics in the form of self-expression, achievement, emotions, constrains, progression and relationships (Mohamad et al., 2018). We created an authentic background storyline in a hospital setting. The main platform was Seppo (seppo.io) game management system where the educators can create various kinds of learning activities, and the results

are shown as a leader board. To expand the learning experience, other digitals tools, such as Padlet (padlet.com), Kahoot (kahoot.it) and Quizlet (quizlet.com) were utilised to strengthen the gamified aspect. The students uploaded their materials and assignments in a multimodal form. In addition, as counterbalance, some analogical and physical games were played in the face-to-face sessions to appeal less digital-savvy learners.

1.5.4 Telecollaboration

In language learning, digital technology provides ample opportunities for foreign language learners to gain access to other language speakers and cultures worldwide. In formal learning setting, especially in higher education institutions, telecollaboration is one way to generate the connection between language learners globally. Telecollaboration is a term that is used particularly in the context of language learning for virtual exchange, and it refers to international collaboration via digital communication tools between learners (Belz, 2003). The aim is to learn the target language and increase intercultural communication competence supported by social interaction and intercultural exchange (Belz, 2003). Additionally, telecollaboration and virtual exchanges provide higher education institutions opportunities to facilitate their globalisation strategies (Helm, 2015).

Telecollaboration has developed from text-only mediums such as email writing exchanges (Belz, 2003) through exchanges on institution's learning management platforms (Hauck & Young, 2008; Ware and O'Dowd, 2008) with asynchronous and synchronous communications possibilities to virtual exchanges utilising social media as a platform (Blattner & Fiori, 2011). Moreover, the exchanges have developed in accordance with the technology development and have become increasingly multimodal, with photos, videos and synchronous videocall or videoconference opportunities; asynchronous voice recordings and videos providing added value to synchronous exchanges. However, as synchronous communication is becoming easier and more accessible, it is becoming a norm in telecollaboration (O'Dowd & O'Rourke, 2019). Multimodality or synchronicity reinforces the sense of belonging and personality by providing visual and auditory contact between the participants (Godwin-Jones, 2019).

The most used form of telecollaboration is an exchange where students from different native languages are paired to communicate in both languages with the aim to learn and teach the language reciprocally. The focus in such exchanges is on the linguistics with corrective feedback providing alternative ways of communicating, and the allocated time is evenly divided between the languages. The native speakers act as experts of their mother tongue (Helm, 2015). Besides concentrating on the language skill areas (e.g., Helm & Guth, 2016) pragmatic lan-

guage use and digital literacies improve (Helm & Guth, 2016) during telecollaboration. Such telecollaboration projects base on reciprocity and autonomy; they support learners' spoken skill improvement, widen their vocabulary, deepen their grammar knowledge and support them to become independent learners (Kukulska-Hulme et al., 2021).

Another well-established model is the one where the focus is on intercultural competence improvement. The students are encouraged to compare cultural differences and similarities between their native countries or regions (Belz, 2003). In all exchanges English language has dominated as the lingua franca (Godwin-Jones, 2019).

In both abovementioned models, the assumption is that native speakers are the optimal teachers and experts of their own culture and language. However, the participants of a virtual exchange can use and learn a foreign language as a lingua franca which is a native language for neither of the counterparts. The benefit of using for both learners a non-native lingua franca is the notion that learners are more eager to communicate with non-natives and they experience mutual support and share the difficulty of learning the same language (Helm, 2015). Neither of the learners is expected to be an expert, and neither has the position of controller which in turn creates a basis for equal power relationship (Train, 2006).

Telecollaboration is a powerful method to be integrated in education to improve language and intercultural competences, and there is a mutual understanding of its benefits. However, there is a debate of the methods to implemented it – should it be strictly facilitated or rather the students are only offered a platform where to collaborate freely and informally. Another issue concerns the shallowness of the intercultural competence themes. It is problematic, becase the cultural topics are not profound, instead, they focus on everyday lives (Godwin-Jones, 2019). In addition, telecollaboration has been criticised strengthening the notion of homogenous national cultures, ignoring subcultures and regional ones (Helm & Guth, 2016).

In this study, telecollaboration was integrated in German language teaching in a manner that the counterparts, who were in the opposite sides of the hemisphere; one in Finland, Helsinki and the other in New Zealand, Christchurch, used a closed Facebook group as a shared platform during the six-week-long project. The project was clearly structured time- and task-wise, but the students were encouraged to initiate discussions of their choice in the Facebook group and add posts and comments freely in the group. Besides the German language learning, the focus was on intercultural competence development and gaining knowledge of cultural aspects of the target language as well as the cultural background of the participants' countries, Finland and New Zealand.

Telecollaboration literature includes scarce research on the impact the concept has on engagement as it has mainly focused on developing language skills and intercultural competence, therefore this research provides valuable research-based

information in the area. Further, compared to English, German is far less used as the target language in telecollaboration studies, this research bridges the gap in that aspect as well.

1.5.5 Social networking sites in language learning

Although social networking sites such as Twitter, Facebook, Instagram and WhatsApp are not originally designed for educational use, their potential for enhancing language skill development and student engagement as authentic, collaborative learning platforms have gained attention among educators and researchers (Lomicka & Lord, 2016; Lamy & Zourou, 2013; Reinhardt, 2019; Pérez-López et al., 2020). In addition, harnessing the social dimension of social networking sites to advance language learning by offering the learners a platform to share and create learning materials instead of receiving and acquiring the teacher made resources is an aspect of interest. Lomicka and Lord (2016) explain that the attraction of social networking sites is the fact that they create a place to meet new people and stay connected with them; further, social networking sites can be environments for social interaction and self-expression (Thorne, 2010). Language learning can benefit from the aspects of social interaction and self-expression, as they are essential for language learning. For this reason, as social networking sites provide learners opportunities to interact, they create an optimal context for advancing language learning in digital spaces (Huang & Su, 2018; Thorne, 2010).

Social networking sites promote collaboration, participation, interaction and community building and intensify the intercultural competence development; hence they are suitable addition for online language learning in higher education. They are mainly accessed on smart phones or other mobile devices even though these platforms have a browser version as well. The accessibility and ubiquity of mobile devices becomes one aspect to safeguard student engagement during the learning process (e.g., Andujar & Salaberri-Ramiro, 2019), as these platforms are frequently visited and used for social purposes or information and content sharing by higher education students (Boyd, 2014).

Social networking sites as a widely accessible and user-friendly platform allows students to connect with people worldwide and develop international, authentic networks communicating in the target language with native or non-native speakers. Implementing social networking sites into language learning to create a collaborative learning environment within sociocultural and ecological language learning approaches is a natural continuation of students' online life (Boyd, 2014). Since in sociocultural and ecological approaches the language competence is seen to emerge through interaction, social networking sites suit well to the approaches. Hamid et al. (2015) define three modes of interaction in social networking sites in

education: 1) student-student 2) student-teacher 3) student-content. Further, the combination of deploying social networking sites and providing the students with meaningful learning activities promote engagement, motivation and autonomy in the context of language learning in higher education (Lee & Markey, 2014).

From the individual social networking sites Facebook is the most used for language learning. Facebook as a shared platform has been deployed for learning community building (Leier, 2017; Blattner & Fiori, 2011; Blattner & Lomicka, 2012; Mills, 2011), and as a learning platform promoting language competences such as writing (Leier, 2017), pronunciation and communicative competence (Blattner & Fiori, 2011) and cultural awareness of the target language (Mills, 2011). Further, Facebook as a part of formal learning contributes to student engagement and promotes learner autonomy (Foogooa & Ferdinand-James 2017; Mills, 2011).

In comparison to Facebook, the potential for language learning using Twitter and Instagram has been less researched. Twitter as an authentic and dynamic platform enhances the language learning experience or creates a virtual extension of the physical classroom and fosters community building and encourages participation and interaction (Lomicka & Lord, 2016). Çakmak (2020) praises Instagram's ability to foster language learner's engagement through its technical features such as tagging locations and people in the posts which can include photos, text and videos, using hashtags for keywords, and having discussions with other users by posts and comments. Instagram has shown its ability for language studies for promoting spoken language skills and activating students' participation (Çakmak, 2020). Moreover, research has acknowledged the potential of Instagram as fostering language learners' digital and virtual literacies development and its suitability for visual learners because of the enhanced visual functionality of the platform (Leier, 2018).

WhatsApp increases its popularity: in Finland WhatsApp is the most used of the social networking site services: in 2017, in leisure time, 68 % of all Finns used WhatsApp and 95-96 % of Finnish teenagers used it (Official Statistics of Finland, 2017). In comparison, in the same year, 55 % of Finns used the second popular platform Facebook. WhatsApp apparently influences student achievement in language learning (Kacetl & Klímová, 2019; Wrigglesworth & Harvor, 2018). The researchers clarify that WhatsApp promotes different language competences such as writing and widening the vocabulary in the target language, oral skills and authentic interaction (Andújar-Vaca & Cruz-Martínez, 2017; García-Gómez, 2020) as well as listening and reading skills. Andújar-Vaca & Cruz-Martínez (2017) emphasise that the use of smart phones and other mobile devices is significant for spoken interaction, because they provide learners with a tool and environment to practice the target language ubiquitously and authentically. Further, Andujar

(2020) highlights the importance of appropriate digital tools and learning environment for the students accessibility is in the key role; they are reluctant to use complicated or intrusive tools.

Andujar (2020) concludes that when deploying social networking sites in language learning, there is a clear need for investigating the influence it has for student engagement and language development in order to have impact on research and education. Moreover, in the research of social networking sites, spoken skills development and practicing speaking skills has not gained much research interest yet (Çakmak, 2020).

There are some concerns about integrating social networking sites in educational settings, such as students' privacy or the terms of the service providers regarding age or other limitations. In addition, students might not be willing to create a social networking account or use an existing one for educational purposes (Abbott et al., 2013; Taşkıran et al., 2018). Students also might perceive their social networking sites not suitable for learning, as they consider them strongly as a part of their private sphere. Prior to learning in a digital community, it is essential to formulate rules for communication and provide the learners with enough information on assessment, assignments and feedback (Çakmak, 2020). Further, it is fundamental to afford students time to create a learning community and build relationships prior to the learning activities, as it benefits their engagement to interaction (Laghos & Nisiforou, 2018).

As for social networking sites, in sub-study II Facebook and in sub-study III WhatsApp were utilised. The sites were selected because of their accessibility, user-friendliness and because the students were active users of these platforms before the courses. In sub-study II, prior to the course, the students were asked about their social networking site preferences, and they preferred Facebook to Instagram as a shared platform during the course.

1.6 Summary of the core concept and terms

In this chapter, I summarise the core concepts of the study. The pedagogical underpinnings of the investigated courses lean on the notions of sociocultural and ecological language learning, technology-enhanced language learning and the understanding of student engagement as a holistic phenomenon. These three pillars form the bases on which the courses were constructed in the context of university of applied sciences language and communication studies, as Figure 2 depicts.
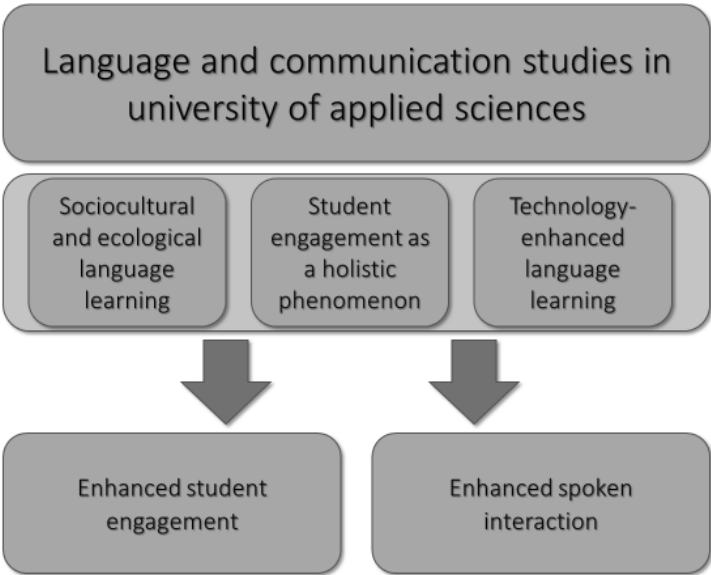
Figure 2. The setting and the core concepts of the study.

2 The aim of the research and research questions

This research aims to gain a deeper understanding about the aspects that contribute to student engagement in blended learning language courses. Another aim is to discover factors which enhance spoken language skill practicing in blended learning courses. The three sub-studies focus on one language study module each in the context of higher education. Each sub-study experiments various opportunities that digital technology provides for language learning: gamification, telecollaboration, social networking sites and multimodality. Regardless of the course design, authentic learning and students' collaboration are in the focus; the target is that the students are producers rather than consumers of digital media and they act as active learners within authentic learning activities (van Lier, 2004; Oskoz & Gimeno-Sanz, 2020). The sub-studies reflect higher education students' perception on the aspects that enhance engagement in the blended learning approach and what they perceive fostering spoken language skills in the blended learning approach.

The significance of this research derives from the importance of student engagement in higher education as a method to decrease student attrition rates in language studies. Secondly, the importance of engagement particularly in language education acts as a promoter to learn all language competences, and thirdly to gain research-based knowledge on the pedagogical solutions and methods to enhance student engagement in digital learning environments. As for spoken interaction, the focus of this research is not on assessing or estimating the participants' language proficiency or its improvement during the courses in question but rather on exploring students' perceptions on the aspects supporting spoken interaction.

As depicted in Table 2, each sub-study contributes to discovering the answers to the overarching research questions:

1) Which aspects do university of applied sciences students perceive enhancing academic and social engagement in blended learning language courses?

2) Which aspects do university of applied sciences students perceive enhancing their spoken interaction in blended learning language courses?

3) Which pedagogical approaches and methods enhance engagement and spoken interaction in blended learning language courses?

Table 2. Summary of overarching aim and research questions of the sub-studies.

Research questions	Sub-study pertinent research questions
Which aspects do university of applied sciences students perceive enhancing academic and social engagement in blended learning language courses?	**Sub-study I** RQ 1: How do health care students evaluate and value the use of gamified applications for triggering interest and enhancing engagement? **Sub-study II** RQ 2: Does task-based language teaching applied in a technology-enhanced environment lead to student engagement in foreign language learning? **Sub-study III** RQ 1: Which features do students perceive enhancing academic and social engagement in a blended learning language course?
Which aspects do university of applied sciences students perceive enhancing their spoken interaction in blended learning language courses?	**Sub-study I** RQ 3: How do health care students evaluate and value the use of gamified applications for enhancing language learning? **Sub-study II** RQ 1: How do students perceive the implementation of the tasks in a FB-group? **Sub-study III** RQ 2: Which features do students perceive enhancing oral communication in a blended learning language course?
Which pedagogical approaches and methods enhance engagement and spoken interaction in blended learning language courses?	**Sub-study I** RQ 1: How do health care students evaluate and value the use of gamified applications for triggering interest and enhancing engagement? RQ 2: How do health care students evaluate and value the use of gamified applications for enhancing enjoyment? RQ 3: How do health care students evaluate and value the use of gamified applications for enhancing language learning? **Sub-study II** RQ 1: How do students perceive the implementation of the tasks in a FB-group? RQ 2: Does task-based language teaching applied in a technology-enhanced environment lead to student engagement in foreign language learning? **Sub-study III** RQ 1: Which features do students perceive enhancing academic and social engagement in a blended learning language course? RQ 2: Which features do students perceive enhancing oral communication in a blended learning language course?

3 Methods

Researcher's theory of how knowledge is achieved or generated i.e., their episte-mologies follow their reflections of the believes on what the world is, that is their ontologies (Twining et al., 2017). This study is grounded in social constructivism according to which truth is constructed through social interactions as participants engage with the world and with each other (Gray, 2014). Further, according to sociocultural learning theory, learning occurs in complex internal and external in-teractions with constrains and affordances of various factors, such as psychologi-cal, societal, historical and cultural aspects (Stickler & Hampel, 2019). In accord-ance, sociocultural epistemology provides a framework where communication is acknowledged as a fundamental method for knowledge generation (Littleton & Mercer, 2013), hence knowledge is considered as a process rather than a product.

3.1 General methodological approach

This dissertation can be described as a multiple-case study. Case study refers to research which investigates one case in the real-life context thoroughly from var-ious perspectives (Simons, 2009) enabling multiple data collection and analysis methods to achieve a comprehensive understanding of the researched phenome-non. Case study allows in-depth investigation of a phenomenon within its actual context, and it provides means to understand the phenomena profoundly in the real-world settings (Yin, 2014; Schreier, 2012).

Case study research is beneficial in answering question such as how, where or what (Yin, 2014). To address the research questions, case study approach enables and requires various data collection and data analysis methods (Yin, 2009). Fur-ther, Yin (2009; 2014) recommends the researcher to be involved in the research context during the study. Yin (2014) divides case studies in four different types: 1) single-case design with holistic single-unit analysis, 2) single-case design with multiple unit analysis, 3) multiple-case design with holistic single unit analysis and 4) multiple-case design with multiple unit analysis. In comparison, Stake (2000) classifies case studies under three types: 1) intrinsic case study which is utilised for gaining a better understanding of a case; 2) instrumental case study in which the researcher has a dual aim, they target to understand one specific case and a phenomenon; and finally, 3) collective case study where multiple cases are studied to investigate one phenomenon or general condition.

This dissertation is based on three cases, in all of which the same phenomenon, student engagement, is investigated holistically. In addition, the same cases aimed

to address another research question. Therefore, the present research can be defined as a multiple-case study with multiple unit analysis (Yin, 2014) or an instrumental case study (Stake, 2000). Each sub-study of this dissertation forms one case study (Yin, 2014). The three separate empirical cases were conducted in universities of applied sciences in Finland; additionally, in one of the studies a part of the participants were university students in New Zealand. The separate studies are individual cases, but interconnected, hence all of them experiment methods to support student engagement and spoken interactionin the frame of technology-enhanced language learning. Each case generated its own, multiple data which were separately analysed. The data selection and methods to collect them followed the case study process (Yin, 2009). The methodologies and processes of each sub-study are described transparently in the sub-studies I-III.

This research follows design-based research approach (Edelson, 2002; Sandoval & Bell, 2004). The contexts of the sub-studies are authentic language study modules in higher education institutions. The study modules go through planning, designing, piloting and investigation which allows intertwining theory and practice. Design-based research is suitable for educational research because the study models can be fast modified and improved according to the findings (Edelson, 2002; Sandoval & Bell, 2004; McKenney & Reeves, 2018). Design-based research focuses on understand a complex phenomenon in its real-world setting with an ultimate aim to provide practical implications; that is bridging the gap between research and praxis. McKenney and Reeves (2018) clarify that educational design research aims to develop theoretical understanding and practical solutions simultaneously in real-world context instead of laboratory settings. The authentic settings provide context for empirical investigations in educational design research which pursue transforming practice and having a positive impact in teachers' work.

The Design-based research collective (2016) suggest that a good design-based research demonstrates the following elements: 1) intertwine designing learning environments with developing learning theories, 2) development and research occur in cycles including design, enactment, analysis and redesign, 3) the findings lead to theories and implications which are shared with other educators, 4) research clarifies the design's ability to function in authentic setting, it expands our understanding of issues related to learning, 5) the development is research-based with methods that can document and connect processes of enactment to outcomes of interest.

Moreover, McKenney and Reeves (2018) characterise educational design research as theoretically oriented, interventionist, collaborative, responsively grounded and iterative. Theoretical orientation means that the research is based on existing theories and can contribute to theoretical insights as well as to the solutions of real-world problems. Educational design research can influence vari-

ous theoretical understanding related to specific subject areas e.g., language learning in this research. Interventionist approach indicates that educational design research seeks a positive solution for real problems such as teaching practices, degree programmes or educational policies. The starting point for educational design research is to identify the authentic problem in an authentic setting, clarify the problem and thereafter explore and implement innovative solutions which utilise theory, empirical piloting and creativity of the researchers; these aspects form the interventionist part. In an ideal case, educational design research is conducted in collaboration with various parties: problem owners, other researchers, and teachers. Responsively grounded means that theory, literature and teachers' expertise form the bases educational design research relays on and through which it investigates and transforms the authentic practices. In addition, as an iterative circle of investigation, developing, testing and adjusting accordingly, educational research contributes to educational praxis.

The research at hand followed the principles of educational design research; the courses in the research were carefully designed guided by ecological language learning theory, with the aim to have impact in authentic educational contexts and teaching practices by creating novel, innovative language course. The identified problems were two: the concern regarding students' sufficient engagement and their spoken language skills improvement in blended learning foreign language courses. The research was collaborative in terms of designing and piloting the courses with a colleague as well as conducting the research in collaboration by collecting and analysing the data with the co-researchers. In addition, the research was responsively grounded on my and co-researchers' and colleagues' expertise in pedagogy, digital technology and research knowledge. The courses were three separate pilot courses, which means that the iterative development of the courses according to the findings of the pilots are not included in this dissertation. Instead of developing one course and one pedagogical design, this dissertation aimed to experiment several ways to harness digital technology for engagement and spoken interaction in foreign languages.

In sub-study I, the gamified professional English course for health care students was designed in collaboration with my colleague English teacher of the same institution. Even though the course was designed in collaboration, I acted as the teacher and researcher designing the research, selecting the data collection methods, collected the data and analysed them. The co-researcher contributed finalising the research article. Similarly, the telecollaboration project which was a part of the German language course in sub-study II was designed collaboratively with another German teacher who is a native German speaker residing in New Zealand. She acted as the teacher for the New Zealander group in the local university and I was the teacher for the Finnish counterpart. The research design was also a result of our collaboration, we planned the data collection methods and we both col-

lected the data in our own institutions, but again the analysis was conducted together. On contrary, the Business English course in sub-study III was designed and taught by me solely, but the research design and the analysis were conducted in collaboration with the two co-researchers. Even if the second implementation phase remains out of this research, the courses were adjusted according to the findings and improved accordingly.

Qualitative research approach is particularly appropriate in technology-enhanced language learning research deploying sociocultural episteme (Stickler & Hampel, 2019) and ecological language learning approach. Qualitative research allows flexible methods to study complex cases in their authentic settings generating rich and dense data which enables the researcher to create a holistic picture of the phenomenon, here engagement and spoken interaction in language learning (Miles et al., 2014). In addition, qualitative methods allow investigating and describing language learning as a process, where the learner must adapt to the time, space, and environment (Stickler & Hampel, 2019).

Even though the overall research approach of this study is qualitative, in the sub-studies, quantitative data were deployed to elicit a comprehensive and holistic depiction of the researched phenomena. A study where data collection follows quantitative and qualitative methods is defined as mixed methods study (Creswell, 2014). In mixed method approach the research questions lead the choice of data collection methods targeting to provide optimal data for answering the research questions. Johnson et al., (2007) describe research approaches as a continuum in which pure quantitative and qualitative approaches are at the opposite ends of the continuum and pure mixed methods research in the middle. They state that the researchers have one primary approach but can utilise other approaches when it benefits their research. According to the definition by Johnosn et al. (2007) the research at hand can be defined as qualitative dominant mixed methods research in which quantitative data is included in qualitative research. This strategy in data collection in educational sciences conducted with qualitative research approach is a common strategy to gather various kinds of data.

3.2 Researcher's position

In 2008 was the first time for me to implement the same professional English course parallel as face-to-face teaching and with the blended learning approach in a university of applied sciences. The students in the face-to-face group were young adults, straight from the upper secondary school conducting their degree programme as so-called daytime students with their timetable covering the working days from 8 am to 4 pm. In comparison, the blended learning group, so-called adult students comprised students with heterogeneous age range and educational backgrounds conducting their studies alongside with their work. In their timetable,

they had contact teaching in the campus approximately once a month in Friday evenings and on Saturdays. For the daytime students the allocated contact teaching for the 3-credit course was 58 hours and for the adult students 18 hours with the aim to reach the same learning objectives.

This paradox, the students with a routine and time to focus on their studies were provided with more teaching hours compared to the students juggling between work, family and studies with a longer time from their previous studies were allocated less contact teaching, made me ponder if both student groups achieve the same learning objectives. In addition, I was concerned about the adult students' learning community building, engagement to their language studies and how to cater learning activities to cover all language skill areas, particularly the spoken one. These concerns were the starting point for me to seek for more knowledge about harnessing digitalisation for language learning. To start bridging the gap in my knowledge, I conducted the Master's Degree Programme in Learning and Educational Technology Research Unit (LET) in University of Oulu after which I continued in the University of Helsinki with doctoral studies and the dissertation at hand.

I had a threefold role during my dissertation process, I designed the courses, either independently or in collaboration with my colleagues, I acted as a teacher in all courses and finally I was the researcher. My sub-studies are teacher- and practise-driven and they are based on my pedagogical thinking. For my professional development, conducting research has been central as it has been fruitful to collaborate with the professionals who share the same passion and drive to experiment novel methods, approaches, and digital technology in practice.

Language teachers have been acting as teacher researchers for many years (e.g., Nunan, 1997) with the aim to enhance teaching and learning through systematic inquiry, professional practices and reflections (Borg, 2013). Teacher research is defined as research which teachers conduct in their own context for understanding their practices better (Borg, 2013). Conducting research as a teacher has several benefits (see, for example Borg, 2013; Lankshear & Knobel, 2004; Wyatt & Dikilitaş, 2016); it increases teacher's confidence, autonomy, knowledge about learning, learners, and teaching. It also enhances teacher's self-reflection skills and critical thinking (Xerri, 2018). In addition, research is a motivation factor that engages teachers with their work and improves their wellbeing (Borg, 2013). Furthermore, besides improving teaching and learning practices it increases public knowledge about teaching (Borg, 2010).

Teacher research has similar requirements in regards of quality as the one conducted by academics and professional researchers; therefore, teacher researchers need to acquire research competences to safeguard trustworthiness of their research (Xerri, 2018). Teacher researchers are deeply immersed in their research context, and they need to be aware of their dual role: first as teachers and second

as researchers whose research is targeted to their own class and students (Xerri, 2018).

The sociocultural frame of this research allows me to act as a researcher. I approached this research as a language teacher who has been teaching languages for over twenty years. I have embraced the opportunities digital technology provides for language learning and aimed to gain a better understanding of the added value the adaption of digital tools into learning has for learners. I acknowledge that my pedagogical standpoints alongside with my long experience as a teacher has shaped my analysis and interpretation of the data. Researchers should recognise how their own background; personal, cultural and historical experiences have an impact to how they position themselves in the research context and how they interpret the data (Cresswell, 2014).

3.3 Research context

The context of this research is innovative pedagogical solutions of communication and language studies in three universities of applied sciences in Finland. The aim in developing the courses was to offer students optimal learning opportunities in terms of engagement and spoken interaction. The universities of applied sciences in question offer Bachelor- and Master- level study programmes in multiple disciplines, however the language studies in this research were courses in Bachelor-level.

As described in the chapter 1.1., in the bachelor's degree programmes, besides the national languages, Finnish and Swedish, the students are required to demonstrate language proficiency at the minimum in one foreign language (Universities of Applied Sciences Act 2014). Language studies in universities of applied sciences are field-specific, aiming to contribute to the students' professional competence in the field of their studies; the foreign languages are integrated into the professional subject content (Robinson, 2000; Airola & Kantelinen, 2008). In sub-study I the target language is English and the professional field health care sector, in sub-study II German is the target language and the professional field is business and in sub-study III the field is also business, but the target language is English.

3.4 Research settings and pedagogical designs of the courses

The investigated three language courses applied technology-enhanced language learning and ecological language learning approaches and they were implemented with blended learning approach deploying various digital technology both in face-to-face learning sessions and in distant learning periods. The target in all course

designs was to enhance learners' engagement through meaningful learning activities and interaction with other learners. In language studies of universities of applied sciences, professional skills are equally important as academic skills, therefore field-specific learning material and learning activities were chosen to match the working life requirements of each field. Typically learning material and assignments are text-based in online platforms, therefore a particular attention was paid to provide multimodal materials and learning activities. In addition, the teacher presented, guided, and gave feedback using different digital formats such as videos, voice recordings and animations through digital tools such as GoAnimate, Voki, Adobe Sparks, Screencast-O-Matic and Powtoon. In the following, I describe each course design individually.

3.4.1 Design of the gamified English course for health care professionals

The sub-study I examined the potential gamification (Detering et al, 2011) provides for engagement, enjoyability and language learning. The investigated course was designed in collaboration with a colleague, but it was instructed by the present author alone.

The setting was a three-credit, field-specific English course for first year health care students with the learning objectives to be able to communicate in English in multi-professional and intercultural situations within the health care sector, to be able to inform and guide clients both in speaking and writing, use relevant vocabulary and terms, to interview clients and patients to examine and evaluate their health and life situations as well as document and report respective information appropriately. The course aimed at enhancing students' language competence and both written and spoken interaction. The objective was to achieve B2 level according to the CEFR.

The duration of the course was ten weeks including five face-to-face learning sessions; the face-to-face session were three hours thirty minutes each. Fronter was utilised as the learning management system where the course was divided into five topics: 1) activity environments in the health care sector; 2) typical health care cases; 3) instructing patient, nursing procedures and self-care instructions; 4) first aid and anatomy; and 5) patient interviews. The main gamified platform was Seppo which was used only in face-to-face lessons. In Seppo, the game controller, in this case the teacher, can give instant feedback. There are also chat tools for private feedback and for a general communication among all the users. The group chat offers students an opportunity to discuss the game tasks, to ask further information and clarification from the game controller or fellow students and to comment on the scores. The private chat can be used by the game controller to provide

explicit instructions if a task has been returned to a player or team in case of mis-understanding or incorrect answers. General messages concerning all the players can be sent using the group chat. Such messages could for instance inform about the time left for playing, notification of the scoring or comments on overall per-formance of the teams or players. Instant feedback was given via the platform, and the teacher was also able to return the assignments to be completed.

The other deployed applications were the online game-based platform Kahoot for quizzes, the virtual wall Padlet for material collection, creation and sharing, and the flashcard-based game platform Quizlet for learning vocabulary and termi-nology. The digital applications allowed the pairs to select their own working space in the school premises. Some of the students stayed in the classroom, but most of them found a more convenient and comfortable place such as a couch or beanbag chairs where they could work without disturbance. Besides digital appli-cations during the face-to-face session also role-plays and games such as "Simon says" were played.

The course design was based on the principle to create versatile learning activ-ities to attract different kind of learners and to avoid excessive number of activities that require competitive drive, see Table 3. Particularly in gamified implementa-tion the challenge is to plan learning activities that are not only based on compe-tition. For the gamified part of the course, a narrative was created to lead the stu-dents into a field-specific hospital setting to simulate working life. As the students acquired language skills needed in their profession, they were virtually in Spain conducting their work placement in a hospital where their professional and leisure time communication was in English.

At the first lessons the students formed a working pair preferably with a student at the same language skill level. They worked with the same pair throughout the course. The first assignment with Seppo was conducted: student pairs signed into Seppo-platform where they were to find the suitable terminology for the presented hospital setting and to name other health sector workplaces in English to tune in. The task was given a time limit, and the teacher provided immediate feedback through Seppo.

The virtual wall Padlet was introduced to the students and the pairs created a Padlet of their own. The idea was that the pairs uploaded all their assignments and materials into their own Padlet. All Padlet links were shared to all students of the group, because the student-made and selected materials formed a part of the course's learning material. The topic of the first lesson being activity environ-ments in the health care sector, the student pairs chose next their own environment and made a PowerPoint presentation on their own topic and a Quizlet-vocabulary set which were embedded in the pairs' own Padlets. The pairs held their oral presentations in the following face-to-face sessions, and an allocated pair and the teacher provided feedback.

The second lesson began with a Kahoot-quiz which was based on the vocabulary the student pairs had created into their own Quizlet-sets. Thereafter, the student pairs collaboratively wrote a description on their chosen typical health care cases and uploaded their documents into their Padlets alongside with their Quizlet-word set on the topic. These written assignments were peer and teacher assessed. In the next learning activity, the game-platform Seppo was utilised for students to present themselves by recording videos for their practical training supervisor. By doing that the students were applying the skills for future job application procedures. Emphasis was on interaction, offering students a chance to express themselves and present their achievements on videos. After the students' application for the work placement were completed, the story continued with a welcoming video message from the Spanish workplace supervisor Maria. The video had been made as an animation with my colleague's voice; she deliberately had a strong Spanish accent whilst speaking English in order to encourage the students to speak English even when it is not perfect.

Also, the third lesson began with a Kahoot-quiz revising the vocabulary of the previous lesson. Two further tasks were conducted via Seppo; first, a task targeting the use of online dictionaries to gather information and improve digital literacy and second, finding solutions to cases using evidence-based studies on databases. Thereafter the pairs created, rehearsed and acted out health care professional - patience situations pertaining the lesson's topics: instructing the patient, performing nursing procedures and providing self-care instructions.

The topic of the fourth lesson was first aid. This time Kahoot was used to learn new vocabulary on the topic, furthermore the lesson was devoted to conducting two assignments using the game-platform Seppo. The students watched videos and answered questions about the videos in the form of photos and text. They also created a role-play video related to a first-aid situation of their choice.

During the fifth lesson the topic was anatomy. The relevant vocabulary was practised first with a Kahoot-quiz and thereafter revised as a traditional game "Simon says" which promotes kinaesthetic learning. Even though the aim of the game is to eliminate participants to find the winner, instead the students were encouraged to continue regardless of failing. Playing the game was a social learning experience enhancing common mastery of anatomy vocabulary. Thereafter, the student pairs formed questions for patient interviews and acted-out an interview and video recorded it.

During the course there was continuous assessment and at the end of the course two exams were held: a written exam conducted individually, and a spoken interaction exam conducted in pairs. In the spoken interaction exam, the pairs were given a list of topics from which they selected one to discuss as professionals or they could act out a role play in which one student acted as a professional and the other as a client or patient. The allocated time for the spoken exam per a pair was 15 minutes after which the students were asked to assess themselves according to

the CEFR self-assessment grid. Thereafter the teacher gave her assessment with reasoning. The feedback and assessment discussions were held immediately after the exam to safeguard fair grading and give the students an opportunity to express their opinion. The students were given separate marks for written and spoken English skills.

Table 3. Design of the gamified English course for health care.

Les-son	Assignment	Topic	Feedback	Assessment
1	Find suitable terminology for the presented hospital setting (Seppo)	Environments in the health care sector	Teacher feed-back	0-5
	Name other health sector workplaces (Seppo)		Teacher feed-back	0-5
	Select your own environ-ment and make a Power-Point presentation (Padlet)		Peer and teacher feed-back	0-5
	Create your own vocabulary Finnish-English (Quizlet)		Peer and teacher feed-back	pass/fail
	Embed presentation and vocabulary in pairs' own Padlet		Peer and teacher feed-back	pass/fail
2	Kahoot-quiz	Typical health care cases	Kahoot feed-back	Kahoot points
	Description of typical health care cases (written) (Padlet)		Teacher feed-back	0-5
	Create your own vocabulary Finnish-English (Quizlet, Padlet))		Peer and teacher feed-back	pass/fail
	Video application for practi-cal training (Seppo)		Teacher feed-back	0-5
3	Kahoot-quiz revising the vo-cabulary of the previous les-son.	Instructing the patient, nursing procedures and self-care instruc-tions	Kahoot-feed-back	Kahoot points
	Use of online dictionaries to gather information and im-prove digital literacy (Seppo)		Teacher feed-back	pass/fail

	Finding solutions to cases using evidence-based studies on databases (Seppo)		Teacher feedback	pass/fail
	Writing instructions for a patient (Padlet)		Teacher feedback	0-5
	Role-play		Peer and teacher feedback	pass/fail
4	Watching first-aid videos and answering questions (Seppo)	First aid and anatomy	Teacher feedback	pass/fail
	Role-play video on a first-aid situation (Seppo)		Peer and teacher feedback	0-5
5	Watching patient interview videos (Seppo)	Patient interviews	Teacher feedback	pass/fail
	Creating relevant questions for patient interviews (Seppo)		Teacher feedback	pass/fail
	Role-play video on patient interview (Padlet)		Peer and teacher feedback	0-5

3.4.2 Design of the telecollaboration project

In the sub-study II, a telecollaboration project between two tertiary institutions, one in New Zealand and the other in Finland, was investigated. The telecollaboration project occurred over a period of six weeks, and it was integral to the German language course curricula in both countries. The course in Finland was a five-credit German 2 course, which was the students' second German course in the university of applied sciences. The learning objectives of the German 2 course were as follows: after completing the course, the students' capacity to talk has further developed, their command of the elementary structures has expanded and the vocabulary for everyday and working life situations has broadened. The students are supposed to be able to read and write short texts in German. The students have gained basic skills of language and culture to the extent that they can further develop their skills in the German language toward working life purposes. The contents of the course included: vocabulary for basic every day and working life situations, central structures of the German language, basic spoken skills, reading and writing skills and cultural knowledge.

The design of the project was based on the three-layer task design (O'Dowd & Ware, 2009) and the principles of the telecollaboration (O'Dowd, 2016; Belz, 2003). During the project, the students used social networking site to advance their learning as a closed Facebook group was created for them to post their own productions on the given topics. These tasks formed a part of their course assignments and the posts combined video, photos, pictures, audio, and text. The various modes of the posts adhered to multimodal meaning-making theory (Kress & van Leeuwen, 2001).

The tasks were organised into three main categories: 1) information exchange, 2) comparison and analysis and 3) collaboration, see Table 4. The information exchange category comprised three assignments; in the first one the students introduced themselves by creating videos and thereafter they had to find a student with similar interests and commented on their post. In the second post, the students presented their families supporting their written posts with photos, and again they were asked to comment on each other's posts. In the third post the students described their hometown with the help of photos, texts and weblinks.

The task type two entailed comparison and analysis tasks. In the fourth task, the students depicted their mealtimes and favourite foods, using photos and writing, and in the fifth post, they presented their favourite outfits and clothes shops using external weblinks, photos and videos. The students from the other country were asked to find similarities and differences compared to their own posts and comment on each other's posts discussing on the topics.

The teachers in both countries were also active in the Facebook group; they commented on the students' posts and urged the students to post in time and invited the student to discussion by asking questions. The teachers also provided feedback and instructed the students in the closed Facebook group.

The task type three was a collaborative task i.e., a joint project including participants from both countries. The students were assigned in groups and the groups chose their own topics, describing and comparing relevant cultural phenomena in both countries such as Christmas celebration, holidays, and birthdays. The joint project was completed as a video. The videos were watched, and peer evaluated in in-class sessions in both countries.

As the six-week long telecollaboration project formed only one part of the spring term long German 2 course in the university of applied sciences, the assessment of the project contributed to the final assessment of the course 20 %. The course itself had two written exams and one spoken exam, in addition to continuous assessment.

Table 4. Design of the telecollaboration project.

Week	Assignment	Topic	Feedback	Assessment
Task type 1: Information exchange				
1	Video: make a video in which you introduce yourself and your hobbies. Comment on at least two distant partners' introductions	Yourself	Teachers' feedback on FB Overall feedback in class	pass/fail
2	Photos and text: tell about your family with photos and written text Comment on at least two distant partners' family presentation	Your family	Teachers' feedback on FB Overall feedback in class	pass/fail
3	Photos, text and weblinks: present your hometown with, photos, written text and weblinks. Comment on at least two distant partners' family presentation	Your hometown	Teachers' feedback on FB Overall feedback in class	pass/fail
Task type 2: Comparison and analysis				
4	Photos and text: Write a text about food and mealtimes and typical dishes in your country. Explain what you eat for breakfast, lunch, and dinner. Use photos to support your text. Compare at least two distance partners' information with your own eating habits	Local culture: food and eating habits	Teachers' feedback on FB Overall feedback in class	pass/fail
5	Photos, text and weblinks: Write a text about your favourite clothes shops. Explain what type of clothes you wear at university. Use also external weblinks and photos to support your writing. Compare at least two distant partners' information with the information on your own country	Local culture: shopping and clothing	Teachers' feedback on FB Overall feedback in class	pass/fail
Task type 3: Collaboration				
6	PowerPoint with voice recording or a video: Make a presentation on one of the given topics in groups of four, two from each university. Compare the phenomenon in the two countries.	Local cultures: Topics: suggestions: Christmas, summer holidays, national festive, Easter, New Year	Peer-feedback in class Teachers' individual feedback in class	peer-assessment grading 0-5

3.4.3 Design of the Business English course

In sub-study III, the course in question was a 5-credit Business English course. According to the curriculum, the learning objectives were as follows: students will be proficient in the basics of business English both in speaking and writing and they will master main communication events and vocabulary of the business field. The pedagogical design of the Business English course applied multimodality (Kress & van Leeuwen, 2001) and social networking sites in language learning (Lomicka & Lord, 2016; Lamy & Zourou, 2013; Reinhardt, 2019). The course target was to provide the students opportunities to practice all four language competencies: reading, writing, speaking, and listening; special focus being on spoken interaction rehearsal. The duration of the course was 16 weeks including distant and face-to-face learning sessions. The face-to-face sessions were five and they were scheduled approximately once a month in Friday evenings and Saturday mornings.

The students had a course book with texts, vocabulary, and assignments at their disposal. The utilised learning management platform was Moodle in which the course was divided into eight modules according to the topics, each topic including study material, assignments, and forum discussions. The eight topics were: 1) education and business studies, 2) social skills, 3) telephoning, 4) business and society, 5) working life, 6) job application, 7 company environments and 8) global competence. The assignments covered all language skill areas rehearsal: listening, reading, writing, and speaking comprising individual and pair work. The focus being on the spoken interaction, course provided students ample opportunities to interact in the target language with the peers and teacher. The students completed the Moodle multimodal assignments, had conversations on Moodle Forum and weekly interacted with their pair via WhatsApp video calls using spoken English in authentic, business-related situations according to the assignments. In addition to Moodle and WhatsApp, several digital applications were deployed: Vocaroo and Adobe Spark for speaking and listening, Kahoot for learning vocabulary, grammar and pronunciation, Quizlet for learning vocabulary and Answergarden for writing and interaction. The applications were used in online and in-class teaching sessions.

In the remote learning sessions, the students conducted the assignments as described in Table 5. The weekly WhatsApp video calls are not marked in the Table. The calls were phoned every week with the same pair, and the topics were related to the overall topics of the week. The idea was that the students study first individually and learn the contents and then practice spoken interaction of the week's topic in pairs according to the instruction the teacher provided in the Moodle platform.

Table 5. Business English course design.

Week	Assignment	Topic	Feedback/support	Assignment
1	Video: make a video in which you introduce yourself (Moodle forum)	Introduction	Teacher comments each video in Moodle forum	pass/fail
	Comment on at least two introductions in the Moodle forum			
1	Find a pair (written) (Moodle forum)	Working pair	Teacher helps to find a pair	pass/fail
2	Make a voice recording in which you describe your education (Moodle assignments)	Education and business studies	Teacher's feedback as voice recording	0-5
3	Video: make a video in which you intro-duce one hand gesture (Moodle forum)	Social skills Global competence	Teacher's feedback as voice recording	0-5
	Comment on at least two videos in the Moodle forum			
4	Writing: Write an essay on the topic: How to sound polite on phone. (Moodle assignment)	Telephoning	Teacher's feedback with screen recording programme	0-5
5	Writing: Answer the question and reason your answer: Have you considered becoming an entrepreneur (Moodle Forum)	Business and society	Teacher's written feedback on Moodle forum	0-5
	Comment on at least two discussions in the Moodle forum			
6	Writing: What motivates you at work? (Moodle assignment)	Working life	Teacher's written feedback in Moodle	0-5
7	Mind map: Make a mind map which covers your experiences and skills required in working life (Moodle forum)	Working life	Teacher's written feedback in Moodle	pass/fail
8-9	Create and write your CV (Moodle assignments)	Job application	Teacher's individual feedback, face-to-face	0-5
10	Write: Covering letter (Moodle assignments)	Job application	Teacher's individual feedback, face-to-face	0-5

11	Video: create an application video (Moodle assignments)	Job application	Teacher's feedback video	0-5
12	Write: Answer the question and elaborate: Have you been on a business trip? Where? Describe more in detail.	Company environments	Teacher's written feedback on Moodle forum	pass/fail
	Comment on two discussions (Moodle forum)			
13	Spoken presentation. Company presentation (face-to-face or video), in pairs	Company environments	Peer feedback Teacher's individual spoken and written feedback	0-5
14-15	Write an essay: Business culture of a chosen country Moodle assignment	Global competence	Teacher's written feedback	0-5
16	Written exam		Teacher's written feedback	0-5

In the face-to-face sessions the aim was to create an appreciative, positive learning atmosphere to enhance students' engagement and active participation in the learning activities. The activities in the face-to-face sessions targeted to cover all language skill areas expect writing, and the activities were conducted in pairs or in small groups. The focus was on communication and sparking the interaction instead of concentrating on error-free products. However, face-to-face sessions covered grammar teaching and exercises as well.

3.5 Participants

Sub-study I investigated an undergraduate mandatory professional English course in a university of applied sciences, in Southern Finland. The participants were 23 first-year health care students, between 19 to 51 of age. Their educational background was heterogenous, but they possessed or exceeded English language skill level B1 in Common European Framework of Reference for Languages (CEFR). Their degree programme was conducted with blended learning approach in Finnish language.

Sub-study II explored a telecollaboration project between two free-choice German-language classes in higher education in two countries: Finland and New Zealand. The participants in Finland comprised 12 business administration students in a university of applied sciences in Southern Finland. The students were conducting their degree programme in English. Their age range varied from 20 to 25. In New Zealand, in a university, the group of tertiary students comprised 14 stu-

dents between 18 and 24 of age who participated in an intermediate German-language course. They studied German in addition to their core subjects, which ranged from law to engineering. The students' German language level in both countries was B1, according to the Common European Framework of Reference for Languages (CEFR).

Sub-study III examined a mandatory professional English language course in a university of applied sciences in Northern Finland. The participants were 22 first-year business administration students. The age and the educational background of the participants were heterogeneous: 8 students had a previous bachelor's degree from a university of applied sciences, 5 had a high school diploma, 5 had a high school diploma with vocational qualifications and 4 students had vocational qualifications. The age range varied from 21 to 52 years. All students conducted their studies alongside their work with blended learning approach, and their English language skill was at least at the level B1 in Common European Framework of Reference for Languages (CEFR). Their whole degree programme was conducted with blended learning approach in Finnish language.

3.6 Data and data collection

In this dissertation, four different data collection methods were used: reflective learning diaries, online questionnaires, semi-structured interviews and a Facebook-log. Table 6 summarises the participants, the data and the data collection methods in all sub-studies.

In sub-studies I and III students' reflective learning diaries were used as the primary data source. The reason for using learning diaries as research data is their ability to provide information on students' activities throughout the learning process (Iida et al., 2012). In engagement research, self-reported data are a commonly used data source (Hiver et al., 2021). In comparison to other research data e.g., surveys, self-reported learning diaries provide a more holistic view of the participants experiences and emotions. Self-report methods are beneficial for exploring emotions or cognition which are difficult to observe or monitor (Hiver et al., 2021). The learning diaries being kept in the students' mother tongue enabled the students to reflect on their learning and emotions during the course more profoundly, and they were ensured that the contents of the learning diary have no effect on their mark.

Table 6. Participants, data, and data collection methods.

Sub-study I		
Participants: 23 health care students in a university of applied sciences in Southern Finland		
Data	**Time frame**	**Amount of data**
Students' reflective learning diaries	During the entire course, collected after the course	23 learning diaries (29234 words in total)
Post-course questionnaire	End of the course	23 filled-in questionnaires
Sub-study II		
Participants: 12 business administration students in a university of applied sciences in Southern Finland and 14 university students of various fields in a university in New Zealand		
Data	**Time frame**	**Amount of data**
Pre-project questionnaire	Prior to the project	11 filled-in questionnaires
Facebook-log	During the project	138 posts (4607 words in total)
Post-project questionnaire	After the project	12 filled-in questionnaires
Face-to-face semi-structured individual interviews	After the project	11 interviews (transcription 8605 words in total)
Sub-study III		
Participants: 22 business administration students in a university of applied sciences in Northern Finland		
Data	**Time frame**	**Amount of data**
Students' reflective learning diaries	During the entire course, collected after the course	22 learning diaries (31077 words in total)
Post-questionnaire with eight open-ended questions	End of the course	22 filled-in questionnaires

Sub-studies I, II and III utilised online questionnaires as one data collection method. When collecting data via a questionnaire, several aspects need to be considered in planning the questionnaire: the type of the questions (closed or open), and the type of the data which they aim to gain; qualitative or quantitative. In addition, the wording in statements or questions needs to be exact to prevent interpretation possibilities. Further, biased, or leading question should be avoided. Good questionnaire questions are reliable and valid when the answers provide information on the researched phenomenon (Fowler, 2009). Questionnaires as a data collection method is considered as rather an objective tool in reaching more re-

spondents than for example interviews with a personal contact between the interviewer and interviewee. With a questionnaire the researcher ensures that from all research participants similar, comparable replies are obtained (Harris & Brown, 2010).

Particularly, when using online questionnaires, a larger group of participants can be reached simultaneously. Further, Cohen et al., (2018) state that a questionnaire is a widely used and a beneficial instrument for gathering data of which analysis is quite straightforward. They recommend using rating scales, such as Likert scale as means to create sensitivity and differentiation in replies, which still generate numbers. Rating scales are commonly used in educational research, because of their ability to determine frequencies and allow the researcher to combine measurement with opinion, quantity and quality (Cohen et al., 2018). In comparison, open-ended questions in questionnaires generate personal comments and can provide information which might stay hidden in multiple choice questions. Open-ended questions leave space for participants own comments and opinions and can elicit authentic responses which are essential in qualitative research. Further, open-ended questions position the respondents more responsible, and owners of the responses comparted to selecting the alternatives in the Likert scale statements (Cohen et al., 2018).

Sub-study II used interviews as one data gathering method. Interviews are besides self-reported data and questionnaires a commonly used instrument obtaining data for engagement research (Hiver et al., 2021). The researchers followed the guidelines of semi-structured interviews in which the interviewer has a list of questions to ask but allows the interviewees to explain more if needed (see, e.g., Irvine et al., 2013; Kvale, 2007). The concept of semi-structured interviews enables the interviewees to have their own voice heard, and the interviewer to ask additional questions and clarification (Kvale, 2007). Specially in investing student engagement, interviews provide a valuable instrument to explore students' emotions and cognitive processes in meaningful learning instances (Hiver et al., 2021).

In educational research, an often-used method is to combine questionnaires and interviews as data collection methods. A questionnaire reaches more respondents whereas interviews provide a more in-depth view of participants' insights and perceptions (Harris & Brown, 2010). The data opted via questionnaires with pre-determinate answers such as Likert scale or multiple-choice questions generate predominantly quantitative data while open-ended interviews provide qualitative data. The findings of these two datasets are often reported together, because they complement each other.

In addition, in sub-study II a Facebook-log was used as one data source. Facebook log generates rich data, as the Facebook group members post texts, pictures or videos as their own posts or as comments. These comments are responses to other group members' posts or comments to their own posts and they can be in

various formats such as written text, photos or videos, but they can also be emoticons or simply 'likes' or 'seen' functions can be used. An emoticon is a graphic facial expression which is used to add emotional information to written text (Franz et al., 2019). As the Facebook data comprises multimodal and interactive data, the analysis needs to be adjusted accordingly to gain accurate results.

To summarise, in the following, I describe the data collection methods and the data in each sub-study individually.

In sub-study I, the data comprised students' reflective learning diaries and responses to a post-course questionnaire. The students were instructed to write their learning diaries after each face-to-face session, and to describe what advanced their learning and what hindered their learning in the gamified professional English course. The length of the learning diaries varied from three pages to 20 pages, the average length being 5 pages and the word count amounted to 29234 words in total. The online post-course questionnaire included 30 statements on students' experiences concerning the benefits of the used applications. A Likert scale from 1 to 5 (from strongly disagree [1] to strongly agree [5]) was used. The link to the questionnaire was posted to the Fronter learning management platform after the course completion. The participants filled in the questionnaire either before or after the written and oral exams.

The data in the sub-study II included quantitative and qualitative data. The quantitative data comprised the responses to the multiple-choice questions that were collected through online questionnaires at the beginning and end of the project. The pre-project questionnaire contained 14 multiple-choice questions, charting students' preferences and activities on various social media platforms, whereas the post-project questionnaire covered 11 multiple-choice questions and 9 open-ended questions on students' perceptions of the project in terms of written and spoken language skills learning, engagement and enjoyment. In both questionnaires, the multiple-choice questions used a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

The qualitative data contained the students' replies to the semi-structured interview questions conducted after the project and the answers to the open-ended questions in the post-project questionnaire. The open-ended questions in the post-project questionnaire pertained students' perceptions on the telecollaboration project and the related assignments. After the completion of the telecollaboration project, the researchers in both countries selected voluntary participants for interviews; five students from Finland and six from New Zealand were interviewed. The 13 open-ended interview questions were carefully planned together with both researchers in order to ask the same questions in both countries. The New Zealander students were interviewed face-to-face individually by an assistant teacher and the Finnish students by the present researcher, also face-to-face and individually. The allocated time for each interview was approximately 20 minutes. The interviewers allowed the interviewees to specify and elaborate their answers to

gain a comprehensive understanding of their experiences on the telecollaboration project. The interviews conducted in English were recorded and transcribed verbatim by the interviewers for the analysis.

In addition, the Facebook log provided both qualitative and quantitative data. The students had a closed Facebook group at their disposal during the telecollaboration project. The Facebook log which comprised 138 posts, totalling 4,607 words, was used as complementary material. The posts and the reaction ('like', 'seen') were counted, and the written comments were analysed qualitatively.

In sub-study III, the qualitative data included students' reflective learning diaries and their responses to the eight open-ended questions of the post-course online questionnaire. For their learning diaries, the students were instructed to write at least one entry per week describing how they had studied English, which aspect they had found beneficial and which aspects had hindered their learning. The diaries' word account variation was notable: from 335 to 2626 words; an average learning diary comprised 1700 words and the total amount of the words was 31077. The students wrote their learning diaries throughout the course in Word documents and finalised them after the course completion. Thereafter, the students uploaded the finalised documents to Moodle. The students wrote their learning diaries either in Finnish or English.

The online questionnaire with eight open-ended questions pertained students' perceptions of the course, digital tools, Moodle assignments, weekly pair discussions, course atmosphere, face-to-face teaching, additional ways of studying English during the course and students' active role in learning. The replies amounted to 2107 words. The link to the online questionnaire was uploaded to Moodle in the last face-to-face session of the course.

3.7 Analyses

The qualitative data of the sub-studies were analysed using the qualitative content analysis method which provides procedures for rigorous analysis methods (Krippendorff, 2004; Schreier, 2012). Applying qualitative content analysis facilitates investigating the data in a systematic way and describing the phenomenon comprehensively (Krippendorff, 2004). Qualitative content analysis is interpretative, situational, reflexive, flexible and case-oriented in nature; the research questions guide the analysis in all its phases (Schreier, 2012). The data for content analysis can be in written, audio or video format and it can be collected via various instruments such as open-ended questionnaires, interviews, observations and learning diaries. The aim is to classify large amounts of data into descriptive categories comprising similar meanings. The focus in content analysis is rather on the contextual meaning of the data than counting the words. However, the results of the qualitative content analysis utilised quantification of the qualitatively generated

categories in which the frequencies of each category were calculated (Krippen-dorf, 2004).

Qualitative content analysis can be conducted with an inductive, deductive and abductive method. Inductive content analysis method, or data-driven (Schreier, 2012), or text-driven (Krippendorff, 2013) refers to a method in which the researcher searchers for patters in the data; similarities and differences are looked for and they are allocated under different level of categories and subcategories. The data leads the analysis, as on the bases of which the researcher creates a theoretical understanding. The researcher starts from the concrete, specific data to abstract concepts. Graneheim et al. (2017) alert to the risk of superficial analysis and to the researcher's prior knowledge and assumptions interference to the analysis.

On contrary, in deductive, or concept- driven (Schreier, 2012) content analysis the researcher approaches the data from the theory. The existing theories or concepts and their implementations are tested in the real-world settings. The researcher mirrors the research data with theory, hence from abstract to concrete. The possible limitation with this approach is to focus on the existing categories which prevents creating new ones. In addition, with deductive approach a part of the data might not be allocated to the existing categories, in such a case the researcher needs to decide how to handle that data (Graneheim et al., 2017).

Further, abductive content analysis is a combination of the two approaches, as the researcher moves back and forth between the two. Abductive approach enables an in-depth, more complete understanding creation of the researched phenomenon in an iteratively process moving between theory and data (Schreier, 2012; Graneheim et al., 2017). Abductive approach enables revealing more subtitle pattens by integrating surface and underlying structures. In the following, I describe the data analysis of each sub-study separately.

Sub-study I

In sub-study I, the qualitative data, i.e., the students' learning diaries were analysed through inductive content analysis method (Schreier, 2012). The analysis was conducted by the following steps: the students' reflective learning diaries were read several times in order to gain a comprehensive understanding of the data. Thereafter, all students' expressions revealing their perception of items advancing their learning and items hindering their learning were marked. The expressions were simplified and then the similarities and differences of the simplified utterances were investigated. The next phase was to combine the simplified expressions to create subcategories after which the subcategories were explored to create major categories. The last phase included combining the major categories, which were engagement, enjoyment, learning, collaboration and course atmosphere.

The Likert-scale ratings of the online post-course questionnaire generated quantitative data per se, and they were used to support the findings of the qualitative data. Sub-study I was an exploratory study in which the aim was to initially investigate how students interpret and experience engagement when the course is designed particularly to promote engagement and spoken language skills.

Sub-study II
Similarly, in sub-study II the qualitative data - the semi-structured interview responses and the open-ended post-project questionnaire replies - were analysed separately using inductive content analysis method. In the first stage, both researchers worked independently, one in Finland and the other in New Zealand. They read the data several times in order to gain an overview of the students' perceptions of the telecollaboration project. The researchers identified and highlighted common phrases, key themes, and patterns concerning students' perceptions on the Facebook collaboration and their views on how the online collaboration led to student engagement in foreign language learning. After independent reading, the researchers compared their findings and discussed how to create the categories which emerge from the data. Thereafter, both researchers analysed the data independently several times for reliability, after which they identified categories. Again, the researchers discussed their findings and refined the final categories. A coding frame was developed, resulting in the following categories: collaboration, use of communication tools on Facebook, authentic learning, teachers' activities and enjoyment. Thereafter, the marked segments were allocated in the categories, and their frequencies were calculated.

The pre-course questionnaire provided information on the students' preferences and experiences of various social media sites, and based on the questionnaire, Facebook was selected for the joint platform. In addition, in the Facebook log the 'seen' and 'like' reactions as well as the communications were calculated. The post-questionnaire with Likert-scale multiple-choice statements provided quantitative data as such, as it mapped students' perceptions on the project.

Sub-study III
In sub-study III, the data analysis was conducted with an abductive content analysis approach. The abductive method enables the researcher to move between the theory and the data; this iterative method allowed the researcher to combine the theory-informed and data-grounded analysis of the data. First, the qualitative data was read several times and all relevant items pertaining engagement or spoken interaction were marked and selected to be analysed utilising Atlas.ti software (version 8.4.18). All utterances that conveyed an impression or opinion regarding academic or social engagement or spoken communication were counted as segments. These segments could be a single word or a clause. The segments amounted 1728 and they were titled descriptively. One extract could comprise

expressions related to engagement as well as spoken interaction, therefore one segment could be allocated in spoken interaction and in either academic or social engagement, but not in both kinds of engagement.

For the first research question, four main categories were created: experienced positive and negative impact on academic engagement and experienced positive and negative impact on social engagement. Each segment was allocated into these four main categories in an exclusive manner: each segment could be in one of these four categories. The total amount of the segments concerning engagement was 1409 - in academic engagement 1050 of which 781 positive and 269 negative segments, in social engagement the total amount was 359 of which 268 positive and 91 negative segments. In the next stage, each segment was investigated thoroughly, and initial subcategories emerged. The following phase was to explore the subcategories and categorise them further in the data-driven method concentrating on utterances conveying students' experience and the following final subcategories were created: for academic engagement: collaboration, course design, digital technology, student's activity and teacher's activity; for social engagement: collaboration, student's activity and teacher's activity.

For the second research question, the same data were analysed following the similar phases as for the first research question, and two main categories were created: experienced positive and negative impact on spoken interaction. The segments amounted to 319, of which 271 were positive and 48 negative expressions. In the next phase, the following subcategories were generated as a result of the aforementioned data-driven analysis: collaboration, course design, digital technology and student's activity.

After finalising the subcategories and allocating the sequences into them, frequencies and relative proportions of positive and negative aspects in each subcategory pertaining both research questions were calculated. The analysis and the emerged categories were discussed and redefined iteratively in collaboration with the two other researchers.

Table 7. illustrates the aims, participants, data sources, instruments and analysis of each sub-study.

Table 7. Overview of the methodological choices.

Sub-study	General aim	Participants	Data source	Instrument	Analysis
I	To explore the impact of gamification in terms of engagement, enjoyment and learning	23 health care students in a university of applied sciences in Southern Finland	Reflective learning diaries	To gain information how learners perceive the learning process	Qualitative: inductive content analysis
			Post-questionnaire	To evaluate the digital tools	
II	To explore the impact of telecollaboration and social media in terms of community building and engagement	12 business administration students in a university of applied sciences in Southern Finland and 14 university students of various fields in a university in New Zealand	Pre-questionnaire	To map social media preferences and use	Mixed methods: inductive content analysis
			Post-questionnaire	Feedback on the project	
			FB-log	To map the number of comments and reactions	
			Semi-structured interview	Gain deeper view of students' perceptions of the project	
III	To explore the impact multimodality and social media have for engagement and language learning	22 business administration students in a university of applied sciences in Northern Finland	Reflective learning diaries	To gain information how learners perceive the learning process	Qualitative: abductive content analysis
			Post-questionnaire	Feedback on the course	

4 Results

In the following subchapters the results are presented pursuant to the research questions; first, elements enhancing academic and social engagement, secondly, the aspects enhancing spoken interaction, and finally pedagogical approaches and methods to enhance engagement and language learning in blended learning courses. The results of the sub-studies are unified and combined in this summary, hence the results of each sub-study are reported more in detail in the original journal articles.

4.1 Aspects enhancing academic and social engagement in blended learning language courses

In the analyses of sub-study I and II, the aim was to discover which aspects foster student engagement generally; in contrast, in the analysis of sub-study III, student engagement was divided into academic engagement and social engagement. In this section, I present the synthesis of the findings regarding academic and social engagement in all sub-studies.

In sub-study I, where the setting was the gamified English course for health care students, the students rated the effects of the gamified learning activities, course atmosphere and collaboration according to three dimensions: engagement, enjoyment and learning indicating their agreement or disagreement on a five-point Likert scale, in addition their learning diaries were analysed. The findings of the data indicate that the students perceived that the gamified use of digital technology, collaboration and learning atmosphere fostered their engagement.

Further, in sub-study II, the results showed that collaboration, use of communication tools i.e., digital technology, authentic learning, teachers' activity and enjoyment were perceived to foster student engagement during the telecollaboration project. In sub-study III in turn, the analysis of the data resulted to collaboration, course design, digital technology, student's activity and teacher's activity contributing positively to academic engagement. Besides investigating the aspects affecting academic engagement, in sub-study III, the aspects affecting social engagement were explored as well. The content analysis of the data resulted to three main elements enhancing social engagement: collaboration, student's activity, and teacher's activity. Figure 3 depicts the aspects enhancing engagement in all separate sub-studies.
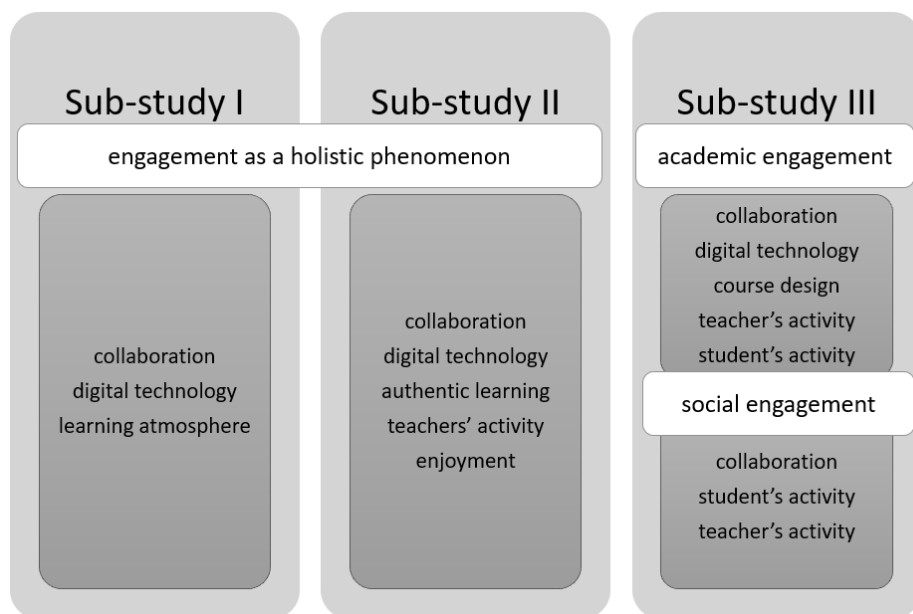
Figure 3. Aspects enhancing engagement in the sub-studies.

In this summary, the results of the sub-studies I and II contribute to this amalgamation. I combine and unify the findings of the sub-studies, and as a result the following six aspects emerged pertinent to academic engagement: 1) atmosphere, including enjoyment, 2) collaboration, 3) course design including authentic learning, 4) digital technology including use of communication tools of Facebook, 5) student's activity and 6) teacher's activity: Likewise, three aspects regarding social engagement were formed: 1) collaboration, 2) student's activity and 3) teacher's activity. In the following I present the combined aspects of academic and social engagement and how they were presented in each sub-study when applicable.

Atmosphere
The course atmosphere was perceived to have an essential effect on student's academic engagement in all sub-studies. All participants reported that they felt respected and accepted by their peers and the teachers, which in turn contributed to their academic engagement. The students appreciated the stress-free, relaxed atmosphere where errors were allowed. The students reported that they enjoyed learning in such a learning atmosphere which in turned had a positive effect in the course atmosphere. The students' enjoyment and course atmosphere nurtured each other as a reciprocal phenomenon. In the sub-study I the students enjoyed the freedom the gamification allowed them in turns of selecting the place at school to conduct the assignments in pairs. Similarly, in sub-study II the telecollaboration project contributed to students' enjoyment by offering them on opportunity to

connect with students from the opposite side of the hemisphere; this was reported to increase academic engagement in both student groups. Likewise, in sub-study III the students praised the enjoyable, supportive learning atmosphere which the learners and the teacher created together.

Collaboration

All sub-studies explored professional language courses which were designed in a manner that the participants had the same pair throughout the course. With this pair the students conducted assignments in distant learning and face-to-face session. In addition to pair work, a part of the assignments was conducted in small groups comprising three to five students or with the whole class. In all sub-studies collaboration was reported to have a vital contribution to the students' academic engagement.

In sub-study I, the students considered that the most beneficial element during the course in terms of engagement was collaboration. The students stated that collaboration enhanced engagement because in regards the collaborative assignments they felt responsible for themselves and for their pairs. Furthermore, the method was viewed fruitful because of the mutual support which elicited better achievement. The students preferred that their pair was at the same language skill level and that they had the same pair throughout the course both in distant learning and face-to-face learning sessions. According to the participants this enhanced their collaboration and as a result, their engagement.

Likewise, all participants of sub-study II rated that collaboration fostered their engagement. The students enjoyed posting in the closed Facebook group and the groups' comments and likes supported engagement. In addition, the last assignment of the project, the joint presentations in groups comparing cultural phenomena in both countries, in which groups included members from Finland and New Zealand, was considered successful in terms of collaboration and enhancing engagement. In this assignment some groups faced difficulties at the beginning, however they reported that not even the difficulties had a negative impact on their engagement. The students enjoyed the versatile assignments on Facebook such as videos and voice recordings and comparing cultural phenomena in both countries which contributed to a deeper understanding of their own and the foreign culture and they noticed how they could learn from each other.

Similarly, in sub-study III collaboration was regarded fostering academic engagement. The participants noticed that peer feedback and support had a positive impact on learning. Successful collaboration was manifested in cases where the students helped each other conducting challenging tasks and they realised that they were responsible for themselves and the pair. With mutual support, the tasks were easier to conduct which in turn fostered engagement. In contrast, if the pairs' academic competences varied or if they struggled matching their timetables, the collaboration was considered to diminish academic engagement.

Further, the students reported that collaboration had a vital contribution to their social engagement. The weekly pair discussions conducted via WhatsApp video calls provided a forum to connect with the pair and alongside with the required language tasks the video calls enabled discussions on issues related to studies or personal topics. These interactions were perceived to contribute strongly to social engagement and sense of belonging. Consequently, collaboration added enjoyment and fun for the studies as the students created a safe forum with peer support, trust and mutual respect. However, when collaboration was not successful, the students experienced sense of not belonging, which is a significant feature of failed social engagement.

In sub-study II, the transnational collaboration in the closed Facebook group promoted social engagement by enhancing sense of belonging. The students perceived themselves having a shared goal, to learn the same target language, and they demonstrated their willingness to use the language. They provided each other resources and grammar instructions as well as they had discussion about the target language in order to support each other. In the Facebook group, they preferred to use German and also reminded the others to communicate in the target language.

In all sub-studies, the learners' willingness to interact in the target language with each other and with the teacher was evident in all situations also when asking the teacher for more instructions. The students' eagerness to use the target language is a clear manifestation of their social engagement in language learning.

Course design

The blended learning approach was evaluated as successful from engagement point of view in all sub-studies. Particularly the face-to-face learning sessions were valued and considered significant for enhancing engagement. In addition, work-related, authentic study material and assignments fostered student engagement. Contextualised assignments were considered imperative since the aim of the courses was to improve students' professional language skills.

In sub-study I, the students valued the professional situations and context of the course in the hospital setting. They stated that the background story of the entire gamified course was engaging. They appreciated the fact that the assignments were a relevant part of the story and therefore interesting to conduct. Also, the opportunity to move around freely in the class and outside the classroom in the face-to face session was regarded beneficial; some students stated that they could concentrate better when they found a peaceful place to discuss and complete assignments while working with their pairs.

In sub-study II, the students claimed that the telecollaboration project and the Facebook assignments added value to the course design. The students regarded that the age-relevant and appealing topics of the Facebook tasks initiated to authentic learning. The students enjoyed sharing details and information about their everyday lives, such as hobbies, mealtimes and eating habits, shopping, and the

clothes they wear. The interesting topics initiated exchanges of authentic personal information, and further students' questions and comments led to genuine interest and authentic learning about other cultures and students' personal lives. Accordingly, realising that the German language is an authentic tool for communication fostered engagement and contributed to students' eagerness to learn the language.

In sub-study III the course design was regarded to have a paramount impact on academic engagement as well. The students praised the clear structure of the course and that the timetable, the variety of compulsory assignments, the tools to conduct them, the deadlines as well as the feedback and guiding opportunities were presented in the platform. In addition, the students appreciated the relevant, work-related course material and the aligned assignments. In comparison, if the participants had no use for the material in their work, they regarded it not engaging. The course was implemented following the blended learning method including five face-to-face sessions; the face-to-face sessions were perceived vital in terms of academic engagement. In cases when the number of face-to-face sessions was regarded insufficient, it influenced negatively to academic engagement. The assignments were considered challenging enough and the students were inspired by the novel tools and variety of methods to conduct them.

Digital technology
Besides the main learning management systems Fronter, in sub-study I and Moodle in sub-studies II and III, the courses deployed various digital tools in terms of learning materials, conducting assignments, practising individually or in collaboration as well as providing feedback and instructions. In sub-study I, the main application throughout the course was educational game platform Seppo. The participants rated Seppo as a suitable tool for enhancing student engagement, because it was user-friendly and allowed multiple ways to conduct the assignments. In addition, Seppo was perceived to enhance individual, collaborative and flexible working methods, which in turn fostered engagement.

In all sub-studies the quiz application Kahoot was used in in-class sessions. With Kahoot created quizzes on vocabulary, grammar and phrases, the questions were displayed from the teacher's computer on the class whiteboard and the answer alternatives were on the students' devices where they selected the correct answer. Kahoot showed the leader board after each question and the final score after the entire game. Speed and correct answers were counted. In all sub-studies Kahoot was praised to enabled students to challenge themselves, visualise their progress and offer positive reinforcement for their learning. The application was considered beneficial because of its ability to create a positive, relaxing atmosphere during the in-class gaming sessions. The learners enjoyed the opportunity to laugh together; they were excited and eager to participate. Performing well was pursued and ranking after each question enhanced competition. However, network

failure caused frustration for some students, and they wanted to stop playing because they noticed that they could not have won. Immediate feedback in the form of correct answers in the game was appreciated and regarded fostering engagement.

Likewise, Quizlet was utilised in all sub-studies for learning the related vocabulary and terms. The application offered multiple exercises and games for practising the vocabulary study sets which can be created by the students (sub-study I) or the teacher (sub-studies II and III). The participants of all sub-studies stated that Quizlet fostered engagement, because they could independently and self-paced practise the field-specific vocabulary in several ways and also improve their performance by rehearsal. Particularly the games integrated into Quizlet were regarded engaging and fun.

All courses deployed voice recording and video recording applications such as Vocaroo and AdobeSparks, which received a controversial evaluation. The participants understood their potential for enhancing learning, but some of them were reluctant to make voice recordings and videos. On the other hand, a part of the participants valued the opportunity to practise several times and they also watch their own video recordings in order to improve their performance.

In sub-study II, besides Kahoot and Quizlet, the use of communication tools on Facebook was seen as an adaption of digital technology to enhance engagement. The students commented on each other's posts in all five assignments in the closed Facebook group. The number of comments had no effect on the degree how the students considered themselves engaged. In addition, instead of commenting, students simply 'liked' each other's posts which was also perceived to increase engagement. Even the 'seen' function (the participants had seen a student's post on Facebook but had not commented nor reacted to it) was considered enhancing engagement. Consequently, the comments resulted to real conversation as the students from different countries acknowledge that they had common interests. Hence, the common ground that was built with communication tools as the students from different countries discovered that they could interrelate. In comparison with other platforms, Facebook with its communication tools was valued as a suitable tool for enhancing engagement. Conducting weekly tasks as well as reading and commenting on the posts became a routine for the students. The Facebook group was perceived to offer a novel, enjoyable and safe learning environment that fostered engagement, and contributed positively to the students' learning experiences.

In addition to aforementioned digital tools, in sub-study III used WhatsApp for conducting weekly video calls between the working pairs was considered enhancing engagement. The students valued its usability and the way it enabled students to conduct their pair assignments using their smartphone regardless of time and space.

In all sub-studies, as the students created photos, texts, recordings, and videos, at the same time they learned to master the digital tools. The students noticed that the used educational tools were beneficial also for their other studies and working life. They learned digital and generic skills alongside with their language studies which they perceived engaging. In contrast, the applications diminished academic engagement according to the students who regarded the tool's usability challenging or if the tools were considered too numerous or useless in real-world settings.

Student's activity

According to the findings of the sub-study III, the students regarded that besides the course design, their own activity affected their academic engagement the most. Taking an active role in their own learning the students saw themselves self-regulated owners of their learning. They acknowledged the benefits of preparing themselves by studying the related material and vocabulary independently prior to the collaborative tasks or face-to-face sessions. The better they were prepared the easier it was to conduct the tasks and the more they felt engaged. Contrarily, students seemed self-critical regarding their own prior language competences and if the tasks were considered too demanding, it had a negative impact on academic engagement. Timetable issues and challenges in combining work, family life and studies were reported to cause decreased academic engagement. Accordingly, by investing time and effort the students' language competences were regarded to improve which in turn increased academic engagement.

Student's own activity affected social engagement as well. Students' comments revealed their willingness to invest time and effort in social interaction with their peers and teacher which enhanced social engagement. Several students regarded that the feeling of progress and overcoming challenges affected their social engagement positively. Accordingly, students' poor self-esteem and shortages in previous competence as well as being afraid of the collaboration decreased social engagement. Also, students' sense of belonging to the group added to their social engagement.

Teacher's activity

The findings indicate that besides the students' own efforts, the teacher role is important for academic engagement in a blended learning course. Teachers' activities here include actions the teachers take during the course, the subtle activities such as designing the course and selecting appropriate digital tools are described in their own chapters.

In sub-study II there were the two teachers — one in Finland and the other in New Zealand; they both had their own German groups and acted as teachers in their own groups, but for the telecollaboration project they were jointly responsible and therefore they were also members of the closed Facebook group. The teachers' actions were perceived enhancing engagement, as they were stated to be

flexible regarding deadlines. Likewise, their contribution to group work or Face-book conversations were regarded fruitful as well as the teachers' availability was perceived as positive and necessary. However, some students would have valued more feedback, especially corrective feedback on their German language produc-tion. All students appreciated teachers' posts and comments on students' posts. The students considered that the teachers' support was beneficial if they had dif-ficulties in starting the tasks or finding a group.

In contrary, in sub-study III, aspects related to the teacher role were mentioned less frequently in terms of enhancing academic engagement. Nonetheless, the stu-dents considered the teacher's subject knowledge and pedagogical expertise en-hancing student engagement. In addition, the teacher's guidance, support and per-sonal feedback was appreciated. They also praised the teacher's enthusiasm to use topical tools and versatility of teaching methods; the teaching style was evaluated as relaxed but consistent and engaging. Thus, the students' academic engagement was perceived to decrease if they regarded the amount of feedback insufficient or the instructions unclear.

Further, the students manifested that the teacher's interaction style with the students contributed to their social engagement; they valued the understanding, empathy and appreciation the teacher showed towards the students. Versatility in teaching methods, being available and having time to discuss issues regarding as-signments, e.g., the stage frights many students experienced before their oral presentations contributed positively to experienced social engagement. The stu-dents reported that they appreciated the teacher's expertise, encouragement, emo-tional support and her endeavour to create positive learning experiences. They also valued the tolerant, appreciative, enjoyable atmosphere where students were not afraid of mistakes. In contrast, some students regarded the teacher having too high requirements in relation to the student's own competences or using only the target language in teaching and instructing decreased students' social engagement.

Likewise, in sub-studies I and II it became apparent that the teachers' teaching methods and interaction style were perceived to enhance students' social engage-ment. The students stated that the teachers were approachable and helpful which fostered students' social engagement. The teachers' assistance was appreciated in terms of language competence, technological issues and in issues regarding pair work or collaboration. In comparison, if the teachers were perceived distant, not engaged or not helpful enough, it diminished the students experience of social engagement.

Overview of the aspects students perceived enhancing student engagement in blended learning language courses

Based on the unified results of the sub-studies regarding social and academic engagement it can be crystallised that social and academic engagement have a

strong reciprocal effect nurturing each other. Student engagement appears to be a holistic phenomenon in language learning according to the students' perceptions.

To conclude, the aspects affecting academic and social engagement in language learning with blended learning approach were investigated as separate phenomena is sub-study III and in general in sub-studies I and II. In all sub-studies it became apparent, that the aspects affecting both kinds of engagement are overlapping and intervened, as depicted in Figure 4. In addition, the aspects do not function on their own, but the individual aspects contribute to the academic and social engagement.

Student engagement

atmosphere
- acceptance
- errors are allowed
- enjoyable
- stress-free
- supportive
- relaxed

collaboration
- enjoyment
- learning from others
- learning together
- mutual respect and trust
- peer support
- time management

course design
- clear course structure
- meaningful tasks
- authentic learning materials
- work related
- clear instructions

digital tools
- effectivity
- enjoyment
- usability

student
- eagerness to invest time
- feeling of progress
- own competences
- own effort
- self-esteem
- self-reflection
- sense of belonging

teacher
- content expertise
- emotional support
- fairness
- guidance
- innovative attitude
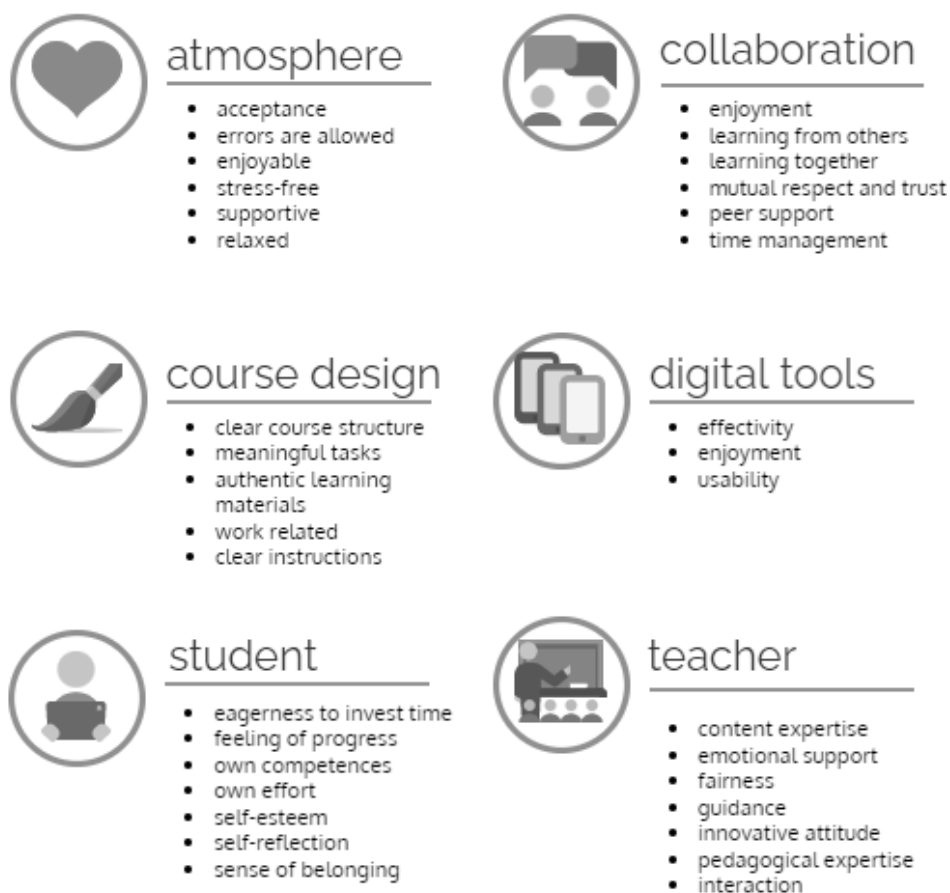- pedagogical expertise
- interaction

Figure 4. Aspects enhancing student engagement.

4.2 Aspects enhancing spoken interaction in blended learning language courses

Besides the aspects of enhancing engagement, all sub-studies explored how students perceived language learning and particularly spoken interaction in the courses in question. In sub-study I, as for spoken interaction, the analysis resulted to the conclusion that the used applications i.e., digital technology and course design with versatile learning methods fostered students' communication and made their learning experiences more fun. Further, collaboration and learning atmosphere had a positive impact on spoken interaction.

In sub-study II, the analysis of the data resulted to the following categories to enhance spoken interaction: collaboration, use of communication tools on Facebook (digital technology), authentic learning, teachers' activities and enjoyment. In sub-study III, the results indicate that collaboration, course design, student's activity and digital technology initiated the most spoken interaction in the foreign language, see Figure 5.

Sub-study I	Sub-study II	Sub-study III
spoken interaction		
collaboration digital technology course design learning atmosphere	collaboration digital technology authentic learning teachers' activity enjoyment	collaboration digital technology course design student's activity
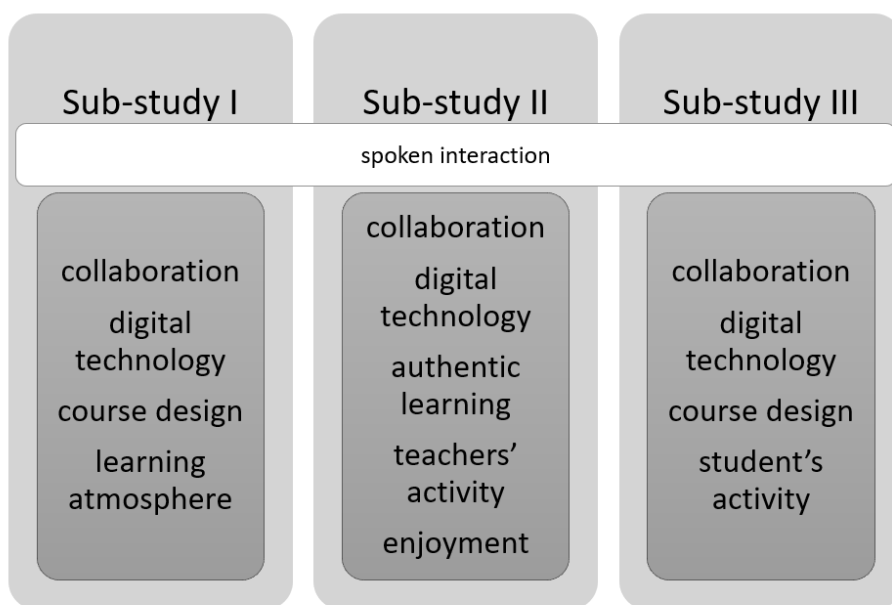
Figure 5. Aspects enhancing spoken interaction in the sub-studies.

In this dissertation, I combine and merge categories, and as a result, regarding spoken interaction, five board themes emerged from the analyses of the datasets of the sub-studies. The students perceived atmosphere, collaboration, course design, digital technology and student's own activity enhancing their spoken interaction. A few of these aspects are intertwined, some results could be categorised

under several topics, e.g., digital technology could be viewed as a part of course design as I as the teacher planned suitable tools for students to practise and conduct their assignments individually (student's activity) or in pairs (collaboration), but for clarity I present digital technology as its own category. In the discussion section I describe the linkages between the categories more in detail.

Atmosphere
Similarly, as for engagement, the general learning atmosphere was integral in spoken interaction. The participants of all sub-studies praised the impact of positive course atmosphere for spoken interaction rehearsal. In sub-study I the participants regarded that their spoken interaction was intensive and stress-free. They praised the course atmosphere as tolerant and positive, which in turn offered a fruitful basis for spoken interaction.

Also, in sub-study II the atmosphere was perceived to have a positive influence on the students' willingness to use the foreign language in the assignments. Even though the target language German is less used outside the formal education in both countries, the students preferred using it throughout the telecollaboration project because of the supportive atmosphere.

Likewise, in sub-study III the students appreciated the relaxed, tolerant atmosphere and the environment of trust where they felt safe to train the target language. The safe atmosphere with plethora opportunities to practice spoken interaction with students' limited language resources even promoted the trust on their own language competences which in turn sparked their willingness to use the target language. In all sub-studies it became apparent, that the students appreciated the relaxed, tolerant, acceptant and enjoyable atmosphere which was created by the students and the teacher together.

Collaboration
It is self-evident that collaborative spoken learning activities are imperative for practising spoken interaction; in all sub-studies the participants stated that collaboration affected their spoken interaction the most. In sub-study I, the gamified pair assignments were perceived to provide beneficial opportunities to use the target language. The students appreciated the collaborative tasks in both distant and face-to-face learning sections. They enjoyed the collaboration which initiated real spoken interaction in the gamified work-related situations.

Likewise, the participants in sub-study II stated that collaborating with new people on the Facebook platform motivated them to use the target language and they enjoyed the variation the telecollaboration project had brought to the language course. The students reported that the Facebook collaborative assignments enhanced their spoken and written language skills as well as their communication competency overall.

Similarly, in sub-study III, the students regarded the weekly pair video call discussions as the most favourable activity for rehearsing spoken interaction. The students acknowledged that spoken skills can be improved only by speaking the target language. In conducting the collaborative spoken assignments, the students noticed how their skills gradually improved, which empowered them to practise more eagerly. In addition, the students confessed it to be supportive to have the same, familiar pair for all distant discussions.

In all sub-studies the findings indicate that when the collaboration was successful, the same pair throughout the course provided security and support, and the spoken interaction in the target language was beneficial. On contrary, failed, and insufficient pair work or mismatch in pairs' academic competences were experienced to diminish the advantages of the activity for spoken interaction. It was paramount that the students prepared themselves for the collaborative sessions by studying the relevant course material and vocabulary. The fluency and success of the interaction was depended on the degree of the pairs' own individual preparations. In comparison, when the students were not well prepared, they were reluctant to conduct the discussions, and the spoken interaction was less fruitful. Students' limitations in their own language competences also affected their willingness to conduct the collaborative spoken assignments. In addition, in all sub-studies some students regarded the collaborative tasks at the beginning not appealing, but as they noticed how efficient the tasks were in terms of spoken interaction, they gradually grew to appreciate them.

Course design

It became apparent in all sub-studies, that the students considered course design significant for spoken language competence practices. The blended learning approach was evaluated favourable since both types of learning sessions – distant and face-to-face - were regarded to include meaningful tasks to spark spoken interaction. The participants of sub-study I stated that the face-to-face sessions with gamified assignments initiated spoken interaction and the face-to-face pair work contributed positively to their eagerness to use the target language. Similarly, in sub-study III, all students confirmed the necessity of face-to-face sessions. The teacher-led spoken interaction practices and pronunciation rehearsal in face-to-face sessions as well as immediate feedback from the teacher was rated to improve spoken interaction.

The authentic and contextualised assignments as well as the work-related and authentic study materials were appreciated by the participants of all sub-studies. In sub-study I, the health care students valued the work-related phrases and vocabulary they could elaborate in the spoken assignments. In sub-study II the tele-collaboration material and tasks were regarded strongly related to the real-world situations and therefore initiated discussions in the Facebook environment and in-class learning. The Facebook tasks were seen as versatile, meaningful, challenging

enough and the topics suitable and learner-centred. Likewise, in sub-study III, the business-related spoken assignments e.g., in customer service situations supported the students' willingness to conduct the spoken activities. The students regarded it beneficial, if they could transfer the learnt phrases and words immediately into their real-world situations, such as study-exchange period as noted in sub-study II or work life context as manifested in all sub-studies. The topics of the assignments were regarded authentic in all sub-studies which in turn motivated the students to use the target language.

In addition, the students valued the versatility of the teaching methods and they stated that particularly the multimodality of the assignments enriched speaking the target language. In sub-study I the gamified course design and the integrated situations were perceived to initiate spoken interaction in the target language, because the responses had to be recorded. For the same reason, in the sub-study II, the students reported that particularly the multimodal assignments e.g., video recordings, enhanced their spoken language skills as well as their communication competency overall. The initially reluctant attitudes towards the multimodal assignments eased over time, and the students gradually viewed them as beneficial, with the weekly tasks becoming a routine. Similarly, in sub-study III, the participants were unwilling to conduct the multimodal assignments at first, but at the end of the course these assignments were rated as the most favourable ones in terms of enhancing spoken interaction.

Digital technology

As the major focus of the courses in question was to initiate students' spoken interaction in the foreign language, various digital tools were selected accordingly. During the courses the students were designed and offered myriad opportunities to practise spoken interaction in face-to-face and distant learning sessions, individually, in pairs and in groups. A selection of digital tools was harnessed for practising the spoken language skill.

According to the students, suitable digital tools supported spoken interaction rehearsal in all sub-studies. Particularly for individual language competence rehearsal, digital technology was considered to offer appropriate tools. As multimodal assignments were regarded to enrichen especially spoken skills practicing, digital technology provided suitable applications for it.

In sub-study I, the game application Seppo was perceived as a beneficial application for conducting spoken assignments both individually and in pairs. Seppo is a platform for educational games - the teacher designs the assignments and tasks, and the students can submit their reply content in the form of photos, videos, voice recordings, texts or links. The teacher grades and gives feedback for the creative assignments while the answers to the multiple-choice questions are graded automatically by the application. There is also a scoreboard showing the progress in real time.

Seppo was not used in the other sub-studies, but in all sub-studies Kahoot was regularly used in face-to-face learning sessions and it was regarded to promote spoken language skills and pronunciation. The teacher offered a pronunciation model during the in-class gaming sessions by saying the revealed words and answer alternatives aloud. In the basic function, the application itself depicts the words only in the written form. Therefore, the teacher pronouncing the new words provided the students with the opportunity to hear the correct pronunciation and repeat it if wanted. The students valued the opportunity to learn the words by practicing them after the model the teacher provided.

Further, Quizlet was used in all sub-studies; the students considered that it affected their speaking skills positively by enlarging their vocabulary with relevant study sets and gamified methods to practise the words. In sub-study I, by collecting their own vocabulary and creating their own study sets into the application, the students perceived themselves as autonomous, authentic learners. In accordance, Quizlet stimulated independent, self-regulated learning by offering authentic work-related vocabulary and it was viewed as fun and fostering spoken interaction skills. In sub-studies II and III the teacher made the study sets, and the students used the application to individually practice the vocabulary; they perceived the application beneficial for spoken professional language competence improvement.

In all sub-studies the students created videos with applicable tools, such as Adobe Spark. These videos were mandatory assignments of the courses. In sub-study I the videos were uploaded to the game platform Seppo, in sub-study II into the private Facebook group and in sub-study III to the Moodle Forum. For this kind of individual spoken interaction competence practice, technology was perceived to offer suitable tools as the students could refined their pronunciation and spoken utterances with the video recording applications. They found that their pronunciation as well as spoken language skills in general improved as they made several recordings to create the best possible video.

In sub-study II, it was evident that Facebook as such was appreciated as an authentic platform for genuine discussions in the target language. The students perceived Facebook as an applicable learning environment for spoken interaction learning and they enjoyed the variation it brought to the course. In addition, it became apparent that the students' shared the interest in learning the German language and the interest in each other's cultures which motivated the interaction between the counterparts. Even though the discussions were mainly asynchronous, they were perceived to contribute to spoken interaction also by widening the vocabulary and providing grammatical knowledge. The students noticed that they could have authentic conversations in the target language which in turn increased their eagerness to use the language. In addition, Facebook platform was perceived as an easy place for communication, because the students used the platform for their social interaction too.

In sub-study III, the video calls conducted with WhatsApp application were evaluated as the most favourable activity in terms of spoken interaction as the students noticed that the skill improves immensely by frequent practicing. WhatsApp was praised as an applicable tool to conduct the weekly video calls and the participant stated that conducting the assignments was easy as they could do them not depending on time and place and the application was familiar to them previously.

In all sub-studies, particularly digital-savvy students enjoyed the versatile educational tools that provided methods to practice spoken interaction. In comparison, some students experienced challenges in using technology and claimed the courses having too many or too complicated applications which shifted the focus from practicing the language to mastering the technology. Additionally, some educational tools were not perceived suitable for promoting spoken interaction skills. In sub-study I, the students considered Padlet as an inefficient application for spoken interaction - even though its contribution to other language skills, particularly writing, was appreciated. Furthermore, some students opposed the communication in Facebook in sub-study II or in WhatsApp in sub-study III, but over time they grew to like them.

Students' activity

The courses were designed in the manner where students were assigned tasks and materials for individual studying before the pair work. It is self-evident, that spoken interaction occurs in collaboration with other people, but in all sub-studies the students reported that it was essential to prepare themselves individually before the collaborative activities. The findings indicate that the selected digital technology was regarded suitable for student's own rehearsal besides collaborative tasks.

In sub-studies II and III planning and recording the videos was regarded as a valuable method to individually refine the participants' own pronunciation and utterances. The students showed persistence by practising for the recordings and simultaneously they practised the speaking. Students' own activities added to their willingness to conduct spoken assignments and increased their comfort to use the target language. In accordance, the most significant factor contributing negatively to speaking skills improvement was the lack of students' individual practicing and limitations in their own language competences.

The findings in sub-study III predominantly indicate the importance of student's own activities; the students confirmed that the better they had individually prepared themselves beforehand, the more favourable and fluent the pair discussions were. In comparison, in cases when students lacked time or energy to rehearse, they were reluctant to discussion with their pair and spoken interaction was less fruitful. Students' insufficient competences also affected their willingness to discuss in the target language with their pair.

In all sub-studies the students noticed that their own activities had a paramount effect to their own learning, their collaborative assignments and overall language competence improvement. They acknowledged that spoken interaction competence emerge gradually and only by speaking the target language with the current language resources.

Overview of the aspects the students perceived enhancing spoken interaction in blended learning language courses

Figure 6 summarises the aspects the students experienced enhancing their spoken interaction.
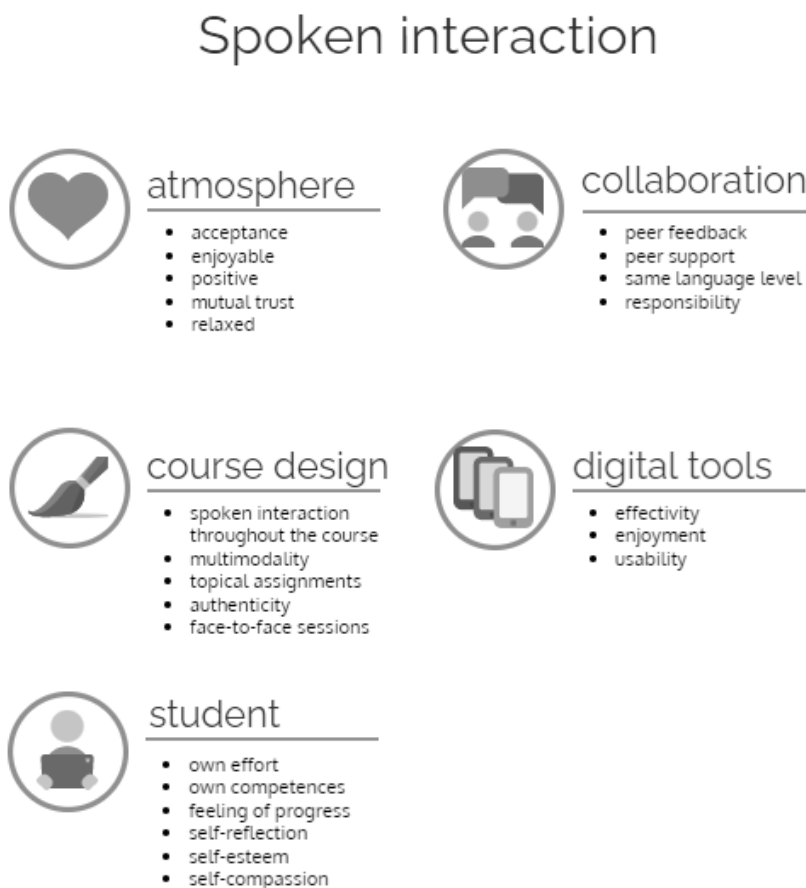

Figure 6. Aspects enhancing spoken interaction.

4.3 Pedagogical approaches and methods enhancing engagement and spoken interaction in blended learning language courses

In this chapter I amalgamate the findings of the three sub-studies pertaining pedagogical approaches and methods for enhancing student engagement and spoken interaction in blended learning language courses in universities of applied sciences.

As for pedagogy, ecological language learning approach with collaboration and interactivity, multimodality and appropriate educational tools create solid cornerstones for versatile, authentic course material and learning activities. Given that the language studies in universities of applied sciences are filed-specific, they contribute to the students' professional growth. In accordance, the study material and the assignment are field-specific and authentic, suited to genuine professional context. As the students notice that they can apply and adjust the learning material in their working life, they become more eager to conduct the assignments and learn the material. In accordance, the appropriate material and assignments inspire students and foster language learning motivation, engagement and eagerness to learn more. Further, the relevant digital tools and suitable assignments to practise all language competences, particularly spoken interaction, have additional value regarding engagement and learning. Besides authentic learning, student-centred methods and the notion of ownership of their own learning promote student engagement. The students' persistence and being self-regulated learners enhance engagement and have a positive influence on language learning and studies in general.

In the frame of technology-enhanced language learning, appropriate digital tools are essential in the learning process and practising the language skills. The students appreciated that some suitable tools were introduced, and various applications were recommended, but the students were not required to use the particular tools, on contrary, they were encouraged to experiment various digital tools and chose the best ones according to their preferences. In addition, the students valued the fact that they were able to apply the same digital tools in their other studies and working life.

Blended learning approach with the combination of distant and face-to-face learning sessions foster both engagement and spoken interaction. The students value the face-to-face sessions and consider them integral for both learning and academic and social engagement. The face-to-face sessions provide the students with an arena to build friendships and alleviate the collaboration in the distant learning phase. In addition, the students benefit from the interaction with the teacher in face-to-face session in terms of language learning and student engagement.

According to the findings, the teacher's role is notable for promoting student engagement and spoken interaction in language learning. The students appreciate the teacher's engagement and enthusiasm, and their targeted manner to create a fruitful learning atmosphere where all students are respected and accepted. The teacher's actions and attitude are central especially in cases where students are unsecure about their language competences or ability to learn the language. A supportive learning environment and understanding that language skills emerge through practising are fundamental for students in terms of engagement. It empowers the student when they acknowledge their own development in their skills; it further engages them into the learning process. In addition, versatile teaching methods and practises improve engagement in terms of providing versatile learning opportunities to avoid boredom.

In addition to being understanding, empathic, accepting, and respectful, the competences of contemporary language teacher in higher education comprise subject knowledge, pedagogical knowledge, digital pedagogy knowledge, digital technology knowledge as well as ability to guide and scaffold the students. Further, as the language studies in universities of applied sciences are field-specific, the language teaching benefits if the language teacher has at least basic knowledge of the field in question.

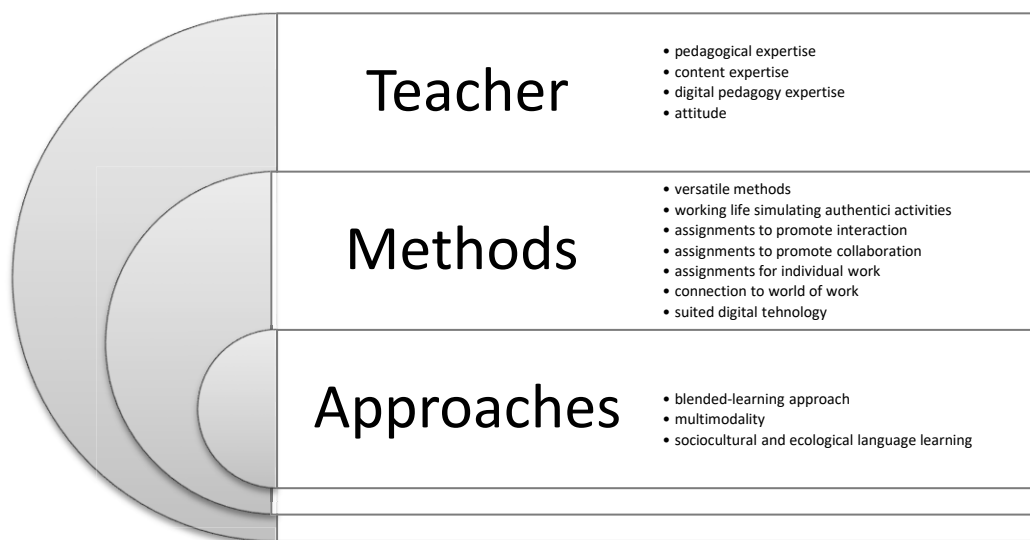Figure 7 summarises the results pertaining research question 3.

Figure 7. Pedagogical approaches and methods enhancing engagement and spoken interaction in blended learning language courses.

5 Discussion

5.1 Results in the light of literature

The results of this dissertation contribute firstly to the emerging research area engagement in language learning and secondly to enhancing spoken interaction in blended learning language studies. In this doctoral dissertation, three language study modules were investigated in each of which different pedagogical designs and digital technology were experimented in order to explore and gain a better understanding of the aspects that contribute to student engagement and spoken interaction within the blended learning approach.

As for student engagement, the previous research in the context of language learning is scarce. Research literature provides evidence of engagement with the target language awareness (Svalberg, 2009) or the task (Philp & Duchesne, 2016; Stockwell, 2018), albeit student engagement as a holistic phenomenon has been less investigated (Mercer & Dörnyei, 2020), therefore the contribution of this dissertation is valuable for the research area. In comparison, a plethora of research has been conducted on different language competences in blended or online learning in the frame of technology-enhanced language learning. However, spoken interaction is less researched language competence in online learning; therefore, this dissertation provides new insights to that research field as well.

The results of the research at hand indicate that the elements affecting to academic and social engagement as well as to spoken interaction practising in the target language culminate into three pillars: course design, student role and teacher role. The pillars contain several aspects; in the following I mirror these aspects with previous research.

According to the results, the carefully planned course design is the bases and cornerstone for all activities during the course, and on which the educator builds the entire study module. The design contains carefully selected study material, individual and collaborative assignments aligned with the learning objectives, suitable digital tools as well as the information and instructions for synchronous, asynchronous, online and offline phases which is in line with the previous research (Driscoll et al., 2012; Compton, 2009; Richards, 2013). In addition, timetables, deadlines and sufficient information for conducting various assignments in different modes are essential (Rienties et al., 2017). Learning atmosphere and enjoyment affect significantly on student engagement and evoke eagerness for learning the target language and practice spoken interaction and conduct the assignments (Driscoll et al., 2012).

It became apparent that spoken language competence activation and student engagement benefits, when elements such as comprehensive story line, gamification or telecollaboration are deployed as methods to incorporate study material, assignments and learning tasks. Digital technology promotes engagement and spoken interaction, when the selected applications or social networking sites are user-friendly and preferable ones that the students use in their everyday lives which is line with the work of Leier (2017) and Blattner and Fiori (2011). The use of appropriate technology and the variety of teaching methods increased students' language learning and engagement and decreased mundane of the assignments. In accordance, too many or too complicated digital tools as well as technical defects have an opposite effect, Chen et al. (2010), Jalkanen & Taalas (2013) and Trinder (2016) gained similar results. Further, social networks foster students' effectiveness and enable content sharing in various modes, i.e., text, photos, videos or links which promotes communication and interaction in the target language by providing an engaging multimodal learning environment which is in line with the work of Akbari et al. (2016) and Pérez-López et al. (2020). The appropriate selection of utilised digital tools and their contribution to learning is in line with the notion of affordances in the ecological learning. It covers the student's relationship with the digital tools and the capacity to deploy them, which are determined by the properties of the environment and digital tools and, on the other hand, by the student's capabilities (van Lier, 2000).

As the courses were implemented with blended learning approach, it became evident that the face-to-face learning sessions were considered paramount for both language learning and engagement. The face-to-face sessions contributed to the sense of belonging and created a bases for conducting the online pair work. Additionally, the spoken interaction was enhanced in the face-to-face session by the teacher and pair support and enjoyable collaborative tasks, with or without digital tools. For example, the games conducted with the Kahoot- application were considered beneficial for community building when the whole study group was competing for the points, but also having fun and laughing together. They were capable to laugh at their own mistakes and at their own and other students' competition drive; and the game formed a part of their learning, the conclusion also Flores and Francisco (2015) draw. These game playing sessions are evidence and an example how important humour, enjoyment and positive atmosphere are for learning, as also stated by Eteläpelto and Lahti (2008). Overall, the importance of learning atmosphere is highlighted in this dissertation. Enjoyable, stress-free learning environment contributes to language learning, particularly to spoken interaction. The students' ability to allow themselves mistakes is in line with the contemporary language learning approach according to which communicative competence is emphasised instead of grammatical correctness. Similarly, the communicative competence is underpinned with the working life language skill requirements (Lantta, 2017).

Likewise, the students stated that the distance learning sessions were carefully structed, and the students were provided with clear instructions about the assignments and the methods to conduct them which enhanced their engagement and supported their learning. The students appreciated the variety of the tasks, as they comprised individual, pair and group assignments conducted via different modes and digital tools. The students perceived themselves producers of the content and the course designs afforded situations and methods for students to distribute and use knowledge in alternative ways (e.g., Lantolf & Thorne, 2006; van Lier, 2010).

Given the language learning in the university of applied sciences is field-specific, the authenticity and work-relatedness of the material promote students' professional development. The transferability and adaptability of the contents as well as compelling assignments enhance engagement and intensify students' eagerness to learn. In addition, the course design provided the students with sufficiently work-related learning material in the target language and enough assignments where the students can use the target language with the help of technology which is in line with the work of Nielson and González-Lloret (2010), and the principles of authentic language learning (Ozverir, 2017). The purposefulness and the usefulness of the assignments is integral for engagement, as also Svalberg (2018) states. Accordingly, timely feedback, facilitation, guidance and support from the teacher contribute to student satisfaction, which in turn has a positive effect on engagement and learning.

Evidently, student-student interaction through collaborative assignments contributed both to social and academic engagement as well as spoken interaction. This is self-evident as for interaction a counterpart is needed. Further, as learning is a social interactive process collaborative learning requires cognitive-linguistic processes elaborated together. By co-elaborating students interact and produce their learning outcomes, as stated also by Baker (2015). Language learning benefits when the course designs afford and encourage students to interact and work together. The collaborative assignments need to be demanding enough, but enjoyable and purposeful for the learners (Pérez-López et al., 2020; Svalberg, 2008). Collaboration and interaction with the peers and the reciprocal support created mutual trust and respect which in turn enhanced students' self-esteem building; this result is in line with the work of Willms, Friesen, and Milton (2009). In accordance, mutual trust and shared humour increase social engagement and forms a fruitful, safe arena for practicing spoken interaction; the safe environment empowers students to use the target language, this conclusion is supported by the work of Sert and Balaman (2018) and Wrigglesworth (2019). These results are also in line with those of van Lier (2008) who emphasises that the dynamic application of linguistic competences in a variety of social and collaborative situations enhance opportunities for language learning and development of language competences can arise. The students constructed collaboratively an authentic learning

environment in which they perceived themselves academically and socially engaged, in accordance the engaging learning environment evoked participation and interaction.

Student's own activity is paramount for language competence building and engagement which is in line with the principles of ecological language learning in which it is viewed as agency. Social and academic engagement was perceived to be increased by self-regulation, self-efficacy as well as autonomous learning, which is in line with the principles of ecological language learning approach in (van Lier, 2004). The students realised that their own efforts and investment on studying contributed positively to their learning, which in turn evoked their eagerness to continue studying (Blin et al., 2016). The multimodal assignments sparked students to make several attempts when creating video or audio recordings. They aimed to produce the perfect version; this indicates persistence and willingness to focus on quality in learning activities (Fredricks et al., 2004; Kuh, 2009; Schindler et al., 2017). The appealing assignments promoted students' positive attitude toward the task and learning which in turn fostered their engagement (Schindler et al., 2017). In contrast, some students were apprehensive about the spoken collaborative assignments but gradually they noticed improvement in their speaking skills and interaction competence which in turn made the tasks easier to conduct, and their eagerness to use the language evoked, the result also Romaña Correa (2015) and Taillefer and Munoz-Luna (2014) received.

Students' own activities further enhanced their willingness to conduct spoken assignments and their security to talk in the target language increased according to the students. However, the most significant factor contributing negatively to spoken interaction skills improvement was the lack of practicing and reported shortcomings in student's own competences. Further, according to students' self-reflections, the use of technology that allows audio and video recordings improved the learning experience and enhanced spoken interaction; with suitable assignments and digital tools the language learning can be enhanced (Jalkanen & Taalas, 2013; Trinder, 2016).

The final emerging result regards the teacher role. According to the results of the dissertation at hand, the necessity of the language teacher's multi-faced role is apparent when teaching with online or blended learning approaches. The teacher acts as a learning designer prior to the course, planning the field-specific learning material, creating the individual, pair and group assignments, selects the suitable digital tools for individual and collaborative tasks regarding face-to-face and remote learning sessions, and decides how the tasks and the whole course is evaluated and how and when feedback and scaffolding is provided.

As mentioned in the course design chapter, the learning atmosphere has a paramount impact, therefore, the teachers need to endeavour to create emotionally safe, equal and supportive atmosphere. In such an atmosphere, students feel free to express themselves, and it nurtures creativity, sparks curiosity and encourages

tolerating mistakes and failures. Teachers need to allocate time for community building in the course orientation phase when such items can be discussed with students.

During the study module implementation, the teacher role comprises three aspects: cognitive, social and facilitator expertise. Thus, engagement was reciprocal between the students and teachers. The students appreciated the teacher's compassion, understanding and emotional support, as well as contents, pedagogical and technological expertise. The teacher's involvement contributed to students' connection with each other and by being approachable and showing concern for students' success and demonstrating expertise the teacher's engagement influenced positively to student engagement; this result is supported by the work of Richardson et al. (2016). The precondition for student engagement is teacher engagement (Kangas et al., 2017; Mystkowska-Wiertelak, 2020).

In social networking sites, teacher's comments and involvement enhanced the student participation and clarified assignment guidelines which facilitated students' learning and their endeavour to conduct even the challenging tasks. In addition, the students considered technical support as significant in terms of engagement and not being frustrated with the suggested applications (Chen et al., 2010). Further, the teacher's timely support and feedback promote students' autonomous learning, the result also Lee (2016) and Nielson and González-Lloret (2010) gained.

In accordance, student-teacher interaction increased social and academic engagement and contributed to an atmosphere where students allowed themselves to make mistakes and understood that language skills, particularly spoken interaction, emerge gradually. This in line with the work of Willms, et al. (2009) according to whom mutual respect, fairness and supporting relationship between the students and the teacher contribute to social engagement and promote learning.

In general, the findings of this dissertation in terms of teacher role in contemporary learning mirror the competences 21st century skills framework requires teachers to master (Saavedra & Opfer, 2012; Hämäläinen et al., 2017). In addition, according to Virtanen and Tynjälä (2019) teachers' pedagogical practices promote higher education students' generic skills mastering; by selecting appropriate teaching methods, 21st century skills or generic skills can be learnt alongside with the subject studies, in this research integrated with language and communication studies.

The results of this dissertation support the importance of pedagogical development work in university of applied sciences language and communication studies which is also noticed in the universities of applied sciences language and communication expert team, the KIVI-forum (Kivi-foorumi, n.d). The team developed and recently published the quality criteria for language and communications studies in universities of applied sciences (Kivi-foorumi, 2021). The pedagogical approach of the quality criteria emphasises the functional language and language

learning view instead of the formal approach. In the functional language learning approach, language is seen as an active, context-bound phenomenon. The quality criteria are divided into three parts: 1. Student's learning path in language and communication studies, 2. Teaching and guidance in different learning environments and 3. Organisation and practicalities in language and communication studies in universities of applied sciences. The first section mentions aspects such as authenticity and working life relevant learning, support for learners' different ways of learning, self-and peer-reflection ability as well as encouraging learners to seek opportunities to use the language. Also, continuous feedback from the students is seen as an instrument that helps teachers to improve their teaching. The importance of these aspects is in line with the results of my research. Likewise, parallel with my research results, the second section of the quality criteria pinpoints aspect such as alignment with the working methods and learning objectives as well as work-related assignments and assignment improving interaction competence. Further, the third section of the quality criteria focusing on language and communication studies' practicalities articulates factors which are essential also according to my research, e.g., field-specific language learning, continuous learning, working life requirements, integration of different learning environments and digitalisation into language learning.

5.2 Educational implications

The fundamental aim of this dissertation was to conduct research that would lead to a deeper understanding of the aspects that enhance engagement and initiate spoken interaction in foreign language learning when the studies are implemented with the blended learning approach. Based on the findings of this dissertation, several educational implications emerge.

Firstly, the results imply that both teachers and learners need to acknowledge the importance of engagement in the learning process and for advancing the studies. Engagement appears to be reinforced by student-student and student-teacher interplay; it is a reciprocal phenomenon which requires effort from all participants.

Secondly, contemporary language teaching in higher education is increasingly implemented as blended or online approaches, therefore technology is integrated in studies regardless of the subject. In addition to the digital media the educators deploy implementing the course, they need knowledge about the relevant tools to recommend to the students for conducting the multimodal assignments. Nevertheless, students' autonomy and engagement benefits if the technology-savvy students can use digital tools according to their preferences and the choices are not restricted by the teacher's recommendations. Instead of being solely consumers, the students primarily need to be producers of the content harnessing digital media

for advancing their learning. The results indicate that student engagement benefits from creative use of technology such as gamification or telecollaboration, therefore the teachers should explore the opportunities technology offers for language learning. Regarding applications, it should be remembered that too complicated or too many digital applications reduce engagement by frustrating the students and shifting the focus from learning the language to mastering the technology.

Thirdly, particularly in spoken interaction, too demanding assignments in respect with the students' prior language competence result to fear of failure which in turn reduces engagement and leads to avoiding collaboration. Therefore, teacher's and peer support and encouragement are essential throughout the learning process. Yet, the assignments need to be demanding enough and completed with various methods and diverse tools to avoid boredom. In addition, the assignments need to be meaningful to the learners and enjoyable to conduct. Furthermore, there is a clear need for both individual and collaborative learning activities, as the students regarded it integral to study individually before the collaborative sessions.

Fourthly, as language learning also includes the cultural aspect, the results indicate that language learning can be nurtured by genuine international contacts which can be organised e.g., on social networking sites such as Facebook or Instagram. The connections can be created between language learners and native speakers, or as in the research at hand, between students who learn the same target language. When neither of the student groups in this study were native speakers, it was regarded as a positive aspect creating an optimal learning environment for practising the target language with similar endeavour and mutual support. In addition, learning about the cultural habits and traditions as well as geography of the counterpart's country and of the target language, inspired the students leading to genuine conversation, where the focus was rather on the message than on the language. International relationships and real contacts between students from different countries enhance language learning and intensify engagement, for this reason, language teachers in higher education should deploy their own international contacts to benefit the students. Even a small-scale international project tends to spark interest in language learning. Social networking sites provide user-friendly and accessible platform for such projects.

Fifthly, language competence forms a significant part of the students' professional competence as the language studies in universities of applied sciences are field-specific. Therefore, language studies benefit, if the collaboration between the subject teacher and the language teacher is seamless, and the language teacher can be part of the degree programme team in the planning and implementation phases of the curriculum. This results to synchronising the studies, and in ideal cases deploying the same learning material and assignments, which in turn enhances students' engagement as they acknowledge how their language compe-

tence improves through assignments which also advance their field-specific studies. The authentic learning with strong connection with working-life and timely, relevant study-material and assignments engage students to language learning.

Finally, the results indicate that the teacher has a profound effect on the students' learning experience. Language teachers should acknowledge their multifaced role in the learning process; besides pedagogical, subject, content, and digital media expertise they need to have guidance and facilitator abilities. In addition, their engagement, enthusiasm, compassion, empathy, and commitment have a paramount impact on students' engagement, learning, wellbeing, and enjoyment. In accordance, it is recommendable that the teacher is approachable and available, defining the times and channels where and when they can be reached. The language teachers should invest time and effort for learning community building and establishing a supportive, enjoyable learning atmosphere at the beginning of the study module.

To conclude, on the bases of the findings, I argue that student engagement can be enhanced, given that the aspects are considered in all phases of the implementation. Further, I state, that students' spoken interaction competence in the foreign language can be activated and developed in the blended learning approach, as the students' error acceptance and self-compassion increased which empowered the students to interact more in the foreign language; the students gradually started to enjoy the weekly spoken interaction assignments and they developed in their reflectional and self-evaluation skills resulting to focusing their effort on the emerging skill areas.

5.3 Methodological reflections

This dissertation was conducted a as multiple case study with qualitative research approach which is a flexible method to study a complex phenomenon holistically in its own context. As the aim was to gain a comprehensive understanding on the elements that for one, students perceive contributing to their engagement, and second to initiate their spoken interaction in a foreign language, therefore qualitative research approached was used. However, given the interpretative nature of the qualitative research, the disadvantage is that the findings might be less generalisable as the focus is on one case (Nimehchisalem, 2018); in this dissertation on three cases. Instead of examining replicability, generalisability, or stability of the research as in quantitative paradigm (Cohen et al., 2018), validity and reliability of qualitative research are evaluated rather based on its truthfulness, credibility, and trustworthiness (Cohen et al., 2018). Qualitative research needs to fulfil the same quality requirements as quantitative research, it needs to be rigorous and systematic. The theoretical underpinnings need to be aligned with the

methodology, research design, methods, instruments, data, and analysis (Twining et al., 2017). In addition, the research questions and the goals of the research must be clearly stated, and the findings discussed mirroring with the relevant prior research literature (Twining et al., 2017). Credibility in qualitative research requires justification of the research questions, using rigorous methods and justification of data collection and data analysis as well as interpretation of the analysis. All above mentioned phases need to be transparent (Creswell, 2014; Stake, 1995; Yin, 2009).

Despite its limitations, qualitative studies have gained more ground in the context of language learning in recent years (Richards, 2009; Stickler & Hampel, 2019). Further, Chong et al. (2021) state that the qualitative research of technology-enhanced language learning has increased because of its strength enabling depth of interpretation by focusing on one specified setting with small number of participants.

In conducting this research, I pursued to enhance the quality of the sub-studies and the dissertation in several aspects. Firstly, in educational research, the context of the research should be a genuine setting with real students. In all sub-studies the research setting was an authentic language course in higher education with authentic students and authentic learning environments. Even though the courses experimented various learning designs and digital applications, the settings were not manipulated nor influenced by the researcher (Cohen et al., 2018). The settings were not established for the research, on contrary, the courses in question were normal, mandatory courses as a part of the degree programmes. In addition, as neither video, voice recordings nor field notes were used as a data collection method, the research had no effect on students' behaviour or learning.

Secondly, as the credibility and trustworthiness of qualitative research can be increased through data, method, researcher, or theoretical triangulation (Oliver-Hoyo & Allen, 2006; Twining et al., 2017), these aspects were considered in every phase of the dissertation. Data triangulation, i.e., using data from different participants, settings or times and method triangulation i.e., using different methods for data collection (O'Brien et al., 2014) were enhanced by collecting various data with different methods in the sub-studies. Because of the different ontological and epistemological views, qualitative and quantitative research methods cannot be mixed in a study, however both numeric and non-numeric data can be used, given that the methodology and research design are aligned (Twining et al., 2017). Therefore, in this research, both numeric and non-numeric data sets were collected, and they were analysed and interpreted according to the qualitative research approach. In sub-studies I and III the data were collected by questionnaires and reflective learning diaries. The diaries ensured the data triangulation by providing student reflections throughout the course. In the sub-study II, the data

were gathered via interviews and questionnaires. All questionnaires generated numeric and non-numeric data with open-ended questions and Liker-scale multiple choice questions

In addition, in all sub-studies investigator triangulation was utilised. Investigator triangulation means that several researchers are involved in the data collection or analysis phases (Oliver-Hoyo & Allen, 2006). In I and III sub-studies, I was the sole collector of the data, but the co-researchers contributed to the analysis stage, whereas in the sub-study II, the co-researcher acted as the teacher of the counterpart of my study group. Hence, we collected and analysed the data of our groups first independently and thereafter compared the analysis results together. In the individual analysis stage, we used the same coding scheme which was jointly created before the analysis.

5.4 Ethical considerations

Conducting research has ethical dimensions that need to be considered. Particularly, when investigating language learning, and aspects such as interaction, identity or interculturality the researcher needs to be ethical and sensitive. Kubanyiova (2008) states that ethically sound research in language learning includes interaction and collaboration with the research participants i.e., the students. In my research I acted as a teacher of the courses in the context of the sub-studies, therefore I contributed to the students' activities by facilitating interaction in online and offline spaces and by supporting them e.g., in finding a pair or team and by scaffolding with the assignments and the learning process. I consider my interference had a positive impact on students' activities, similarly the co-teacher and co-author of sub-study II contributed positively to students' learning experiences.

In addition, the use of social networking sites logs as a data source, here a Facebook log in sub-study II, causes ethical questions. Ackland (2013) states that in social media the distinction between public and private is unclear as well as the participant anonymity is not protected sufficiently. In this research however, the data was obtained in a closed Facebook group and the participants were asked an informed consent (Appendix 2). The participants were assured, that their Facebook profiles are not explored nor connected with this research.

In each phase of this research, I followed the guidelines of the Finnish Advisory Board on Research Integrity (2012; 2019) for educational research and valued honesty and accuracy during the research process. At the beginning of each course, i.e., the research settings, the participants were given informed consents (Appendix 1, Appendix 2, Appendix 3), and they were provided with comprehensive information about the research, the use of the collected data, the preservation of the collected data and the aim and purpose of the research. This is in accordance

with responsible research conduction (Cohen et al., 2018; Kvale, 2007). In addition, the participants were ensured that their anonymity and privacy are guaranteed in all stages of the research (see Cohen et al., 2018; Kvale, 2007) and that they are allowed to withdraw from the research at any stage, and their participation is voluntary (see Kvale, 2007; Raffe et al., 2005). Further, personal information and direct identifiers of the participants have been removed from the data before the analysis stage; hence the participants cannot be identified from the sub-studies or from this dissertation. For this reason, the institutions cannot be identified, and their names are not mentioned. The students were also assured that their participation to the research has no effect on their course assessment. The sub-studies were conducted without causing harm to the involved participants and they were treated respectfully in all stages of the research.

5.5 Limitations of the study

This research has limitations that should be acknowledged. I consider as an overarching limitation the fact that the sub-studies are generated foremost from the practical knowledge rather than basing on theoretical understanding. The research gap and the need for more guidelines was identified in authentic educational settings, that is in my own teaching. The identified knowledge gap led to investigating various methods to implement language study modules in blended learning approach.

Besides the overarching limitation, the first actual issue regards the post-questionnaires of the sub-studies, particularly of the first one. After piloting the professional English study module, I had a limited amount of time to create the post-course questionnaire, which affected the quality of the questionnaire; not all relevant aspects were covered by the questions. On the other hand, the data that was collected via the questionnaire supplemented the primary data source, i.e., the reflective learning diaries. The data from the questionnaire reinforced the primary data; hence the issue pertain to the questionnaire is a minor one, and despite shortcomings, the questionnaires provided valuable data for the research.

The second possible limitation concerns the deployed digital tools. Digital technology develops fast, therefore some of the tools that were used in this research might soon be considered dated. The tools will be replaced with more sophisticated ones and the variety of tools increases continuously. However, in this research the focus is not on the tools and applications per se, but rather on the ways digital technology can be integrated in learning and how it enhances all language competences and engages students to learning the language. The recommendations derived from this research are valid regardless of the tools because the focus is on pedagogical methods, and how digital technology can be harnessed for language learning.

As the third limitation I consider the limited number of participants in the study modules in question and the fact that the context of the sub-studies were pilot courses. After the student feedback from the pilot courses, the courses could have been improved. Since the courses were implemented as such only once, the number of the participants nor data could not be increased. Despite of this limitation, the data collected from the sub-studies provided sufficiently evidence to answer the research questions and make conclusions.

5.6 Avenues for future research

In the future, language education in universities of applied sciences and universities will prominently be implemented as blended or online methods, which provides fruitful opportunities for future research, but also request for guidelines and research-based knowledge for educators. The current Covid-19 pandemic has also forced language teachers to convert their teaching online, which has caused stress and presser for mastering online teaching methods (Macintyre et al., 2020). Therefore, this dissertation is even more timely than anticipated since language teachers need recommendations and guidelines for designing optimal and engaging online language studies. In addition, the situation at hand has increased or totally transferred the teaching online in higher education which has multiplied the difficulties of online learning. The educators need even more research-based knowledge how to design engaging online teaching to promote students' learning and wellbeing.

As for future research, it would be worthwhile experimenting the multiple means learning analytics provide for monitoring and exploring students' actions in online learnings spaces (Reinders, 2018) or in the frame of mobile-assisted language learning (Viberg, 2020). With the help of learning analytics, student engagement could be investigated more in detail for example, by measuring students' time investment in comparison to their learning outcomes. Likewise, the newly developed, specifically for language learning aimed set of survey scales to assess learner's engagement in terms of cognitive, affective, behavioural, and social aspects (Hiver et al., 2021) provides a valuable instrument to investigate the area. The questionnaire focuses on learners' engagement and persistence in areas such as rate and amount of language production and accuracy as well as syntactic and lexical complexity. It would be fascinating to test the survey and compare student engagement between study modules implemented in different methods such as face-to-face teaching, blended, online and hybrid learning approaches.

Moreover, as this research focused on initiation of spoken interaction, more research is needed on spoken proficiency improvement in online learning spaces and online learning approaches. Such a research would offer valuable knowledge on the methods to develop spoken language competences in online learning. Similarly, immersive technologies provide a wide repertoire of research topics in terms of telecollaboration and intercultural competence learning as well as for

spoken interaction improvement (Blyth, 2018). Instead of using video conferencing platforms, students might perceive spoken exercise conducted with the help of virtual or augmented reality programmes more engaging (Gruber, 2021). Also, the aspect of learner's mindset in relation to their contribution in interaction in the target language would offer interesting viewpoints for further research (Mercer, 2020; Sato, 2017).

Additionally, longitudinal studies in the area are also welcome. It would be compelling to investigate how the students' language proficiency and their perception of their own language competences develop during their entire higher education studies as well as what kind of impact their language skills have into their professional competence and in accordance with their employability. Also, the recently created quality criteria for language and communications studies in universities of applied sciences (2021) offers an attractive frame for further research, e.g., to investigate in which degree the criteria materialise in reality, and which aspects need to be focused on in praxis.

As this study concentrated on the students' perceptions and the teacher's insight were in a minor role, more research is needed to investigate the learning process from the teachers' perspectives regarding online teaching. In addition, an interesting research topic would be how essential teachers regard their digital pedagogical competence in contemporary higher education language teaching. Alternatively, studies could further investigate the impact of teacher presence on students' academic and social engagement as well as language learning results.

To conclude, technology-enhanced language learning is an integral part of higher education language studies, therefore the teachers need more research-based information on the methods to implement it and ways to best support the learners in their individual learning path. For this reason, online and blended learning approaches in the context of language learning in higher education welcome further research.

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Appendices

APPENDIX 1

The Letter of Consent for Students of the Gamified English Course Project (Originally in Finnish)

Dear students of the professional English course for health care

This course is a new course, and you are the first students to attend this pilot. My aim is to investigate how you perceive the new course and therefore I ask your permission for me to collect data during the pilot and use the collected data for my research. I will use two different data collection methods during the course: your learning diaries and a post-course online questionnaire. Please, note that the contents of your reflective learning diaries have no effect on the course assessment and grading.

The participation of this study is voluntary, and you have the right to withdraw from the study at any stage.

Please be assured that particular care will be taken to ensure the confidentiality of all research data gathered for this study and you cannot be identified at any stage of the research.

This study will used for publication in national and international journals and the outcomes are presented at national and international conferences. You may at any time ask for additional information or results from the study. If you choose to participate, please return the signed consent form to me.

If you have any questions about this research, please do not hesitate to contact me.

Thank you for considering taking part in this research.

APPENDIX 2

The Letter of Consent for Students of the Telecollaboration Project

Title of Project: Telecollaboration project between Finland and New Zealand

Dear students of the classes German 2 and Grmn251

In this class we aim to develop an authentic learning environment integrating a telecollaboration project as part of the course and the course assessment (see the course outline of the German for the description of the project and the assessment details). We, the German language teachers Kirsi Korkealehto and Vera Leier have set up a telecollaboration project between the German 2 students in xxx and the Grmn251 class in xxx. We use a closed Facebook group as a platform. We intend to study the effects of this learning environment on your learning of German this semester and would like to invite you to participate in this study.

If you decide to take part in this research, I we would ask you to fill in two questionnaires and in the end of the six weeks you are invited to take part in a semi-structured interview lasting between fifteen to twenty minutes. The interviews will be recorded and transcribed. In the interview you will be asked about your perception of the telecollaboration project and how you value it as a German learning experience. Following the interview, you will be emailed the transcripts with the opportunity to correct or otherwise change what you have said.
The participation of this study is voluntary, and you have the right to withdraw from the study at any stage. If you withdraw, we remove any information relating to you, provided this is practically achievable.

Please be assured that particular care will be taken to ensure the confidentiality of all research data gathered for this study. We will provide you with a Facebook-Smart guide, to help you to set your Facebook - privacy settings as securely as possible. All information that could identify you will be replaced with a pseudonym. Every member of the closed Facebook group is encouraged to take responsibility for maintaining confidentiality. As required by the xxx research policy the data will be held securely by the researchers and kept for a period of 5 years and will be destroyed thereafter.

This study will used for publication in national and international journals and the outcomes are presented at national and international conferences. You may at any time ask for additional information or results from the study.
If you choose to participate, please return the signed consent form to us.
If you have any questions about this research, please do not hesitate to contact us.

Thank you for considering taking part in this research.

Kirsi Korkealehto

APPENDIX 3

The Letter of Consent for Students of the Business English Course
(Originally in Finnish)

Dear students of the Business English course,

this Business English course is a new course, and you are the first students to attend this pilot. My aim is to investigate how you perceive the new course and therefore I ask your permission for me to collect data during the pilot and use the collected data for my research. I will use two different data collection methods during the course: your learning diaries and a post-course online questionnaire. Please, note that the contents of your reflective learning diaries have no effect on the course assessment and grading.

The participation of this study is voluntary, and you have the right to withdraw from the study at any stage.

Please be assured that particular care will be taken to ensure the confidentiality of all research data gathered for this study and you cannot be identified at any stage of the research.

This study will used for publication in national and international journals and the outcomes are presented at national and international conferences. You may at any time ask for additional information or results from the study. If you choose to participate, please return the signed consent form to me.

If you have any questions about this research, please do not hesitate to contact me.

Thank you for considering taking part in this research.