Extending the ability to communicate effectively via an online mobile application: Connecting Australian senior secondary school German and French learners with target-language speaking peers to increase language learner development.

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DECLARATION

I, Joanne Downing, hereby declare that this thesis contains no material that has been accepted for the award of any other degree or diploma in any educational institution and, to the best of my knowledge and belief, it contains no material previously published or written by another person, except where due reference is made in the text of the thesis.

Signed   Date 20/04/17

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Abstract

This thesis reports a study which investigated how interacting with target-language speakers on a language learning app influences Australian French and German learners. A qualitative case study is used to explore how communicating online influences student development as language learners. Sociocultural theory in language learning (Lantolf, 2011) provides a framework for considering factors that were influential in the online interaction. Data was collected from the students and drawn from three sources: pre-task student reflective portfolio entries, pre- task student interviews, and post-task student interviews. The findings revealed that developments in the language learner occurred in three areas: personal development, linguistic development, and development of learning and communication strategies. The project highlighted the importance of extending language learning beyond the classroom to develop student communicative competence.

CHAPTER 1: Introduction

1.1.   Overview

Motivating students to learn an additional language can be challenging in the Australian school context (Cruickshank & Wright, 2016; Cruikshank, 2017; Lo Bianco, 2009). An underlying pedagogic principle for teachers is to create multiple opportunities for communication which the learner perceives as relevant and enjoyable. A deeper exploration of the background informing this research project is in the next section. Following on from this, the focus of the research and purpose of this study will be discussed, defining key terms in this thesis. The significance of the study is shown through the relationship between the research and the important contribution it makes to pedagogy, which allows students to use the language beyond the classroom. To close, this chapter will include chapter summaries to provide an overview of the research study.

1.2.   Background

Scarino (2014a) is wary of the efficacy of government action in light of the fact that language learning policies of the past have done little to improve language education in Australia, with attrition remaining high, especially in the latter years of schooling, (Tovey & McNeilage, 2013). A significant problem for language learners, is that it is difficult to develop strong language skills within the secondary school years as a result of insufficient face-to-face lessons (Collentine & Freed, 2004). Sociocultural theory centres on communication and interaction, which captures the essence of language learning. Eisenchlas (2011) emphasises the benefits of authentic interactions and states that merely relying on content from textbooks may leave students lacking in "pragmatic linguistic competence" (p. 55).

To effectively increase and enhance language learning opportunities, new approaches to pedagogy are required (Thomson & Mori, 2015). Rethinking language pedagogy can contribute to learning programmes, which are capable of supporting students in becoming users of the target language (Thomson & Mori, 2015).

This project was an introduction to language learning beyond the classroom for the participants. Hence, this study is a useful guide for educators interested in broadening their pedagogy to include approaches, which can support their students in their development as language learners and potentially increase motivation.

With the popularity and user-friendly features of social networking sites and apps (Mindog, 2016), these online resources are useful for supporting language learning outside the classroom. Social media is increasingly being used to foster both individual and collective learning through collective

knowledge construction ((Kimmerle, Moskaliuk, Oeberst & Cress, 2015). These 'fun' activities are, according to Bailly (2011), "a way of simulating immersion in a distant language" (p. 126).

However, learning autonomously is challenging and in an article by Reinders & Hubbard (2013) they raise the point that language learners need to develop strategies to support them learning beyond the classroom (p. 181). Indeed, language learning with technology and learner autonomy can work well together to develop language learning pedagogy (Reinders & Hubbard, 2103, p. 1). While this study examines linguistic and intercultural development, it is the influence of the learning experience on the student language learning strategies that is at the heart of this project. Recent research by Kimmerle et al. (2015) affirms the idea of examining the process and not the product while learning collaboratively online, as the initial purpose of social media was not centred on education.

There is limited research on mobile apps for language learning (Mindog, 2016, p. 5), and learning across formal and informal contexts (Wong & Looi, 2011; Bogiannidis, 2013) in student-centred contexts (Byrne & Diem, 2014). Benson (2013) also argues for more research into learner autonomy and language learning, to look at outcomes from different pedagogical methods (p. 212). If teachers are to adopt new pedagogies beyond the classroom, it is important to conduct research that informs them of best practice.

1.3.   Focus of research

This research study's central aim is to investigate the development of language learner strategies, which have the potential to give birth to the development of linguistic and intercultural competence. It offers insight into any influences on language learner development and teacher pedagogical development, through involvement in the online project. It proposes that this research can serve as an example of pedagogy beyond the classroom to enhance language learning for educators and students in Australia and beyond.

Autonomous language learning beyond the classroom is a new concept for the participants of this study. The French and German classes involved in this project follow a largely teacher-centred approach which focusses mainly on textbook pedagogy. While technology is utilised in the language programmes, it is rarely used in class. There is also little demonstrated self-initiative by the students, as reported by the teachers, in seeking out language learning opportunities beyond school. One may surmise why these students and teachers are interested in participating in a project centering around autonomy and technology.

This can be explained by the fact that the teachers referred to wanting their students to strengthen their language skills and increase in motivation. Both teachers recognise that formal learning in a classroom needs to be supplemented with authentic interactions to develop communication capabilities (Nunan & Richards, 2015).

The case study school acts as a useful illustration for educators who are eager for their students to increase their language learning opportunities. It also raises key issues that can adversely affect outcomes. Learning beyond school with technology is a new approach to learning for both the teachers and students at the case study school. The project is, thus, informative for educators who desire to enhance their students' language development through the acquisition of skills developed beyond school.

Reinders & Hubbard (2013) see that autonomy and language learning through technology can combine to enhance language education with "adequate preparation, practice, feedback and support" (p. 2). Indeed, research in the area of target-language interaction points to the benefits of moving learning outside the classroom walls (Hung & Higgins, 2015). However, there remain gaps, which are identified in the intersection of the fields of language learner autonomy and learning languages with technology. In Mindog's (2016) study, she states that deeper qualitative research is needed based on language learning with mobile apps (p. 4). Benson (2013) calls for more research into pedagogical approaches that increase language learning outcomes when learning autonomously (p. 212). Eisenchlas (2011) discusses the need to "supplement" formal classroom learning to develop communicative competence (p. 53). Researchers also point to the fact there are few studies that examine learning across devices and contexts (Bogiannidis, 2013; Wong & Looi, 2011). Hence, if teachers are to be able to create "one harmonious learning space" through combining both formal and informal learning contexts (Bogiannidis, 2013, p. 94), then research is needed that is informative and useful for educators.

This research is situated at the intersection of two key areas, learning beyond school and learning with technology. It investigates how interacting in the target language beyond school on a mobile language learning app, HelloTalk, influences students as language learners. This project examines data from two Year 12 classes in an Australian secondary school using a qualitative case study. The data was obtained from pre- and post-task individual interviews of students and teachers, and student pre-task reflective portfolio entries.

1.4.   Purpose of proposed study

The purposes of the study are:

(a) to critically examine the potential of interactive mobile language learning apps in extending language learning beyond the school.

(b) to expand student language experience beyond the classroom in order to further their development as language learners and to increase both language development and language learner strategies.

(c) to provide an innovative approach to pedagogy in language education in Australia.

(d) to fill a gap in the literature of autonomous language learning and learning with technology, and to supplement empirical research of collaborative online learning beyond the classroom.

(e) To contribute to the qualitative empirical data of the development of student skills, which serve to support linguistic and intercultural development in autonomous online language learning environments, and to highlight the importance of integrating this approach into language education.

1.5.   Definition of key terms

Key terms used in this thesis will now be defined to enhance comprehension.

1.5.1.   Affordances

Affordances are the specific characteristics of an item that enable a person to use a device to accomplish a particular task. In this review, the affordances of the mobile device in learning are those characteristics of the mobile device that foster and develop learning.

1.5.2.   CALL (Computer-Assisted Language Learning)

CALL refers to how technology and its applications can support teaching and learning (Levy, 1997).

1.5.3.   Communicative competence or intercultural competence

Communicative competence or intercultural competence is the ability to communicate effectively and appropriately in intercultural interactions (Byram, 1997). This concept is discussed at length in Chapter 2 (Literature Review).

1.5.4.   Language development

Language development includes growth in both linguistic and cultural learning.

1.5.5. Learner autonomy

Learner autonomy entails the managing of one's own learning (Holec, 1981) and includes "dependence, interdependence and engagement in a social world" (Hunter & Cooke, 2007).

1.5.6. Linguistic self-confidence

Linguistic self-confidence consists of strong beliefs in language competence and low levels of anxiety when interacting with the target language (Clement, 1980; Clement & Kruidenier, 1985).

1.5.7. Mobile application (App)

A mobile application, commonly referred to as an app, is a software application created to run on mobile devices. They often have the same features as websites but are more user-friendly.

1.5.8. Telecollaborative exchange

A telecollaborative exchange is usually organised by teachers of a target language to support student language learning. Students are connected online with target-language speakers to mutually support each other in the development of language skills and intercultural competence.

1.6. Key research question

The research question within this study allows for exploration of student perceptions. The study investigates the following research question:

Key r*esearch question:* How do students perceive that writing collaboratively with French- and German-speakers on a mobile language learning application influenced their development as language learners?

1.7. Overview of Methodology

A qualitative case study approach was employed. Data was collected in one school from two classes of senior secondary school students, a French class and a German class. The data collection was designed to investigate:

(a) Student perceptions of how interacting on a mobile app influenced their language learning

(b) Student perceptions of any changes in their language development through interacting online

Four students from Year 12 also engaged in individual pre- and post-task interviews. To supplement the interviews and to enable triangulation of the data, students completed a reflective portfolio before commencing the project (Johnson & Christensen, 2011, p.307; Denzin & Lincoln, 2011).

1.8.   Significance of the study

The relationship of this study with approaches used in language education in Australia will be explained in this section. Australia has been building towards a national curriculum for a long time but it is only in the last few years that this has been realised. Prior to this period, states and territories were responsible for their own curriculum. This resulted in considerable variations in curriculum and pedagogical approach across Australia (Slaughter, 2009).

While communicative language teaching is still a common pedagogical approach across Australia, Scarino (2014a) argues that this method is flawed in how it is "transactional, separate from its social, historical and cultural contexts of use" (p. 6). The new Australian curriculum for languages seeks to move towards a more holistic approach. It states:

Languages aims to develop the knowledge, understanding and skills to ensure students:

- communicate in the target language

- understand language, culture, and learning and their relationship, and thereby develop an intercultural capability in communication

- understand themselves as communicators.

   These three aims are interrelated and provide the basis for the two organising strands: Communicating and Understanding. The three aims are common to all languages.

   (http://www.australiancurriculum.edu.au/languages/aims)

Further aspects of the Australian Curriculum prepare students for the 21st century through the 'general capabilities' and 'cross-curriculum priorities'. These are integrated across key learning areas of the curriculum. The general capabilities are of particular relevance to this project and include "numeracy, information and communication technology (ICT) capability, critical and creative thinking, personal and social capability, ethical understanding and intercultural understanding" (The Shape of the Australian Curriculum v4, 2014, p. 16).

In light of these changes in the curriculum, it is salient to consider how best to support language learning and to enable students to develop language learning skills that will foster their development as learners into the future. *The Quality Teaching (2003)* model of NSW asserts the significant role of external learning. This is where students may augment their language learning. In particular, communication with target-language speakers can foster learner communicative competence

through negotiating meaning in real conversations (Chun, 2011; Stanley, 2015; Thomson & Mori, 2015).

This project, through its small case study, offers evidence of a pedagogical approach to foster language learning beyond the classroom and equips students with skills that enable them to develop in communicative competence. The need to inform teachers of how best to support language learning interaction through social media is discussed by Righini (2015) who believes that social media has potential in developing learning autonomy (p. 91). This project, thus, also seeks to inform teachers of methods of teaching beyond the classroom.

1.9. Chapter summaries

This study contains six chapters:

- In Chapter 2, the bodies of literature supporting this study are discussed to provide the background for the current research and to look for empirical evidence to answer the research question of this project.
- In Chapter 3, the methodology is presented, which supported the processes of collection and analysis of the data.
- In Chapter 4, a profile of each participant is included and the findings are presented in response to patterns identified from the data analysis.
- In Chapter 5, a detailed discussion of the themes that arose from the data analysis is presented.
- In Chapter 6, conclusions are made about the findings of this study in response to the research question. Limitations are discussed and recommendations for further research are put forward.

CHAPTER 2: Literature Review

2.1. Overview

This chapter presents a review of the literature in autonomous learning and online intercultural exchanges, relevant to the topic of this thesis and covers areas such as the concept of authentic experiences and resources, the influence of the teacher role, the salience of student training, and the role of online collaborative writing.

This literature review seeks first to investigate insights gained from sociocultural theory and its relationship to autonomous online intercultural language learning. The notion of communicative competence developed from sociocultural theory. Further research in communicative competence contributed to the concept of intercultural language learning. The review explores the literature based on sociocultural theory and its relevance to autonomous intercultural language learning with technology.

The review then moves to an examination of four key component issues in successful online language learning. First, the role of authentic experiences and resources is discussed in section two. A summary of what is meant by 'authentic' is also discussed in this section. Second, the notion of the teacher being integral in autonomous learning is explored. This exploration reveals how a new pedagogical approach is necessary when learning collaboratively online. Third, a number of studies are discussed, which focus on student training in learning autonomously with technology. Finally, this section will close with an overview of online intercultural written exchanges. The contribution that writing makes to overall language development is mentioned, acknowledging the increased benefits through writing collaboratively online.

In consideration of these four areas of research, there appears to be limited attention paid to successful autonomous language learning with mobile apps through the medium of writing with school-aged students. The chapter finishes with a brief discussion of studies in the field of autonomous online language learning, discussing areas where research is limited, and outlining where this study can contribute to the field.

Thus, a model showing the sequence of the Literature review may be conceptualised as in Figure 2.1.
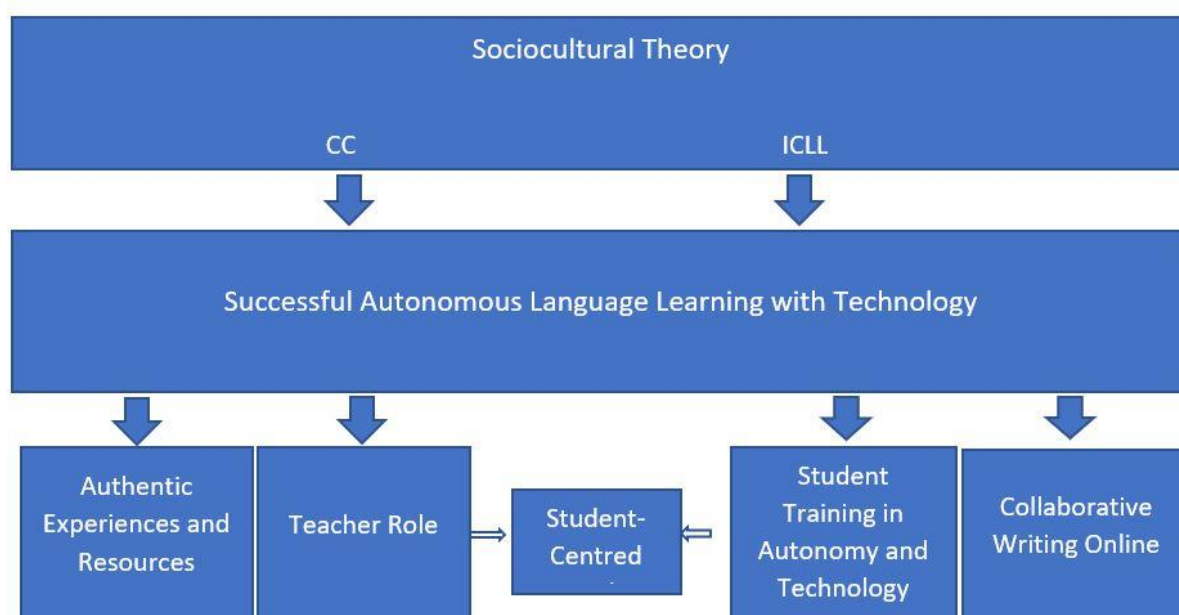
Figure 2.1. Structure of the Literature Review

2.2. Theoretical framework

Viewing this study through the lens of sociocultural theory allows a deeper understanding of the learner outcomes as a result of participating in the online interactions.

2.2.1. Sociocultural Theory

Interaction with speakers of the target language offers significant benefits to language learning (Chun, 2011). Sociocultural theory (Lantolf, 2011) and Vygotsky's construct, the ZPD (Vygotsky, 1978), support the notion that learning takes place while interacting and collaborating with others. Learners can do more through collaboration than if they were working alone (Lantolf & Thorne, 2007). The concept of the ZPD arose from studying children at play, noting how they developed though collaboration with each other. This construct developed and was extended to adult learners of another language (Kinginger, 2002). Tudini (2015) refers to how the notion of the ZPD gave birth to the importance of 'scaffolding' or support by a teacher or more capable learners.

> We propose that an essential feature of learning is that it creates the zone of proximal development; that is, learning awakens a variety of internal and developmental processes that are able to operate only when the child is interacting with people in his environment and in cooperation with his peers. (Vygotsky, 1978, p. 90)

Vygotsky's concept of ZPD entered the field of language learning and is referred to as SCT-L2, and refers to the social aspect of cognitive processes, the 'social turn' (Lantolf, 2011). Collaboration with more capable learners and guidance from teachers is seen as vital in developing learning, according to Tudini (2015).

> SCT-L2 is very much concerned with concrete classroom activity and its impact on learning. It argues for the pedagogical relevance of explicit and rigorous linguistic explanation, especially that derived from cognitive linguistics, and is devoted to discovering how to make learning happen through direct instruction. (Lantolf, 2011, p. 56)

Tudini (2015) refers to how learner autonomy grew from socio-constructivism in language learning. Learner autonomy was seen to be supported through computer-assisted language learning (Benson, 2004; O'Rourke & Schwienhorst, 2003), centering on learners interacting with others and not just with a technological device (Warschauer, 2003). Collaborating with more competent target-language speaking peers can raise motivation levels and help learners interact in the target language without teacher support (Tudini, 2015).

Sociocultural theory examines cognition in a social/interactional setting (Lantolf & Thorne, 2006) and contributes to an authentic language learning experience, one which is capable of developing and supporting communicative competence (Eisenchlas, 2011). What an authentic language learning experience entails will be discussed later. The notion of communicative competence grew out of sociocultural theory and has a significant role in language learning.

2.2.1.1.   Communicative Competence

The concept of communicative competence is a central part of this thesis, so in order to shed light on this role, the development of the notion of 'communicative competence' is briefly sketched. Chomsky (1957) saw language competence as linguistic competence. In other words, if an individual were able to create sentences without error, then they were competent language users. This concept was broadened to include the social and pragmatic elements influencing communication by Hymes (1972), who introduced the expression 'communicative competence'. As communication occurs in a social framework, it is necessary to acknowledge the role of social and pragmatic elements when using the language with target-language speakers. In this way, sociocultural theory illustrates how the social setting in which communication occurs results in growth in understanding (Janssen-Sanchez, 2015, p. 14).

From the 1980s to the year 2000, there was much discussion and theoretical development regarding the embedded role of culture in communicative competence. However, in their assessment of developments in this period, Liddicoat, Papademetre, Scarino, & Kohler (2003) critiqued many of the theoretical models devised, stating that they needed to be more comprehensive. The authors were also critical that there was scant reference to connections between elements of the models, such as the roles of learning, understanding and communication, and the linguistic, social and cultural elements of the models.

An influential notion was the idea that the intercultural learner is situated in a 'third place' (Bhabha, 1992). Thus, the learner is conceptually situated in an independent space, allowing for reflection on their own and the other culture (Byram, 1989; Kramsch, 1993). In order to learn how to communicate effectively in the target-language, it is necessary to reflect on how culture intersects with language during communication, with the learner being situated at the intersection of the two languages and cultures (Liddicoat et al., 2003).

Further research discusses the need to develop the notion of communicative competence to reflect the complexities of communicating in society today. For example, Kramsch (2006) asserts that learners require symbolic competence rather than communicative competence.

> Symbolic competence does not do away with the ability to express, interpret, and negotiate meanings in dialogue with others, but enriches it and embeds it into the ability to produce and exchange symbolic goods in the complex global context in which we live today.
>
> (Kramsch, 2006, p. 251)

Similarly, Lotherington & Ronda (2014) perceive that communicative competence should reflect the influence of technology on communication and call this 'communicative competence 2.0'. This notion refers to changing technological and social trends and includes multimedia competency, collaborative communication, agentive participation, and multitasking competency (Lotherington & Ronda, 2014, p. 19). For the purposes of this thesis, the term 'communicative competence' will be used and includes developments from the notions of symbolic competence and communicative competence 2.0.

This very brief sketch of intercultural learning theory makes clear that language development is a process and is not only a complex structure of linguistic and cultural learning but is also concerned with the development of capabilities to ensure successful communication in a global era. Certainly, for students to grow as language learners, they need to interact interlinguistically and interculturally,

reflecting on not only the interaction but also on both languages and cultures (Scarino, 2014b, p. 393).

2.3. Successful autonomous language learning with technology

2.3.1. The role of authentic experiences and resources in quality language learning

Quality learning is high on the agenda of the current Australian curriculum. The *Quality Teaching (2003)* model of NSW examines three pedagogical areas, representative of high quality learning: intellectual rigour, quality learning settings, and personally-meaningful learning, extending beyond the school walls. 'Personally-meaningful learning' relates to those factors most relevant to the learner's world. Indeed, authentic resources and experiences are part of this world. Scarino & Liddicoat (2009) discuss how authentic resources enable learners to engage in "contemporary language use" and increase "understandings of language and culture" (p. 60). Along these lines, Corbett (2003) argues that authentic resources provide information about how a culture functions. (p. 42). However, "authentic resources are not necessarily there to be used in the same way as members of the target culture use them" (Corbett, 2003, p. 42). They have a different purpose in the language-learning classroom and require the teacher's involvement to ensure learning is fostered. Arnold (1991) describes how the following elements need to be combined to foster quality authentic learning. These are: authentic materials and learners' purposes, authentic materials and authentic interactions, authentic responses, authentic participants, authentic status, settings and equipment, and linking of tasks, authentic inputs and outputs (Arnold, 1991, pp. 237 -241). Indeed, research has shown that language learning is enhanced when the teacher prepares and supports students to participate in authentic language learning opportunities (Curtis, 2015; Grode & Stacy, 2015; Webb, 2016).

Intercultural development is an integral part of language education in the new national Australian curriculum (*The Australian Curriculum: Languages Foundation to Year 10 Curriculum Design,* 2014). The role of intercultural competence is affirmed by Scarino (2014a) who is critical of the fact that in Australia, 'communication' in language education has become transactional, moving away from the "art of meaning-making…particularly, within an intercultural orientation" (p. 294). Rich educational programmes are, thus, required in language education. Certainly, communicative competence developed, albeit slowly, through engaging in online exchanges in spite of pragmatic challenges that arose during the interactions (Chun, 2011, p. 417). A "pragmatic approach" focuses on guiding students in learning how to interact appropriately in authentic social situations and supports the development of communicative competence (Eisenchlas, 2011, p. 52).

Integrating authentic resources and experiences into any language learning programme needs to be situated in environments with "high challenge and high support" to engender quality learning (Gilmore, 2007, p. 112) and foster communicative competence. This is particularly relevant when learning with technology, an area where superficial learning is prevalent if unaccompanied by sound pedagogical design (Kramsch, 2014). The affordances of mobile devices with interactive mobile apps make a significant contribution in fostering an authentic language learning experience when accompanied by "adequate preparation, practice, feedback and support" (Reinders & Hubbard, 2013, p. 2).

2.3.2. Teacher role

Contrary to popular opinion, when learning with technology, the role of the teacher is fundamental if deep learning is to occur (Kramsch, 2014). In Kessler's (2009) study, owing to a lack of teacher presence during an online wiki interaction, learning outcomes were not achieved. However, it could be argued that learning was supported, just not the type of learning the teacher had envisaged, meaning students focused on meaning and not form. The significance of the teacher role was also observed in an online interaction between Australia and China, where differing teacher expectations and a lack of communication culminated in unequal contribution from learners (Moloney, 2013). Problems and misunderstandings can also occur between students in online exchanges. Kramsch & Ware (2005) discuss these issues at length, with reference to a German American online exchange (Ware, 2005) where problems arose through intercultural differences. These challenges emerged even though the students were well prepared for interacting online (Kramsch & Ware, 2005, p. 199). Similarly, Tudini (2015) discusses the positive learning outcomes that can ensue from online interactions but warns that the teacher is instrumental particularly when tensions may occur through intercultural misunderstandings (p. 8). Indeed, there are many accounts in the literature where collaborative online intercultural language learning was unsuccessful (O'Dowd & Ritter, 2006). This led to O'Dowd & Ritter's (2006) conclusion that it is a diverse range of factors that can impact the outcome, tied to the learners and the sociocultural settings where the exchange is taking place.

The teacher is central in ensuring students are well-prepared for any learning activity, particularly in complex learning contexts (Moloney, 2013; Kramsch, 2014). In Lee's (2009) study of a telecollaborative Spanish-American exchange, although students perceived the activity to have increased "critical thinking and deeper understanding of the topic" (Lee, 2009, p. 434), there was

criticism regarding inadequate teacher direction during the project. In light of these studies, teachers need to be cognisant of the importance of their role in sustaining online language learning.

Furthermore, Kukulska-Hulme (2009) asserts that a change in pedagogy is required to make the most of the unique learning opportunities available through the mobile device, with Churchill & Wang (2014), emphasising that teachers need to reflect on how "collaboration, connectivity, representational possibilities and analytical uses" are at the heart of learning with technology (p. 223). Changing the teacher role is significant when students are interacting with online partners beyond the classroom. Indeed, part of the teacher's role is to support a student-centred interaction and how to achieve this successfully is explored in O'Dowd & Ritter (2006). Thus, when interacting in an intercultural online exchange, O'Dowd & Ritter (2006) recommend 'learner-matching procedures' (p. 631), which means teachers match students of similar target-language ability. A better solution than "learner-matching" may be to allow learners to choose their own partner. After all, unequal language proficiency is not the only element that can result in a poor interaction. Dunne (2014) used "learner-matching" in a telecollaborative email project with EFL learners in Japan and Chile, aimed to pair students with comparable language ability, age and gender (Dunne, 2014). The resultant outcomes were predominantly positive with Dunne (2014) attesting to no "intercultural tension, unmanageable levels of incomprehensibility, or inability to arrive at a task outcome observed or reported" (p. 183). The positive learning results that can occur when students are interacting with someone with whom they share common interests, supports Wang's (2011) statement that student-centred learning is central to a constructivist learning environment (p. 276).

2.3.3. Student training

In an autonomous learning experience with technology beyond the classroom, students need to be prepared to learn autonomously and to learn with technology (Morgan, 2012). It is essential to teach "the procedural skills and knowledge for ICT usage …(separately) from the analytical, evaluative and reflective skills for autonomy" (Morgan, 2012, p. 174). Providing students with sufficient training in each of these domains can safeguard against the failure of learning outcomes not being realised (Benson & Reinders, 2011). Furthermore, successful learning outcomes will ensue when learning autonomously, if students are encouraged to develop autonomous skills in the classroom, before using them outside school (Benson & Reinders, 2011).

In language learning, there are three strategies students need to develop, declares Reinders (2011). These are: (1) cognitive (e.g. approaches to learning vocabulary); (2) metacognitive (e.g. reflection); and (3) social-affective (e.g. using the language in a social situation, or finding approaches to increase

motivation) (p. 181). Reinders (2011) also emphasises the role of reflection, maintaining that it needs to occur throughout the learning activity. Interestingly, Dörnyei (2005) sees the capacity to self-regulate as having more value in promoting learner autonomy than learning strategies. Learning autonomously is, thus, no easy feat, particularly when combined with technology. However, if autonomy is a primary "social-psychological" need, as declared by Deci (1995), then we cannot afford to exclude it.

Byrnes (2007) acknowledges the positive impact that a well-structured learning environment can have on increasing language capabilities. In accordance with this, Lys (2013) designed a robust learning activity and observed an increase in student oral proficiency in the target language on an interactive FaceTime task. Similarly, success ensued in a study with university students, where a high degree of "independent and target-language-focused participation" was evidenced in a Moodle forum during the holidays (Barrs, 2012, p. 21). This was attributable to the fact that the students participated in a practice mini task and were provided with training and support in learning autonomously with technology. Hence, the importance of guided instruction and training is a crucial factor in sustaining and increasing learning (Reinders, 2011).

2.3.4. The role of writing in language learning

Writing is a cognitively challenging task (Byrnes and Mancho´n, 2014). Nevertheless, developing writing capabilities is integral to the development of linguistic and intercultural capabilities through the development of vocabulary, grammatical and syntactical structures, and intercultural competence (Ruiz-Funes, 2015). Ruiz-Funes (2015) draws attention to the ability of writing to promote language learning generally. Indeed, Williams (2012) declares that: "(1) its permanence; and (2) the slower pace at which it occurs in comparison to speaking", allow for increased mental concentration with input from memory or other sources, and mean the learner has more time to perfect the written text, even coming back to the written form after completion (p. 322). These benefits have the potential to enhance critical thinking and foster deep learning.

Swain (2005) states that sociocultural theory centres on language production, viewing speaking and writing as "cognitive tools that mediate internalisation; …that construct and deconstruct knowledge" (p. 480). Indeed, based on Swain's experience studying French L2 students in an immersion setting, she concluded that complete grammatical processing only occurs when learners engaged in producing language (output) and that reading and listening to the target language were not enough to result in "all-round interlanguage development" (Mitchell, Myles & Marsden, 2013, p. 175). It is also salient to mention the role of writing in serving as working memory to some degree (Schoonen,

Snellings, Stevenson, & van Gelderen, 2009), providing time to recall knowledge from long-term memory (Kuiken & Vedder, 2011).

Writing, therefore, is an essential part of language learning. This raises the question of how writing can best be supported and developed in language education today to positively influence language development and communicative competence.

2.3.4.1.   The role of online collaborative writing

Interaction and collaboration have been investigated in literature, demonstrating that writing collaboratively is more supportive of language development than writing alone. Williams (2012) discusses the role collaboration plays in fostering language learning and increasing knowledge (Nassaji & Tian, 2010) through the provision of more input and through turn-taking. Furthermore, Richards (2015) mentions the positive influence of "collaborative interaction and negotiation of meaning" in language learning, declaring that by engaging in such activities, students profit "from feedback, clarification requests, recasts and the use of communication strategies to help them achieve shared understandings" (p. 11). However, Kern (2014) argues that writing online not only brings benefits but also many challenges. Kern (2014) suggests that some of the internet's mediational characteristics can hinder intercultural development. This was noted with French and English university learners in America and France who faced linguistic, pragmatic, and intercultural challenges when interacting over three mediums; MSN Messenger, Skype, and VISU (Kern, 2014). Although, language development was evident in a study by Bobb-Wolff (2010) where collaboration within a forum on Moodle improved writing skills with pre-service ESL teachers. Significantly, wide-reading habits also grew during the process, for learners are not just writing but also reading their peers' responses. Another positive learning experience was evident in a Spanish-Australian online exchange, where the findings revealed that students developed their linguistic skills and intercultural competence, with 99% of students showing an increase in motivation (Garcia-Sanchez, 2012). This contributed to students writing longer texts and many students discussed how they used their peer's feedback in their future writing tasks.

2.3.4.2.   The role of mobile apps in supporting collaborative writing

The connectivity available through mobile devices means students are able to use the target language with others in a way unknown to previous generations. If this device with which students are so comfortable can be supportive of learning, then it renders it a useful tool. Indeed, when users are familiar with a technological device, then they are more likely to learn with it, as was noted in

Jarrahi (2010), who noted that professors would use the Course Management System if they were familiar with it.

Mobile apps foster connection. Indeed, social networking apps, contribute to motivation by providing feedback and comments from target-language speakers (Pollard, 2014), and expose them to linguistic variations (Cho, 2015). In a study examining how Korean students of Japanese used Web 2.0 tools, Nishioka (2016) recommended that learners use sites or apps that are purpose-designed for language learning to connect with target-language speakers, particularly for those students who have no contact with members of the target-language culture.

HelloTalk is one app that is specifically designed for language learning. In Mindog's (2016) study, a Japanese learner of English declared it assisted "his reading and writing skills" (p. 9). Furthermore, Mindog (2016) found that apps can be supportive of learning autonomously, however, did note that "in the absence of external pressure (e.g. test), the absence of 'fun factor' seems to lead to the deletion of apps" (p. 18). Thus, it is important to encourage students to participate on the app in ways that they find motivating and to allow them to direct their learning process, along with guided instruction (Mindog, 2016, p. 16). Research by Sampasivam & Clement (2014) also recommend that "methods that provide more leeway and self-pace (e.g. text chat)" can be less taxing for students with lower levels of language capabilities (p. 28). By way of example, Kissau, McCullough, & Pyke (2010) showed that linguistic self-confidence grew and anxiety decreased during written interactions, which were designed to increase learners' written communicative capabilities in French. Thus, it is appropriate to consider carefully which apps best support learners at particular stages of their language development.

2.4.   Gaps in the research

The literature reviewed provides support for research in how mobile learning can support target-language writing skills to augment linguistic and intercultural skills through online interaction and collaboration. Although much research is currently being undertaken in learning with technology, there is limited attention to learning with mobile phones in interaction with target-language speakers. There remain gaps in several key areas of language learning, both in focus and in methodology: Firstly, Mindog (2016) claims that most research on mobile language learning apps is from surveys (Byrne & Diem, 2014; Khaddage & Latteman, 2013; Steel, 2012; Watanabe, 2012) and, thus, lacks qualitative depth ; Secondly, there is a lack of research relating to learning across devices and across contexts (Bogiannidis, 2013; Wong & Looi, 2011), with Bogiannidis (2013) signifying a

need to observe how learning can support "one harmonious learning space in order to provide students with more opportunities for ongoing learning at any time, place and pace" (p. 94) . Thirdly, more student-centred research (Byrne & Diem, 2014) in informal learning settings is required (Kukulska-Hulme & Shield, 2008), with Wong (2013) stating the need for more research into looking at how autonomy is impacted by age and language ability. Benson (2013) sees a need for research that contributes to our knowledge of autonomy in learning languages outside the classroom and explores how different approaches can influence autonomy and language development (p. 212). Research is, thus, needed that is situated in the intersection of these gaps to sustain language learning and teaching.

2.5.   Conclusion

In conclusion, the themes explored in this review provide an account of how language learning can be extended with mobile devices through moving language interaction beyond the classroom walls. The review sought to explore how a successful mobile language learning interaction can be supported in an interdependent framework that is intellectually challenging, interesting and relevant to the learner's world (Thomas & Mori, 2015). The role of the teacher remains significant in guiding and supporting students in a student-centred setting. Providing student training in how to learn autonomously with technology was noted in order to enhance learning. The importance of the role of writing in language development was also discussed, with an emphasis on collaborative writing and writing to learn, resulting in overall language development. Consideration of these bodies of research and the identification of gaps in the research have informed the research question in this project:

Key research question: How do students perceive that writing collaboratively with French-and German-speakers on a mobile language learning application influenced their development as language learners?

CHAPTER 3: Methodology

A qualitative approach affords deep exploration into the influences on student learning during online intercultural interactions. This chapter provides details of the research design, describing the methodologies used. It then discusses the participants, the research site, the app, the research methods, procedures and, data collection. It concludes with an explanation of the treatment of the data, the validity and limitations of the study.

3.1. Overview

As discussed in Chapter 1 (Introduction) one purpose of this study is to examine the influence of an online intercultural autonomous language learning experience on student development as language learners. The data collected informed the description of student perceptions of learning on HelloTalk. There were three methodological qualitative tools in the study. A case study utilising qualitative methods was employed. Four students in senior secondary school (Year 12) classes in French and German took part in pre- and post-task interviews. Additionally, the students completed reflective portfolio entries. This occurred over a two-month period in 2016 and 2017. Different data sources contributed to triangulation of the data.

3.2. Research design

The researcher employed a single case study approach utilising qualitative methodologies. A case study provides a holistic view of all the factors involved (Johnson & Christensen, 2014, p.434). The case study approach has the following strengths:

• depth

• high conceptual validity

• understanding of context and process

• understanding of what causes a phenomenon

• fostering new hypotheses and new research questions (Denzin & Lincoln, 2011, p. 314).

These features enabled the researcher to examine each of the components, which shaped the learning outcomes of the online interaction for both the students and teachers.

3.2.1. Researcher role

The researcher worked as a casual teacher in the school, with this role ceasing before the study commenced. From visits to the school, the researcher had observed frequent use of technology in classroom pedagogy, including the use of mobile phones for learning purposes. The researcher was responsible for collecting and analysing the data. The teachers chose the topics of discussion for students and the writing tasks.

As a result of the researcher's years of experience in teaching German and French to high school students, she had observed that interaction with target-language speakers developed student language skills and increased confidence and motivation. She was, thus, interested in observing whether and how learning could be ameliorated through using mobile technology to connect with target-language speaking peers. The researcher acknowledges that the interpretation of the data may be influenced by her particular personal and professional background (Glesne & Peshkin, 2000). However, there are elements included in this study, discussed later, that reduce researcher bias.

3.3. Participants, site selection and the app

The participants involved four students (N=4). French and German classes were chosen as the researcher was a French and German teacher. The researcher's proficiency in both languages meant that she could prepare the students for the online intercultural interactions. The researcher invited the teachers to engage in the study through an email to the case study school. The school was a co-educational school in Sydney. The German teacher expressed a keen interest in taking part, with the French teacher later agreeing to her students being involved because some students had left the German class. The app chosen for the online interactions was HelloTalk.

3.3.1. Student participants

The student participants were drawn from a senior class of *intermediate-level German learners and a senior class of *lower-intermediate-level French learners. Both classes were invited to take part in the project and participation was optional. The entire German class (2 male students) and two of the students (2 female students) in the French class chose to be involved. The students were all in Year 12, which is the final year of senior secondary school. Lower-intermediate to intermediate-level learners were selected because students need to be able to communicate in the target language beyond a basic level in order to interact effectively via HelloTalk. The students were all aged 17. With the exception of one student, Keith, the remaining three students were native speakers of English. All of the students were born in Australia. Keith was the only student who spoke German and English

at home. The other students spoke English at home and had English-speaking parents. None of the students spoke a third language.

Detailed profiles of the student participants can be found in Chapter 4 (Findings). Student citations are drawn from the transcriptions of individual pre-and post-task interviews.

*Lower-intermediate level corresponds to level A2 to B1 and intermediate level corresponds to level B1 to C1 on the *Common European Framework of Reference for Languages (CEFR)*, which is an international standard for measuring language ability.

3.3.2. The case study school

The case study school, Greenvale High School (pseudonym), is situated in a middle-class suburb in Sydney, Australia. It is a secondary co-educational Christian school. The school started in 1988 and has 1500 students from Pre- to Year 12 school. According to the school website, it states that its ethical framework encompasses "serving others, participating fully, exploring Christ, learning for life, leading by example".

Technology is central in the curriculum of the school. The school has a BYOD policy, Bring Your Own Device. All students are required to own a laptop or tablet. Students are allowed to use their mobile phone for learning purposes in class. The researcher is a frequent visitor to the school in the role of casual teacher and, thus, can observe that there is frequent use of technology in classroom pedagogy.

Languages are strong in the school and three languages are offered: French, German and Japanese. In the current Year 12 cohort, there are classes in each of these languages.

3.3.3. Details of the HelloTalk app

HelloTalk has many features that make it supportive of language learning. A significant benefit when working with students under the age of 18 is that the app's safety features make it a relatively safe space for students to interact online in the target language.

There are a number of elements that enhance safety online: an age-filtering policy for users under 18 matches users of the same age; interactions are monitored and users have to abide by the code of contact when using the app; and, users engaging in inappropriate behaviour are blocked from using HelloTalk. Furthermore, users can report someone or request that they be blocked. They can

hide themselves from the search facility if too many people are contacting them. It is also possible for learners to choose who they want to interact with by selecting age, gender and language. Learners can communicate with others in a variety of ways. Each user creates a profile. They can contact and search for target-language speakers and initiate conversations. Conversations can be one-to-one, in groups, or in a section titled 'Moments' where they are able to interact with everyone who speaks the target language.

The app supports many languages including those that do not have a Roman script. Learners may communicate via text, audio or video. There are built-in affordances for translation, pronunciation, transliteration and corrections. (http://home.hellotalk.com/)

The task for this project entailed supervised and supported use of HelloTalk. Students were asked to connect with two to three regular partners via HelloTalk and a structured framework of language topics was provided to students to guide their discussion with their partners. As the study occurred in a Year 12 class, the topics centred on Stage 6 syllabus topics from the NSW Board of Studies.

3.4. Data collection methods

Data collection began at the end of Term 4 in 2016. The methods chosen to collect data were:

1. pre-task reflective portfolio student entries

2. semi-structured pre-and post-task student interviews

Ethical and scientific approval was obtained from Macquarie University Human Research Ethics Committee in November 2016. Students and parents of students signed consent forms after being provided with details explaining the study. These forms are available in Appendices A and B.
The methods used by the researcher to explore the research question are illustrated in Table 3.1.

Table 3.1: *Methods used by the researcher to explore the research question*

Key research Question	Method	Data Sources	Data Analysis	Purpose
How do students perceive that writing collaboratively with French- and German-speakers on a mobile language learning application influenced their development as language learners?	Individual pre- and post-task interviews Reflective portfolio entries Audio recording of interviews	Transcript of pre- and post-task interviews Text from the reflective portfolio entries	Applied Thematic Content Analysis of text from interviews, reflective portfolio entries, audio recording	To identify perceptions of development in the language learner through extending language beyond the classroom with a mobile app

3.4.1. Student reflective portfolio

Student data was gathered from an online reflective portfolio. Initially, it was intended that students complete several portfolio entries through the project. However, the students only completed one portfolio entry during the training session. The reflective portfolio was hosted on OneNote, which is used across the school. Students have 24/7 access to OneNote. The reflective portfolio was based on the biography component of the *European Language Portfolio.* It was designed to assist students in learning beyond school, in addition to questions from which data was collected. The portfolio questions can be found in Appendix C.

 While students only completed one portfolio entry, this was a comprehensive entry with rich material to inform the interviews. Data was collected from the reflective portfolio entries before the pre-task interviews commenced.

3.4.2. Interviews

All participants were individually interviewed. As Denzin & Lincoln (2011) state, "By using interviews, the researcher can reach areas of reality that would otherwise remain inaccessible such as people's subjective experiences and attitudes" (p. 529).

The interview format consisted of the interview guide approach. Johnson & Christensen (2014) discuss the benefits of this method, centering on the fact that the researcher can cover similar topics with all participants (p. 233). Thus, comparison across the cohort is possible while maintaining some flexibility to deviate into areas of interest raised by the participant (Harding, 2013, p. 31).

3.4.2.1. Student interviews

The student interview questions from which data were gathered are in Appendices D and E. The interviews took place in a school classroom alone with the researcher during school hours. Individual interviews allowed the researcher to gain a personal perspective from each student. As each student presented in a different manner on the app, they have been treated as four separate case studies.

3.4.2.1.1. Pre-task student interviews

The pre-task student interviews were audio recorded and transcribed, and were 10 minutes in duration. This enabled repeated readings, providing detailed information. The pre-task interviews were divided into three sections:

- student language background
- student use of technology
- student perceptions of their capabilities in language learning

3.4.2.1.2. Post-task student interviews

The post-task student interviews were audio recorded and transcribed. The interviews were 20 minutes in length. The post-task interviews examined:

- how features of the HelloTalk app supported their learning
- how learning was supported during the interaction
- how and whether student learning strategies and language development were influenced

3.5. Protection of human subjects

This research satisfied the guidelines of the National Statement on Ethical Conduct in Research Involving Humans (Commonwealth of Australia, 1999). To address the ethical requirements, an email was sent to the Principal of the school requesting permission to conduct the research. The Principal consented and forwarded the email to the language department, with the French and German teacher consenting to participate. Informed permission was sought from parents/guardians and students in the French and German classes.

Participation was voluntary and participants could withdraw from the study at any time. The project was independent of any formal school assessment. Risks were minimised as the project occurred within a pedagogically rigorous framework with students being provided with a training session on online safety and teacher and researcher support throughout the project. Additionally, the school counsellor was involved should any negative situation arise during the online interactions.

To ensure confidentiality participants were de-identified through the use of pseudonyms, with all data remaining confidential.

3.6.   Data analysis

The data was analysed using an inductive, exploratory approach.

1. Pre- and post-task interviews: the transcriptions of the interviews were analysed using structural coding. Based on the question, structural codes were created.
2. Reflective portfolio entries: the student responses were analysed and thematically coded based on the structural codes from the interviews.

Through an examination of the transcribed texts and the portfolio responses, a coding system was created (Guest, MacQueen, & Namey 2012. p. 8). The interviews were semi-structured and had been carefully designed to elicit key information to address the research question. The data was coded manually through repeated readings. Key words and concepts were identified with the use of an excel file to construct the occurrence of emergent themes. The main themes were then examined to ascertain whether there were sub themes. Guest et al. (2012) suggests that finding themes using an applied thematic analysis approach involves focusing on the "analytic objective" (p. 19). These 'analytic objectives' support the prioritisation of relevant themes.

3.6.1.   Thematic coding of data source: pre-task student interviews

The pre-task interviews supplemented and reinforced findings from the post-task interview and the portfolio entries. They served as the main source of data from which the student profiles in Chapter 4 (Findings) were created.

3.6.2.   Thematic coding of data source: post-task student interviews

The student interviews were transcribed and analysed, using the interview questions as categories under which the coded data was situated. Three main themes were identified from this data. From these themes arose a number of sub-themes. The following table highlights the process.

Table 3.2: *Themes and sub-themes from the analysis of student post-task interview data*

personal development		differences in patterns of interaction	
		relatedness	
		collaboration	negotiation of meaning
			intercultural development
linguistic development		personalised learning experience	
		willingness to provide and receive feedback	
		increase in accuracy	
		increase in vocabulary	
development of strategies	learning strategies	cognitive strategies	
		metacognitive strategies	feed forward
			writing
			metalinguistic awareness
	communication strategies	circumlocution	
		use of emoticons	

3.6.3. Treatment of data source: Reflective portfolio entries

The portfolio entries were analysed and supplemented the data analysis of the post-task interviews. They were read and re-read thoroughly.

3.6.4. Conclusion

Data was collected and analysed throughout the project to provide an in-depth analysis of the learning process. This is supported by Vygotsky (1997) who discusses how studying the entire process of the development of learning is important, rather than merely examining it at the end.

3.7. Study reliability and validity

After an explanation of the analysis of the data, this section addresses the reliability and validity in this qualitative case study.

3.7.1. Reliability

Conducting a study in a school can be challenging and teachers and students can be stressed, tired, or uncooperative. However, although the teacher influence in this study resulted in student non-participation in the writing tasks and in some of the portfolio entries, the interviews and the first portfolio entry provided rich material. Furthermore, each of the students participated in distinctive ways on HelloTalk, providing insight into the diverse approaches that these four students adopted when interacting online.

3.7.2. Validity

Approaches that are evident in this study to increase validity and reduce researcher bias will be explained in this section.

The researcher has a particular interest in learning languages with technology and has observed the benefits of interaction. This could, thus, affect the interpretation of the findings (Glesne, 2011, p. 49). However, Glesne (2011, pp. 49-50) and Johnson & Christensen (2011, pp. 299-300) list a number of strategies, two of which were utilised in this study to reduce bias:

* Reflexivity was present and involves being aware of any partiality when analysing data.
* Negative-case sampling involved looking for instances, other than being involved in the project, that could have increased student development as language learners. This included incorporating questions in the interview to discover other elements of influence.

Interpretive validity was evident as the researcher sought to represent participant responses accurately. The interviews were an in-depth investigation of student perceptions and allowed the researcher to deviate from the set questions. The researcher could, thus, accurately explore participant responses during the interview.

Additionally, the researcher was supervised by a senior lecturer in language teaching methodology with considerable experience in intercultural research and in the teaching of languages.

Triangulation was employed through using different data-collection methods such as interviews and portfolio entries (Johnson & Christensen, 2011, p.307). The reflective portfolio entries helped substantiate, refute or add to data obtained from the interviews. Additionally, they alerted the researcher to issues which she had previously not considered and which could be followed up in the post-task interviews.

External validity is not the aim of this research nor is it possible with one small qualitative case study. However, the researcher is interested in examining how mobile technology can facilitate online

intercultural interactions. This study, therefore, provides useful information about influential elements in online intercultural language learning in these four students. These factors illuminate possible areas requiring more research and identify best practice when learning collaboratively with mobile devices. Additionally, qualitative enquiry, such as qualitative case studies, are claimed by Wardekker (2000), as having a "generative power" rather than transferability or generalisability. Enquiry has the "power to enlighten people by making them really understand the narratives that were the object of the study" (Wardekker, 2000, p. 266). This can then lead to a "potential for learning and change" (Wardekker, 2000, p. 269).

3.8. Limitations of Methods Used

There were several limitations in the methods that were employed:

1. This was one small case study with four students.

2. The study took place over a brief period of time. It commenced prior to the holidays with the training session and the pre-task interviews, and finished the week after the holidays with the post-task interviews.

3. Only one portfolio entry was completed by the students.

4. Researcher bias may be present in the findings (Glesne, 2011).

5. All the data are self-reported.

6. Researcher desirability effect (Neuman, 2000) may have been present because the researcher had been a casual teacher at the case study school and had taught the German students on one occasion.

3.9. Conclusion

This chapter has provided a detailed explanation of the methods evident in this study. The researcher sought to design a study that allowed for a comprehensive examination of student perceptions through the three methodological tools. The researcher believes that a qualitative approach is most appropriate for this type of innovative pedagogy, as it enables all of the influences present in an online intercultural autonomous interaction to be thoroughly investigated.

CHAPTER 4: Findings

4.1. Overview

This chapter seeks to answer the research question through an analysis of the findings. Detailed profiles of each of the participants, were constructed from pre-task portfolio entries and pre-task interview data. These will serve to illuminate potential factors that could influence the outcome of the project.

4.2. Presentation of student data

In order to answer the Key research question, student data are presented from the following sources:

1. Pre-task portfolio entries
2. Pre-task interviews
3. Post-task interviews

4.2.1. Student profiles from pre-task interviews

Brittany

Brittany is a strong student of French. However, she has no interaction with French speakers. Brittany uses social media apps but only spends an hour a day on her phone, checking Facebook and sending messages. She does not use her phone to learn French but prefers to use her laptop. She enjoys speaking, reading aloud, and reading comprehension. However, she finds writing and listening challenging. Brittany wants to increase her reading and writing skills with HelloTalk, stating that correction from a native speaker is beneficial.

Zara

Zara's passion for learning French has grown since developing a friendship with a French-speaking peer, Marie. This relationship is sustained through Facebook Messenger, with Zara also chatting on Skype or Facetime with Marie when she has to prepare for an assessment. Zara has a friend in Sydney who is learning French and they chat together occasionally in French. She enjoys interacting on social media apps. She is keen to engage on HelloTalk, believing it will provide her with authentic language and help her develop friendships with French speakers. She is fairly confident in her reading and writing abilities. Listening and speaking are challenging as she can't use a dictionary and has less time to reflect.

Keith

Keith speaks German at home. However, most of the family's interactions are in English. His mother is Austrian and his Australian father speaks German. He visits Austria for four weeks biennially to stay with relatives, where he mainly converses in German. Keith prefers to interact in group chats with Facebook Messenger. Although, when he is talking to relatives he uses Skype or Viber. Keith uses the laptop for learning German, although he does read an online Austrian newspaper on his phone. Keith is more comfortable with speaking than writing, because he has always spoken German at home. He wants to develop his writing skills on HelloTalk, in addition to forming friendships with German speakers.

Hunter

Hunter has no contact with target-language speakers. He is a reluctant user of technology and rarely uses his phone. However, he does use Facebook and Facebook Messenger because he feels they do everything he wants and he is familiar with them. He also reads German news via his Newsfeed on Facebook. Hunter considers the internet to be of limited use for learning German but believes that online interaction with a target-language speaker is worthwhile. Hunter is keen to connect with target-language speakers on HelloTalk to polish his conversational skills and increase his vocabulary. While Hunter enjoys writing as it allows him to go back and refine his work, he dislikes writing in German on his laptop and prefers to use pen and paper for writing.

4.2.2. Presentation of student findings from post-task interviews

Each of the four students demonstrated different responses to the task. Thus, each student will be treated as a separate case study, an approach supported by O'Toole & Beckett (2010), who state that, "A case study might even be utterly specific: of a single individual's practice…" (p. 55). The interview excerpts were selected based on their relevance to the post-task interview questions and in relation to answering the research question. Following the structural guide approach suggested by Guest (2012, p. 8), which utilised the post-task interview questions to support the analysis of data, the following areas were explored:

- level of engagement in the online interaction
- useful features of HelloTalk
- how students supported their learning
- how partners supported each other's learning
- evidence of development in language and learning strategies

4.2.2.1. Case Study 1: Brittany

4.2.2.1.1. Level of engagement in the online interaction

Brittany declared that she enjoyed the project and interacted on HelloTalk throughout the summer holidays, fitting it around planned holiday activities. Furthermore, Brittany intended to continue her interaction with one partner after the project.

4.2.2.1.2. Useful features of HelloTalk

Overall, Brittany found the two most advantageous features of HelloTalk to be the correction feature and the translation feature.

"I texted in French and she texted me in English, so, we could correct each other on our own language."

Here, the reader gains some understanding about the power of interacting collaboratively to support mutual learning. Learning is occurring "in collaboration with more capable peers", working in each of their zones of proximal development (Vygotsky, 1978, p. 86).

Brittany also used photos to enhance understanding. Students are easily able to share images and content on HelloTalk, with the possibility of taking photos through the app's interface.

4.2.2.1.3. How students supported their learning

Another simple but effective paralinguistic feature that Brittany incorporated into her interaction were emoticons, explaining their purpose:

"If you were saying something that could be taken a different way you could put a happy emoticon to make sure that the tone is right."

These have been shown to enrich interaction (Hung & Higgins, 2016) and lessen misunderstandings.

Through Brittany writing regularly to her partners, it is also assumed that incidental learning took place. Rodgers (2015), noted that learners of French and Spanish showed evidence of incidental learning in their writing ability over a semester, which emphasises that learning may occur through simply using the language.

4.2.2.1.4. How partners supported each other's learning

According to Brittany, the interactions were bilingual, fostering a bilateral learning experience. Through this approach, the reader is reminded of the salience of 'other-regulation', which can result in increased understanding (Janssen-Sanchez, 2015).

Brittany mentioned that she communicated more often with her partner when they were online at the same time. However, because of the time zones, this mode of communication was less frequent than asynchronous interactions. Sampasivam & Clement (2014) compare asynchronous and synchronous communications and refer to research by Ortega (2009) that shows that the latter is more beneficial for language development owing to the 'real-time demands' (p. 28).

Brittany also reported that "once I'd put up my description in my profile, people just approached me". Having a choice of people with whom to chat, enabled Brittany to find a partner she connected with easily. Allowing students to choose their own partner builds on O'Dowd & Ritter's (2006) idea of "learner-matching" (p. 631) and supports communication.

4.2.2.1.5. Evidence of development in language and learning strategies

Brittany felt that she grew most in her knowledge and understanding of France and its culture. Another area of growth was through meaningful feedback, important so that students understand where they can improve, which is 'assessment for learning' (Hargreaves, 2005).

"She would correct my sentences and if I didn't understand what she'd corrected, I would ask her and she'd explain it to me."

Brittany admitted that she had ameliorated her French but felt that the contact remained superficial and this had frustrated her, asserting that "we didn't really get to know each other properly." This draws attention to the salience of relatedness for wellbeing and motivation (Ryan & Deci, 2000).

Brittany showed that she recognised diversity in France, which indicated growth in the area of intercultural competence (Dervin, 2015). She was not just interested in general responses, wanting to ask, "What's YOUR school like? instead of, what's school like in France?"

Although, Brittany expressed that she had struggled to sometimes clarify what she meant in French, it could be observed that she was engaging in circumlocution (Hung & Higgins, 2016). Additionally, through realising that her partner had incorrectly modified her written expression in French, Brittany, was developing her metalinguistic awareness.

"I said something and she corrected it to something completely different to what I intended to say, but I think I just tried to correct it in French as best I could."

4.2.2.2.   Case Study: Zara

4.2.2.2.1. Level of engagement in the online interaction

Zara enjoyed interacting on Moments, which is a public space for collective interaction, as she enjoyed the assortment of opinions present during group interactions. By using the term 'status' here, Zara is referring to when users post new information to others on social media.

"I found the status REALLY interesting because I would write my status in French and that's a public space, and you'd get people responding in French."

Initially Zara interacted frequently on HelloTalk but her interest waned. This issue of motivation declining when something is no longer novel has been observed in research on learning with mobile technology (Bobb-Wolff, 2010). However, in this case it was when Zara went to France that her zeal decreased.

"At the beginning, I was really enthusiastic about the app but then because I went overseas so my whole enthusiasm just …I'd just be busy."

4.2.2.2.2. Useful features of HelloTalk

Zara gained most from the correction feature and the group interactions on Moments.

"I…like how other people can correct what you're saying, and there's a status thing where you can make statuses and then people just correct it for you, and you can ask opinions."

Zara reported feeling more "comfortable" writing as she used HelloTalk on the bus.

"It wouldn't be an opportunity for me to be able to record myself or listen to other people's recordings."

However, the value of situated learning being fostered by the mobile device is evident here (Melhuish & Falloon, 2010). Zara is able to learn how, when, and where it is most convenient for her.

4.2.2.2.3. How students supported their learning

Developing friendships and broadening her network of French friends was important to Zara, which meant she focused on the information rather than noting down new words.

"I didn't really do anything to support my learning. It was more a friendship sort of thing."

However, when Zara discussed the activities she had engaged in on HelloTalk, it was noted that she was writing and reading in French. Bailly (2011) draws our attention to the fact that students often don't perceive 'fun' activities as learning (p. 126). However, these 'light' or 'fun' activities are, according to Bailly (2011), "a way of simulating immersion in a distant language" (p. 126).

4.2.2.2.4. How partners supported each other's learning

Zara had forgotten that the students had been advised not to use Moments, due to safety concerns. However, Zara's initiative on Moments supported Reinders (2011), who declares that students need to manage their own learning to ensure successful learning outcomes (p. 175). Zara reported learning more from group interactions on Moments.

Zara found the one-to-one interactions less helpful, saying, "I would reply in French and they would reply in English and I wasn't reading French, I was just trying to write it."

She also felt the conversations were superficial, saying, "I wasn't talking to the people for a really long time, it was about two weeks, so, I didn't think it was appropriate to ask personal questions."

Similarly, in a study by Lee (2009), it was observed that students did not want to give feedback to online peers as they felt they didn't know them well enough.

Receiving feedback from her online partners contributed to her development in writing in French.

"They did give me corrections, which I found beneficial because it was okay, well, this is where I'm making mistakes, this is what I've got to do for next time."

Although Zara's fear of making mistakes meant that she was reluctant to write complex sentences.

"I think a lot of kids don't want to make mistakes in their work…and it's quite a public thing, especially if it's a status."

On the positive side, Zara reported that she finessed her writing as she knew a lot of people would be reading it. Over time learners interacting on language exchange websites become less worried about making mistakes (Kozar, 2015, p. 106).

The unique traits of an individual's personality can contribute to a successful language learning exchange. Misunderstandings are part of an online intercultural interaction (O'Dowd & Ritter, 2006), and through their resolution can develop metalinguistic and social-affective skills, which may influence the growth of linguistic capabilities and communicative competence (Sasaki, 2015, p. 122).

In this instance, Zara confused the word 'sauteur' for 'pullover' but her sense of humour eased her potential embarrassment.

"Like putting on a jumper. I did a Google Translate and it said 'sauteur but that means like a person that just jumps [laughs]. So, they were like, 'WHAT'?"

4.2.2.2.5. Evidence of development in language and learning strategies

Zara reported that she would "refine it (her writing) and make sure there's no mistakes" when posting on Moments. An increase in accuracy when posting in a public space has been observed in language-learning research. Certainly, because students would see their work, learners of Spanish and English paid more attention to their writing in an intercultural blog exchange (García-Sánchez, 2012).

Zara had positive interactions with HelloTalk and grew in understanding but stated that, "I would have found HelloTalk more beneficial if I knew that I wasn't going to go to France."

Zara also conceded that the project felt like another school-based task, saying, "I felt it was almost a homework sort of thing". Learners can be resistant to learning with social media if they do not perceive it to be formal learning, so "autonomy and self-direction" need to be introduced slowly (Righini, 2014, p. 91).

Zara emphasised her growth in intercultural skills through interacting with a number of people on Moments.

"I like pitching questions. I feel I got more cultural perspective from actually making statuses, because it's a whole bunch of different opinions instead of one person's opinion."

This illustrates that students are able to broaden their intercultural understanding when engaging with a group of people, recognising that there is diversity of opinion amongst the inhabitants of a country (Dervin, 2015).

4.2.2.3. Case Study 3: Keith

4.2.2.3.1. Level of engagement in the online interaction

Keith struggled finding partners, asserting that "it was hard to find people that had similar interests". In the same way, Kozar (2015) mentions how some students struggle to find a "committed partner" on language exchange websites. Keith stated that, "I messaged quite a lot of people but not many people replied or kept talking for long". However, he did refer to communicating with three or four

partners on a regular basis through the holidays. This suggests that if he got to know someone over a longer period of time, Keith may find it less confronting, saying that, "If you had someone you knew from over there, it might have been easier to hold a conversation".

4.2.2.3.2. Useful features of HelloTalk

Keith was enthusiastic about the built-in correction feature on HelloTalk, making it easy for users to provide and learn from feedback.

"The one (feature) where you could correct what they write and they correct what you write. That was pretty good."

Similarly, increased motivation was noted in a French class where students found that the touch feature made language learning more engaging (Bogiannidis, 2013, p. 71).

4.2.2.3.3. How students supported their learning

Keith discussed how he supported his learning through interacting regularly with partners and using online translating tools.
"I'd mainly just use Google Translate because it was already on my phone."

Owing to the affordances of the mobile phone, Keith had everything he needed to support his interaction.

Keith saw the need to retain what he had learnt. He approached this in the following manner.

"I talked to the people and read over the conversations, and over my mistakes...If there was a word I didn't know I would write it down."

Here, the permanent quality of writing is contributing to "increased mental concentration with input from memory or other sources" (Williams, 2012, p. 322).

4.2.2.3.4. How partners supported each other's learning

Keith and his partner used the correction feature to aid each other in their learning. He also referred to communicating asynchronously, due to time zones. Asynchronous communication affords students time to reflect and respond appropriately. Additionally, Reinders & Hubbard (2013) mention that in synchronous interactions "there is not much extension and not much opportunity to focus on accuracy or complexity" (p. 14). In this way, Keith was able to develop his writing ability.

4.2.2.3.5. Evidence of development in language and learning strategies

When asked how Keith's German had been influenced through the online interactions, he responded with the following statement:

"Probably wider vocabulary. If I didn't know a word to use I would look it up…before I wrote it."

Keith, therefore, saw the need to retain what he had learnt, building on his lexicon over the period of the holidays. He was, thus, developing cognitive and metacognitive strategies as he learnt new vocabulary while reflecting on the written interaction.

4.2.2.4. Case Study 4 Hunter

4.2.2.4.1. Level of engagement in the online interaction

Hunter found that "getting willing participants to help you with learning is very difficult." Furthermore, Hunter referred to the fact that "time zones…kind of stunt communication". Here, he was referring to the fact that he usually interacted asynchronously. Hunter may also have been keener to interact regularly with a partner if he had known them.

"If I were to do a similar task I would rather have the more kind of traditional structure to it, so, you're assigned someone who lives in Germany."

This form of interaction was somewhat confronting for Hunter and Kozar (2015) proposes that e-mail exchanges are "a good 'stepping stone' in language exchange" (p. 109).

4.2.2.4.2. Useful features of HelloTalk

Hunter found the user-friendly features of HelloTalk to be "very similar to a lot of popular social media. Navigating the app is quite simple, which is nice." The benefit of an app specifically designed for language learning is advantageous in fostering learning, with Pollard (2014) seeing a major benefit of social networking apps being in facilitating feedback.

Although, in contrast to the other students, Hunter and his partners did not use the correction feature, with his partners preferring to provide written feedback. Nevertheless, all feedback received would be relevant to each student's level of development as it occurred in the course of a conversation sustained by Hunter and his partner.

4.2.2.4.3. How students supported their learning

Hunter tended to rely on his memory to support his learning, stating that, "If I had a pretty good conversation going then I could retain a lot of the info proposed."

Of the four students, Hunter was the least motivated in interacting on HelloTalk. It could be assumed that his aversion to technology, played a part in his unwillingness to see mobile learning as a valid form of learning. Indeed, Bailly (2011) noted that 'fun' activities can sometimes be devalued by students (p. 176).

4.2.2.4.4. How partners supported each other's learning

Hunter and his partners provided written feedback to each other. This enabled them to develop their understanding of German and to strengthen their communicative ability. Owing to Hunter's understanding of German he was able to better support his partner in learning English.

"I could interpret what they were trying to write and say that back, correct it."

In this instance, Hunter was able to support his partner's language development, and in turn grow in metalinguistic awareness and communicative competence.

4.2.2.4.5. Evidence of development in language and learning strategies

Hunter did not feel he ameliorated his linguistic skills in German, although he did see merit in interacting with young people in Germany.

"It's good to have basic, general conversational German, especially when texting because we haven't done any activities that involved conversation over text in German."

Hunter's lack of perceived progress in the language was a result of him interacting predominantly in English during his conversations. However, Hunter reported growth in intercultural understanding through comparing and contrasting Germany and Australia with his partners. He was potentially able to discuss these elements in greater depth when using English.

"You know, we discussed what was going on in Germany…, what's going on in Australia…"

Hunter attributed his intercultural development to prior knowledge, his overseas experience and the HelloTalk interactions. This finding aligns with observations by Wong & Looi (2011), who affirm how "new information (either intentionally or incidentally) accessed or sensed anytime, anywhere…and within any context" creates a holistic learning experience (p. 2372).

4.3.   Teacher Influence

There were challenges present throughout the project as a result of the teachers' attitudes. Initially, the German teacher was very enthusiastic that her students participate in the project and saw the project as a means of motivating the students. The French teacher agreed to participate in the project to make up numbers because she wanted to support the German teacher. However, as a result of the French teacher being very busy and less enthusiastic about the project, she prevented the researcher from coming in early to run the training sessions and a pilot task. These activities would have provided students with the necessary training and time to practise before the holidays started, which is needed to foster successful communication online (Chun, Kern, & Smith, 2016). Further challenges arose when both teachers were disappointed that none of the students had completed designated written tasks on OneNote. The exercises were set by the teachers and based on the discussion topics for the chat sessions. This appeared to cause the teachers embarrassment and contributed to a defensive approach towards the researcher and the project. The teachers' contribution to the educational outcomes of this project is illustrated by Scarino (2014b) who refers to how teachers' decisions influence "the curricula, programs, and learning experiences" (p. 394). In the area of learner autonomy, research shows that language learning experiences coupled with teacher support in autonomy developed learner motivation over the course of a year (Oga-Baldwin, Nakata, Parker, & Ryan, 2017). The influence of the teachers' attitudes towards both the students and the project highlights that for projects where students are learning autonomously online, teacher support is central for learning to be developed. This is supported by Tudini (2015) who stated that, "Theoretical constructs suggest that to develop students' interactional competence, programmes need to strike a balance between teachers' direct instruction and students' autonomous interaction with expert speaker peers" (p. 1).

4.4.   Summary of student findings

Through the interactions it can be seen that some students supported their learning more substantially than others, with development occurring to a greater extent in those students who actively interacted with their partners. Increased teacher support may have enhanced learner outcomes. However, all students evidenced the beginnings of growth as language learners. This learning was facilitated by the affordances of an app designed for language learning so that students were able to learn individually and in collaboration with their partner through using language learning strategies to increase linguistic and intercultural competence. This highlights that

collaboration is not just about "sharing or transferring ideas", it also allows people to develop new

ideas (Kimmerle, Moskaliuk, Oeberst, & Cress, 2015, p. 125).

CHAPTER 5: Discussion and Recommendations

5.1.   Overview

This thesis is concerned with the examination of the process of learning that has taken place on the app rather than focusing on the product. Research in the field of learning with technology supports this notion (Comas-Quinn et al., 2009). Kimmerle et al. (2015) suggest that viewing the collective and individual learning that takes place with social media requires a process-oriented perspective. The authors describe individual learning as occurring within each person's mind, while "collective knowledge construction" is the process of learning that develops through collaborative group interactions (p. 123). Investigating the process enables a deeper study of not only individual and collective learning, but also the intersection of these two areas.

The theoretical background of this research and the methodology supporting the analysis of data has been explained in the preceding chapters. An analysis of the findings discussed in Chapter 4 will be presented in this chapter.

5.2.   Thematic threads that arose during the analysis

This section discusses the findings in relation to the Key research question:

How do students perceive that writing collaboratively with French- and German-speakers on a mobile language learning application influenced their development as language learners?

In order to answer the research question, three themes were identified from an analysis of the data. It was observed that linguistic development was present but was small compared to personal influences and learning strategies. Developments in the language learner were divided into three areas: 1. personal development; 2. linguistic development; and 3. development of learning and communication strategies.

5.2.1.   Personal development in the language learner

As technology advances, there are an increasing number of mobile applications, which foster connection. This is highly advantageous for language learners, owing to the learning benefits that can arise from collaborating with others, particularly 'more competent others' (Vygotsky, 1978). However, while interaction is at the heart of mobile learning, not all students in this study interacted to the same degree. Through the interactions on HelloTalk, it was noted that autonomy and relatedness appeared to have the greatest influence on students' desire to communicate (Deci & Ryan, 1985). Certainly, the personal development of the learner in the interactions was affected

through motivational influences. These will be examined through a discussion of the following: 1. differences in patterns of interaction; 2. relatedness; and 3. collaboration.

5.2.1.1.   Differences in patterns of interaction

It has been observed in studies that collaboration does not occur easily and some students prefer to work alone (Bogiannidis, 2013; Yang & Xie, 2013). A study by Helm (2015) showed that finding, maintaining and developing a rapport with partners was a significant challenge for some students (p. 211). This issue arose in the study with the two male participants. Granting that gender may not be a contributing factor to the degree of interaction in the study, it is noticeable that both male students struggled initiating and sustaining contact. In contrast, the female participants stated that they had no trouble finding people with whom to chat. Similar differences were observed by Martin (2013), where different patterns of communication were present in the way the female participant communicated with her partner in contrast to the males. This led to Martin suggesting that this may have influenced the varied outcomes from the intercultural interactions and was not related to language competency (pp. 284, 285). Correspondingly, the female students interacting on HelloTalk displayed stronger learning outcomes and engaged in a wider range of interactions online than their male counterparts.

5.2.1.2.   Relatedness

The desire to get to know their partner on a deeper level was a strong theme in the interviews, with students expressing frustration that the interactions were on a superficial level. Similarly, Akbari, Pilot, & Robert-Jan Simons (2015) discovered that relatedness had the greatest influence on learning outcomes in a study examining language learning with Facebook (p. 130), resulting in students wanting to prolong the interaction after the project had ended.

In this study, Brittany reported that she was keen to continue communicating with her partner beyond the project. Certainly, she expressed that she would have preferred to have asked more personal questions. Each of the students in this study wanted to build a deeper connection with their HelloTalk partners.

Mobile learning is an ongoing process; one which is able to support language learning long after the student has completed any formal study of the target language. Developing friendships, which may extend beyond formal schooling can encourage students to continue their language learning. Students need to be motivated to press on with language learning, which according to Dörnyei (2009), "is a sustained and often tedious process with lots of temporary ups and downs" (p. 38). Both female students enjoyed communicating with real people, sharing ideas and learning from

others. The bonds they formed may contribute to their idea of a future image of themselves as language learners, which Dörnyei (2009) terms 'future selves', strongly aligned with language-learner motivation.

5.2.1.3. Collaboration

Collaboration is at the heart of learning (Richards, 2015). Mobile devices allow collaboration to be ongoing. Kimmerle et al. (2015) argue that group interactions can give birth to new ideas, in turn influencing individual learning (p. 125). Collaboration in this study supported students in the negotiation of meaning and in the development of intercultural competence, as discussed below.

5.2.1.3.1. Negotiation of meaning

Through the students and their online partners grappling to understand each other, engaging in the negotiation of meaning, deeper understandings arose. All students discussed how when misunderstandings arose they were able to find a resolution, resulting in growth of metalinguistic awareness and developing communicative competence.

As each member of the online dyad knew the language of the other partner, this facilitated communication and understanding. Hence, understanding the grammatical and syntactical structure of the target language made the online partners' corrections and expressions in English more comprehensible to the Australian students, developing both metalinguistic awareness and critical thinking skills. In turn, these processes support the development of communicative competence, a common outcome from telecollaborative exchanges, as attested in Helm (2015).

The co-construction of knowledge through interacting with the online communities of HelloTalk, contributed to collective and individual learning and culminated in intercultural and linguistic development. Indeed, growth in intercultural competence was nowhere more evident than in the online communities on Moments. This mode of communication appeared to foster intercultural development to a noticeably greater degree, as a result of the diversity of opinions and ideas residing in a broader community of participants.

5.2.1.3.2. Intercultural development

Zara demonstrated a mature understanding in relation to recognising that each individual embodies different beliefs and behaviours. She displayed a different approach to the other students because she was interested in learning about a range of views. Zara believed Moments influenced her intercultural development more than interacting one-to-one online because it was more representative of the diversity of beliefs present in France. Recognising that cultural beliefs and

behaviours vary and learning about these concepts through dialogue are two significant features identifying growth in intercultural competence (Dervin, 2015).

The real benefits of social media will only be evident when participants want to engage readily in the co-construction of knowledge (Kimmerle et al., 2015, p. 133). The authors point to how learners need to share their knowledge with others, to externalise their thoughts, so that ideas can be debated and discussed, which can then lead to internalisation of the individual's learning, re-shaping their prior beliefs and attitudes (Kimmerle et al., 2015).

5.3. Linguistic development in the language learner

Another key area of influence in the study that stimulated language development was through feedback. Enhanced understanding was achieved for all students through receiving feedback that was appropriate to their level of understanding. Sasaki (2015) discusses how receiving feedback during interactions through "modifications of novices' language in the form of recasts, repetitions, clarification requests, or overt error correction" can increase communication skills (p. 115). The following positive outcomes that arose through participating in feedback were observed: 1. a personalised learning experience; 2. willingness to provide and receive feedback; 3. increase in accuracy; and 4. increase in vocabulary. Each of these outcomes influenced linguistic development.

5.3.1. Personalised learning experience

Technology can foster a personalised learning experience. This benefit is magnified when collaborating with another person, as occurred on HelloTalk. Vygtotsky (1978) discusses how children of the same age are not necessarily at the same developmental level (p. 86). He proposes that children need to be working just beyond their capabilities with the help of more skilful others for learning to develop (Vygotsky, 1978, p. 89). The online interactions on HelloTalk illustrated this idea in operation. Certainly, being able to engage in dialogue with target-language speaking peers means students are able to direct their learning path through conversation, which results in stronger communicative competence (Chun, 2011).

5.3.2. Willingness to provide and receive feedback

Each student declared that a favourite feature on HelloTalk was the correction feature. Hattie & Timperley (2007) emphasise the salient role of feedback in learning but warn that not all feedback results in positive outcomes. However, in this project, the students were overwhelmingly positive about the benefits to their language learning gained through feedback. This is in contrast to other

studies, which state that students find giving and receiving peer feedback challenging, although it is more comprehensible to students than teacher feedback (Dippold, 2009, p. 20). Students require explicit instruction on how to provide peer feedback for learning to be ameliorated, especially in online interactions (Jahnke & Kumar, 2014). In a study by Jin (2013) it was found that Chinese students were reluctant to correct their American partner's work, as they desired to form friendships with their partners and did not want to cause offence. To a certain degree, this occurred in this project, where although linguistic development was present it was small in comparison to the desire to build intercultural friendships.

Students in this study had only received a limited amount of training in providing and giving feedback online, and yet, no student referred to having difficulty in receiving or providing feedback on HelloTalk. Indeed, during the interactions on HelloTalk, students sought to develop friendships through engaging in feedback.

5.3.3. Increase in accuracy

Writing online has been shown to increase quality through the use of digital tools and through feedback (Nobles & Paganucci, 2015). Furthermore, Nobles & Paganucci (2015) observed that writing in public spaces, such as on blogs on Google sites, also contributed to greater quality of student writing. Certainly, this was true in the case of Zara emphasising how she perfected her work as she did not want to make a mistake in a public space. However, although her accuracy increased, she was reluctant to use complex structures in French. This supported Lys (2013) who discussed that the trajectory of language development is not linear. In Zara's case, potentially, her fluency and communicative competence was increasing, although her sentences were simple.
Target-language speakers may inhibit students' willingness to take linguistic risks for fear of embarrassing themselves in front of 'expert' others; this is particularly so when the student has a low level of proficiency in the target language. This was noted in a study with a learner of English who preferred interacting with non-English speakers in Australia as they understood his struggles with the language (Edwards & Roger, 2015). However, as his English improved, he could speak confidently with target-language speakers in most situations. As Zara was a beginner-level student of French, this may have contributed to her nervousness about making mistakes with target-language speakers.

In Edwards & Roger's (2015) study, they observed that linguistic self-confidence increases over time. linguistic self-confidence has a significant role in students' desire to interact (MacIntyre, Clement, and Dörnyei, 1998). Therefore, choosing different types of contact to enhance student linguistic self-confidence is important, depending on their level of proficiency (Sampasivam & Clement, 2014, p.

28). As students' language skills grow, so too does their linguistic self-confidence and ability to interact in more communicatively-challenging situations.

All of the students in the project reported an increase in accuracy through using the correction feature. However, written explanations from partners also contributed to language development, possibly providing students with a deeper understanding of the target language. Feedback in the written form can be more conducive to students' retention of corrections and explanations, as discussed in Williams (2012), with students in this project reporting how they were able to read over their corrections, noting them down and reflecting on where they had made mistakes or could have expressed themselves in a better way.

5.3.4. Increase in vocabulary

Vocabulary acquisition alone does not ensure language development. Language learning is a social process and there are tangible benefits when interacting with target-language speakers (Nunan & Richards, 2015, pp. xiv). When language learning does not occur in interaction with others, problems can arise, as occurred in a study by Yang & Xie (2013) who observed that while learners of Chinese understood the meaning of idioms, they could not use them in the appropriate context. Language learning is, thus, best supported when learnt in social interaction, which can result in enhanced understanding (Janssen-Sanchez, 2015, p. 14).

Each of the students interacting on HelloTalk, to a lesser or greater extent, affirmed their growth and development in the area of furthering their understanding and enhancing their vocabulary development. They were then able to integrate this into their future written discourse. Swain (2005) discusses how deep language learning really only takes place when students actively use the language, in either speaking or writing. Being able to use the feedback from their partners during an ongoing interaction means the students were able to include what they were learning while they were learning.

Personal written feedback from her partner enabled Brittany to understand the nuances evident in the lexicon of a language. Indeed, many positive outcomes can arise through interacting with target-language speakers (Kozar, 2015).

Cognitive and metacognitive growth was observed when Keith described his learning experience on HelloTalk, referring to amassing a 'wider vocabulary', which he wrote down to integrate into future work. Hunter also felt that the interactions contributed to his 'basic, general conversational German', which would have introduced vocabulary into his lexicon that could not be gained from textbooks or classroom-based tasks.

5.4. Development of learning and communication strategies in the language learner

Dörnyei (2009) argues that learners need to have a future idea of themselves as language learners. Without this, interest in language learning can wane. Strategies are central to reaching the goal of achieving a future self (Oyserman, Bybee, & Terry, 2006). In order for students' language development to continue, strategies that are developed through online interactions can equip students to move towards their goal of achieving a possible or future self (Dörnyei, 2009). The development of language learning strategies and communication strategies supported student communication on HelloTalk. The following learning strategies were identified during the interactions. These were cognitive and metacognitive strategies. The communication strategies that were noted included pragmatic strategies and the use of circumlocution and emoticons. Each of these strategies are discussed below.

5.4.1. Language learning strategies

5.4.1.1. Cognitive strategies

Online communication is situated within a socio-constructivist framework, and, hence, results in the growth of learning and cognitive development through collaboration (Murphy, 2008, p. 84). The utilisation of cognitive strategies was observed in this project through students' approaches to learning vocabulary, which was supported by the written format serving as a form of memory through its permanence (Swain, 2005; Williams, 2012). Despite the fact students attested that they could have expended more effort in developing their language skills, their discussions about the approaches they used to increase accuracy in both grammar and syntax and in developing vocabulary, confirmed that some language development was present.

5.4.1.2. Metacognitive strategies

Reflection or metacognitive skills play a key role in learning and need to be central in the learning process, according to Reinders (2011, p. 183). Thus, not only are metacognitive strategies necessary to ascertain relevant learning strategies and resources, but are also integral in discovering appropriate "learning opportunities" (Murphy, 2008, p. 85). Metacognitive strategies were demonstrated by the students during the project and were supported through the interactions and features of the app. Reflection was evident in the following elements:

5.4.1.2.1. Feed forward

In order for feedback to be effective and worthwhile, one key principle is that students are able to use it in their future work. In order to do so, students need to reflect on how they will utilise any feedback received. Hattie and Timperley (2007) maintain that 'feed forward' needs to provide instruction and support for future work. Indeed, the partner's responses served this role through a dialogic approach. Feedback received through dialogue fostered reflection, allowing the students to seek clarification when they did not understand corrections their partners had made. Certainly, each student affirmed the potential of feedback in allowing for reflection on the corrected written form.

5.4.1.2.2. Writing

The correction feature on HelloTalk means that feedback on the app can function as a source of memory (Schoonen et al.,2009), meaning students can read over their work at a later stage (Kuiken & Vedder, 2011). Being able to re-read written texts stimulates deeper learning, as was observed with Kevin who not only read over his conversations but also wrote down new words, which he would then be able to integrate into subsequent work. Strong metacognitive skills were observed in the case of Zara, in particular, who was very deliberate in her desire to progress in her French, reflecting on each of the corrections, making sure that she would not repeat the same mistakes.

5.4.1.2.3. Metalinguistic awareness

The development of metalinguistic awareness is a significant component of metacognition as students reflect on languages. Communicating on HelloTalk with target-language speakers contributed to students' understanding of their own language and the target language. Research also demonstrates that comparing the target language and one's native language demonstrates high levels of metalinguistic awareness and contributes to language development (Sasaki, 2015, p. 122). There was evidence of each of the students engaging in metalinguistic awareness in this study.

5.4.2. Communication strategies

Being able to communicate effectively requires learners to develop pragmatic competence, and is an important part of intercultural learning (Eisenchlas, 2011, p. 52). Pragmatic strategies were evident through students engaging in negotiation of meaning and through sustaining and maintaining communication with their partners. Although, the male students found fostering interactions socially challenging, no student reported any problems arising during the online interactions. The female students were very positive about their connections with their partners, being careful not to give offence to their partners.

Being able to participate in 'basic, general conversational German' was a positive outcome of engaging in the authentic use of language and was discussed by Hunter. In the same way, Eisenchlas (2011) discusses how real-life interactions are necessary to provide students with the ability to communicate, to "supplement" not "substitute textbooks" (p. 59).

However, online communication does not always run smoothly (O'Dowd & Ritter, 2006) and requires the development of strategies to support interaction (Hung & Higgins, 2016). Within this project, it was noted that two communication strategies were employed: These were the use of both circumlocution and emoticons.

5.4.2.1.   Circumlocution

Circumlocution is an important communicative, compensatory strategy (Hung & Higgins, 2016, p. 908). This strategy is often utilised by language learners who do not know specific words and phrases but are still able to describe what they mean. This was noted in Brittany discussing how she was able to explain what she wanted to say even though her French is limited. This highlights the salience of authentic communicative situations in building students' communicative competence.

5.4.2.2.   Use of emoticons

Hung & Higgins (2016) emphasise how using paralinguistic measures can "facilitate problem-free discussion and keep the conversation flowing" (p. 911). Paralinguistic features are outside the lexical element of communication and can include body language. However, when interacting online, body language is absent (Smith, 2003). Emoticons are a simple way of ensuring that when typing a message to someone, it is clear what is intended. Use of this paralinguistic measure was evident in interactions online between Chinese and English learners (Hung & Higgins, 2016). Brittany only used this strategy once in her interactions to ensure that the 'tone' was what she intended. Interestingly, none of the other students reported using emoticons and it could be of interest to explore reasons why some students resort to the use of emoticons and others do not.

5.5.   Critique and summary of discussion

It is valuable to remember that learning with social networking applications is best examined as a process (Kimmerle et al., 2015), rather than just focusing on the outcomes. The project with HelloTalk was an introduction to the process of interacting online beyond school, not only for the students but also for the teachers. Student development was noted in the personal arena, and also through an increase in linguistic competence and strategy adoption.

Although, there were issues that influenced the outcomes of this study, there was evidence of some learner development in these four students through interacting online with target-language speaking peers. This project offered a holistic approach to learning and students were beginning to develop skills necessary to navigate the process of language learning beyond the classroom.

CHAPTER 6: Conclusion

This chapter begins with two short overviews, which discuss the purpose of this research and the background literature that influenced this study. The methodology is then reviewed. Discussion of the data methods and the findings that were discovered through its analysis then follow. The chapter finishes with a summary of conclusions based on the study results and leads into a discussion on the limitations. It concludes with recommendations and suggestions for future research.

6.1.   Overview of purpose

This study wanted to learn how secondary school-aged students interacting autonomously on a mobile app are influenced, if at all, in their development as language learners. The methodological approach chosen to explore this area was a qualitative case study. This project acknowledged the limited existing research at the intersection of the fields of autonomous language learning and learning with technology beyond school.

The main purpose of this research was to gain insight into how, if at all, student language learning strategies supported their language development in an autonomous setting during the long school holidays.

6.2.   Overview of Literature Review

Chapter 2 (Literature Review) referred to research from two main fields, language learner autonomy and learning with technology beyond the classroom. It drew attention to the complementary nature of these fields in supporting authentic language learning.

The first part of the literature review discussed the theory supporting the study, sociocultural theory in language learning (Lantolf, 2011). A brief discussion of communicative competence was provided. Research drawing from sociocultural theory was reviewed to examine the literature in the fields of learner autonomy and learning with technology. Four areas of significance were identified. The first area addressed the salience of authentic language experiences and resources in developing communicative competence. The next area identified the centrality of the teacher role to enhance learning outcomes, which led into the significance of student training. This section concluded with reference to the importance of writing, with a focus on how language learning benefits are further increased through writing collaboratively. These four areas informed understanding of how to support an autonomous online interaction when learning beyond school.

The review concluded with a discussion of gaps in the research. In order to further student development as language learners, new research-based learning opportunities are needed that provide students with learning experiences unavailable in the classroom. This study seeks to make a contribution, through this small case study illustration, by furthering understanding of both students and teachers involved with language learner autonomy beyond the classroom and learning with technology.

6.3.   Review of methodology

A qualitative approach to this study provided insights into the data collected from the responses to the research question. A case study enabled the researcher to explore each of the elements of influence on the four students. A range of data collection methods was used to enable triangulation of the data. These included, semi-structured pre- and post-task individual student and teacher interviews, and student pre-task reflective portfolio entries.

The case study school was selected as it offered three languages in the senior secondary school. The teachers and students were given pseudonyms to protect them from being identified in the research.

Data was collected throughout the project. It was collected at the end of the second academic semester of 2016, after the student reflective portfolio entries and the pre-task student interviews were completed. Data collection finished at the beginning of the first academic semester of 2017 after the post-task student interviews. Pre- and post-task interviews were audio-recorded and the texts transcribed.

6.4.   Treatment of data

Applied thematic analysis (Guest et al., 2012) was used to analyse the data collected from the pre- and post-task student and teacher interviews.

The student pre- and post-task interviews were organised into themes and sub-themes as they related to the Key research question. The pre- and post-task student interviews were transcribed and analysed. The pre-task reflective portfolio entries were analysed and compared with interview data. This allowed for triangulation of the data.

6.5. Summary of findings

This chapter analyses the findings of teacher and student perceptions to address the research question in this study. In response to the Key research question, the analysis of data from student pre-task reflective portfolio entries and interviews, and post-task interviews identified areas that showed learner strategy development, which contributed to the beginnings of student development in linguistic and intercultural competence.

The analysis showed that participant language learners demonstrated this development through:

- motivation developed through building friendships
- the user-friendly features of HelloTalk
- supporting their own learning by developing strategies
- collaborating with their partner
- development of strategies during the interaction, which promoted linguistic and intercultural growth

6.6. Conclusions

This section offers a short discussion of conclusions drawn from the findings. It was observed that students exhibited development as language learners in both linguistic and intercultural competence, and development of learning and communication strategies. Through analysing the data, it was discovered that student development as language learners could be split into three sections: personal development, linguistic development, and strategy development. The development of strategies to support student learning on this app and beyond, were a large part of the language learning experience for the students.

6.7. Limitations of the study

There were several limitations evident in this study. Although it is not possible to generalise from this research because it is a small case study with only four participants, there are lessons that can be taken from the study. The different approaches taken by each student when interacting on the app may be useful for providing some insight into how learners learn beyond school, including the challenges they face. A further limitation was evident in that the data are all self-reported.

An additional limitation is that the study occurred over a short period of time. Unfortunately, due to time constraints, students received limited training in preparation for learning on the mobile app. This influenced the outcomes of the study. However, if online learning is to be viewed as process-oriented rather than product-oriented (Kimmerle et al., 2015), the emergence of learner strategies

was observed through the process of interacting, even within such a short timeframe. Through the development of language learner strategies, the beginnings of linguistic and intercultural competence were observed.

Other limitations relate to the researcher element. Researcher bias could be present in the analysis of the findings as the researcher is a languages teacher who herself has experienced collaborative language learning with technology. Researcher desirability effect (Neuman, 2000) may also have influenced students' responses. Guest et al. (2012) discuss the fact that "in applied thematic analysis we assume that there will be a researcher effect on the data" and points to the importance of discussing that impact (p. 50). The researcher, thus, declares that the following elements limit researcher bias in this project. First, reflexivity is present in the project because the researcher is aware of potential partiality and was methodical in the analysis of data. Secondly, negative-case sampling in the interview questions identified elements that could influence the outcomes of the online interaction. Thirdly, the researcher's supervisor functioned as a 'critical friend'. Finally, triangulation of the data served to strengthen the analysis arising from the findings.

6.8.   Recommendations and further research

Based on the outcomes of this research, I make several recommendations to enhance autonomous language learning beyond school with technology. These are as follows:

The first recommendation is to educate parents in the aims of the project when working with school-aged students, emphasising the value of extending learning outside school. Online safety is of concern when working with students under the age of 18 and some parents did not provide consent in this case study. However, although interacting online poses safety risks, owing to the design of the study, no safety issues arose during any of the interactions.

The second recommendation is that there is a need to start slowly when learning autonomously and to conduct the project over a longer period to maximise learning benefits. This is essential when students and teachers have never been involved in learning autonomously with technology.

The third recommendation is to allow students some choice over their topics of discussion and their preferred mode of communication. As enjoyment of group interactions (in Zara and Keith) was noted to influence student frequency of interaction, then fostering choice could lead to increased motivation and willingness to interact.

The fourth recommendation relates to allowing students to practise all their language skills. None of the students used the audio feature, yet, this has potential to increase students' oral and aural

abilities. Introducing the project over a longer period would allow students to build confidence in writing and to develop their relationship with their partner. This increased confidence could lead to students using the audio or video features available on the app.

The final recommendation draws attention to the vital role of teachers, discussed in Chapter 2 (Literature Review) and Chapter 4 (Findings). It is evident from this study that while learning autonomously is worthwhile, it can be challenging for students and teachers. The role of the teachers cannot be underestimated. In this project, as in other studies (Chun et al., 2016; Kramsch & Ware, 2005; Moloney, 2013) teacher influence played a key part in the outcomes of the project.

Suggestions for future research:

1. If, as shown, autonomous language learning beyond school has potential in developing learner strategies, there is a need to investigate further the elements of effective pedagogy that best support autonomous learning experiences, particularly in relation to the challenges faced in this project.

2. It would be useful to conduct a comparative study, examining schools with different social and demographic profiles. Including two Asian languages to identify differences and similarities in learning beyond school with these languages, would also be valuable.

3. As learning autonomy requires practice and support over a sustained period (Barrs, 2012), a longitudinal study of language learner development through social networking apps would be worthwhile, tracing learner development from Year 10 to Year 12. Year 10 involves typically a lighter workload for students and the generated motivation may contribute to them choosing to continue their language study into Year 11 and 12.

4. Motivation is important for students to continue with their language study and to develop strong skills. Dörnyei (2009) emphasises that students need to have a future notion of themselves as language learners if they are to persevere with language learning (p. 38). An in-depth case study could examine the influence of interacting on mobile apps beyond school on, either (a) students' development of a future self; or (b) the development of linguistic self-confidence its role in increasing communicative competence (Clèment, 1980; Clèment & Kruidenier, 1985).

The study makes a positive contribution to language learning by offering a model of learner autonomy beyond the classroom for teachers and students. It also notes the challenges, supporting Kern's (2014) statement that writing on the Internet is not always straightforward but has much potential. This small case study hopes to encourage the adoption of approaches in language pedagogy that extend language learning beyond the classroom.

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APPENDICES

Appendix A: Student consent form

Department of Educational Studies

Faculty of Human Sciences

MACQUARIE UNIVERSITY   NSW   2109

Phone: +61 (0)2 9850 8704

Fax: +61 (0) 9850-8674
Email: education@ mq.edu.au

Participant Information and Consent Form STUDENTS

Name of Project: Extending the ability to communicate effectively via an online mobile application: Connecting Australian senior secondary school German and French learners with target-language speaking peers to increase language learner development and influence teacher pedagogy.

You are invited to participate in a study of learning German OR French through an online phone application. The purpose of the study is to examine how interacting on a mobile application, HelloTalk (http://www.hellotalk.com/#en), with German OR French speakers can support the development of writing skills.

The task entails supervised and supported use of HelloTalk with the principal's and teacher's permission. You will connect with 2 to 3 regular partners via HelloTalk and a structured framework of language topics will be provided to guide discussion with your partners. The task starts at the end of term 4 and continues through the Christmas holidays, allowing you to develop your language skills in preparation for Year 12.

To enhance safety during the interaction on the application, there are various safety features in place. The following link outlines HelloTalk's privacy policy, designed to protect users http://www.hellotalk.com/privacy_policy.html. The following features will increase safety: (1) An age filtering policy for users under the age of 18 exists, matching users of the same age, (2) Users can block or report people, (3) The app filters inappropriate images, reporting people who share these online, also offering pop-up warnings during conversations, (4) Images and links cannot be sent until learning partners have interacted 5 times, (5) Participants can restrict people who can find them by gender, including hiding themselves from the general search platform. You will be provided with a training session focusing on online safety and are advised to only connect with the same gender. The co-investigator and teacher will guide you through the entire project and you can contact them at any time, should an unsuitable situation arise.

The study is being conducted by Dr Robyn Moloney, Senior Lecturer in the Department of Educational Studies, Macquarie University (robyn.moloney@mq.edu.au) and Mrs Joanne Downing (joanne.downing@hdr.mq.edu.au). The study is being conducted to meet the requirements of the Master of Research degree, under the supervision on Dr Robyn Moloney.

If you decide to participate, you will be asked to participate in 1 pre-task interview (20 minutes) in late November 2016, and one post-task interview (20 minutes) in February 2017, and to give consent for your student portfolio to be used for research data. The interviews will be conducted by Mrs Joanne Downing and will occur at school. The interview sessions will be audio-recorded. You will be offered a cinema ticket for participating in the study.

Any information or personal details gathered during the study are confidential, except as required by law. No individual will be identified in any publication of the results. (Only the researcher, Mrs Joanne Downing, will have access to the data.) A summary of the results of the data can be made available to you on request after the thesis is submitted in April 2017.

Participation in this study is entirely voluntary: you are not obliged to participate and if you decide to participate, you are free to withdraw at any time without having to give a reason and without consequence.

Department of Educational Studies

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I, …………………………………………………………. *(participant's name)* have read *(or, where appropriate, have had read to me)* and understand the information above and any questions I have asked have been answered to my satisfaction. I agree to participate in this research, knowing that I can withdraw from further participation in the research at any time without consequence. I have been given a copy of this form to keep.

Participant's Name:
  (Block letters)

Participant's Signature: _____   Date:_____

Investigator's Name: ROBYN MOLONEY

Investigator's Signature: _____   Date:

The ethical aspects of this study have been approved by the Macquarie University Human Research Ethics Committee. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Director, Research Ethics & Integrity (telephone (02) 9850 7854; email ethics@mq.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

Appendix B: Parent consent form

Department of Educational Studies
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Participant Information and Consent Form PARENTS

Name of Project: *Extending the ability to communicate effectively via an online mobile application: Connecting Australian senior secondary school German and French learners with target-language speaking peers to increase language learner development and influence teacher pedagogy.*

You are invited to give consent to your child/ward to participate in a study of learning German OR French through an online phone application. The purpose of the study is to examine how interacting on a mobile application, HelloTalk (http://www.hellotalk.com/#en), with German OR French speakers can support the development of writing skills.

The task will entail supervised and supported use of HelloTalk with the principal's and teacher's permission. Students will connect with 2 to 3 regular partners via HelloTalk and a structured framework of language topics will be provided to students to guide their discussion with their partners. The task will start at the end of term 4 and will continue throughout the Christmas holidays, allowing students to develop and maintain their language skills in preparation for Year 12.

To enhance safety during the interaction on the application, there are various safety features in place. The following link outlines HelloTalk's privacy policy, designed to protect users http://www.hellotalk.com/privacy_policy.html. The following features on the application will increase safety: (1) An age filtering policy for users under the age of 18 and HelloTalk matches them with users of the same age, (2) Users can block or report people, (3) The app filters inappropriate images, reporting people who share these online and the site contains warnings that pop up during conversations, (4) Images and links are unable to be sent until learning partners have interacted at least 5 times, (5) Participants are able to restrict those people who can find them by gender, including hiding themselves from the general search platform if needed. The students will be provided with a training session focusing on online safety and will be advised to only connect with the same gender. The co-investigator and teacher will be guiding students throughout the entire project and are able to be contacted by students at any time, should an unsuitable incident arise.

The study is being conducted by Dr Robyn Moloney, Senior Lecturer in the Department of Educational Studies, Macquarie University (robyn.moloney@mq.edu.au) and Mrs Joanne Downing (joanne.downing@hdr.mq.edu.au). The study is being conducted to meet the requirements of the Master of Research degree, under the supervision on Dr Robyn Moloney.

If you decide to give consent for your child/ward to participate, your child/ward will be asked to participate in one pre-task interview (20 minutes) in late October/early November 2016, and one post-task interview (20 minutes) in February 2017, and to give consent for their student portfolio to be used for research data. The interviews will be conducted by Mrs Joanne Downing and will take place at school. The interview sessions will be audio-recorded. Students will be offered a cinema ticket for participating in the study.

Any information or personal details gathered in the course of the study are confidential, except as required by law. No individual will be identified in any publication of the results. (Only the researcher, Mrs Joanne Downing,

will have access to the data.) A summary of the results of the data can be made available to you on request after the thesis is submitted in April 2017.

Participation in this study is entirely voluntary: your child/ward is not obliged to participate and if they decide to participate, they are free to withdraw at any time without having to give a reason and without consequence.

Department of Educational Studies

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MACQUARIE UNIVERSITY   NSW   2109

Phone: +61 (0)2 9850 8704

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Email: education@ mq.edu.au

I, …………………………………………………………… *(Parent's/Carer's name*) have read *(or, where appropriate, have had read to me)* and understand the information above and any questions I have asked have been answered to my satisfaction. I agree give consent to my child/ward……………………………………………………. *(Child/Ward's name*) to participate in this research, knowing that he/she can withdraw from further participation in the research at any time without consequence. I have been given a copy of this form to keep.

Parent's/Carer's Name:_____

  (Block letters)

Parent's/Carer's Signature: _____   Date:_____

Investigator's Name:_____

  (Block letters)

Investigator's Signature:_____Date:

The ethical aspects of this study have been approved by the Macquarie University Human Research Ethics Committee. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Director, Research Ethics & Integrity (telephone (02) 9850 7854; email ethics@mq.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

Appendix C: Student reflective portfolio questions

1st Portfolio Entries prior to Commencement of Project

1. Setting Goals, reflecting on learning processes, thinking about learning strategies:

   a. *What do I want to achieve?*

   b. *What are my strengths and capabilities? What am I good at?*

   c. *What do I need to work harder on?*

2. Methods I use to learn languages:

   a. *How I learn words:*

   b. *How I check my own (written) texts and develop (my writing skills):*

   c. *How I learn grammar:*

2nd, 3rd, 4th Portfolio Entries

My Language Learning Diary:

In the past week, I have learnt:

   a. *Topics*:

   b. *New vocabulary:*

   c. *New expressions*:

Reflecting on learning goals:

   a. *How well did I achieve my goals?*

   b. *What should I change?*

   c. *Deepening your learning: What shall I do, so that I can repeat(re-use) and consolidate what I have learnt?*

   d. *Experiences with German culture: Some impressions during the first week. Reflect on surprises, misunderstandings, differences, interesting things, difficult things, enriching things...Give two examples.*

   e. *My next learning goal:*

Appendix D: Student pre-task interview questions

In this interview, I want to talk to you about your feelings about learning German/French generally, and I am also interested in finding out how you learn German/French when you are not at school. I'm going to break this interview into three sections. In the first section, I am just interested in learning a little about your language background. In the second section, we'll explore how you use technology, including how you use technology to help you learn German/French, then we'll finish up discussing the aspects of German/French that you find most engaging or most challenging.

First Section

1. Have you got anyone in your family who speaks German/French?

2. Have you ever been on exchange to Germany/France? When? For how long? How often?

3. Are you able to interact with native speakers when you are not at school? Where does this occur? Do you do this regularly?

Second Section

I'm interested now in learning about your experiences with technology, and whether you use technology for learning German/French.

4. Do you have a mobile phone?

5. What kind of apps do you use?

6. How much time do you spend on your phone each day?

7. How often would you interact with others on the phone?

8. Tell me about the apps you think are best or are most popular for interacting with others.

9. How much time would be spent learning German/French with your mobile device?

10. How regularly do you interact in German/French online?

    a. Which application did you use to do so?

11. How helpful do you feel technology is in helping you with learning German/French?

Third Section

I'm going to ask you now about what you enjoy or don't enjoy about learning German/French.

12. Let's begin with what is enjoyable for you about learning German/French.
    Now let's talk about what you don't enjoy about learning German/French.

13. In which of the 4 skills, reading, listening, reading and writing, do you feel most confident when expressing yourself in German/French?

14. Do you enjoy writing in German/French?

15. What do you find most challenging about writing in German/French?

16. What are you hoping to get out of this task?

Appendix E: Student post-task interview questions

This interview is interested in learning about how you learnt French/German through interacting on HelloTalk. **Section 1** is interested in how the HelloTalk app supported your learning; **Section 2** will focus on how your partners supported your learning; and, **Section 3** consists of finding out whether your language skills and cultural knowledge changed through this online interaction.

Section 1:

1. Did you enjoy the project?
2. Which features of HelloTalk did you find useful for language learning? Which did you use most frequently?
3. How did you use emoticons/emojis in your interaction?
4. How did you support your learning on HelloTalk, i.e. writing down new words or phrases?
5. Did you use other apps with HelloTalk to support your learning, either during or after the interaction? If so, for what purpose?
6. How much of your interaction with your partner on HelloTalk was synchronous/asynchronous? Why did you choose to interact this way?

Section 2:

7. How many partners did you interact with?
8. How regularly did you write to your partner/s in French/German?
9. Describe how your partners supported your learning.
10. How did interacting with a French/German speaker influence your writing in French/German?
11. Were there any misunderstandings when writing in French/German to your partner? If so, how did you resolve these?

Section 3:

12. In which areas of French/German have you noticed any change through this online interaction? Describe these changes. (a) Reading (b) Writing (c) Speaking (d) Listening (e) Intercultural Development (f) Vocabulary, Syntax, Grammar
13. Which cultural attitudes and behaviour did you notice, which you can perhaps now understand, or are still puzzled over?
14. Has learning about the French/German culture changed the way you think about Australian culture?
15. Were there elements of the project that you found difficult or tedious?

If you were to do a similar task again, would you alter anything?

Appendix F: Ethics Approval Letter

Office of the Deputy Vice-Chancellor (Research)
 Research Office
Research Hub, Building C5C East
Macquarie University
NSW 2109 Australia
 T: +61 (2) 9850 4459
http://www.research.mq.edu.au/
ABN 90 952 801 237

 7 November 2016

Dear Dr Moloney

Reference No: 5201600777

Title: *Extending writing ability via an online mobile application: Connecting Australian secondary school German learners with German speaking peers to develop writing skills*

Thank you for submitting the above application for ethical and scientific review. Your application was considered by the Macquarie University Human Research Ethics Committee (HREC (Human Sciences & Humanities)).

I am pleased to advise that ethical and scientific approval has been granted for this project to be conducted by:

• Macquarie University

This research meets the requirements set out in the *National Statement on Ethical Conduct in Human Research* (2007 – Updated May 2015) (the *National Statement*).

Standard Conditions of Approval:

1. Continuing compliance with the requirements of the *National Statement,* which is available at the following website:

http://www.nhmrc.gov.au/book/national-statement-ethical-conduct-human-research

2. This approval is valid for five (5) years, subject to the submission of annual reports. Please submit your reports on the anniversary of the approval for this protocol.

3. All adverse events, including events which might affect the continued ethical and scientific acceptability of the project, must be reported to the HREC within 72 hours.

4. Proposed changes to the protocol and associated documents must be submitted to the Committee for approval before implementation.

It is the responsibility of the Chief investigator to retain a copy of all documentation related to this project and to forward a copy of this approval letter to all personnel listed on the project.

Should you have any queries regarding your project, please contact the Ethics Secretariat on 9850 4194 or by email ethics.secretariat@mq.edu.au

The HREC (Human Sciences and Humanities) Terms of Reference and Standard Operating Procedures are available from the Research Office website at:

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research _ethics

The HREC (Human Sciences and Humanities) wishes you every success in your research.

Yours sincerely

Dr Karolyn White

Director, Research Ethics & Integrity,

Chair, Human Research Ethics Committee (Human Sciences and Humanities)

This HREC is constituted and operates in accordance with the National Health and Medical Research Council's (NHMRC) *National Statement on Ethical Conduct in Human Research* (2007) and the *CPMP/ICH Note for Guidance on Good Clinical Practice*.

Details of this approval are as follows:

Approval Date: 7 November 2016

The following documentation has been reviewed and approved by the HREC (Human Sciences & Humanities): Documents reviewed	Version no.	Date
Macquarie University Ethics Application Form	Revised application received 04/11/2016	
Response addressing the issues raised by the HREC	Received 04/11/2016	
Participant Information and Consent Form - Parents	1	04/11/2016
Participant Information and Consent Form - Students	1	04/11/2016
Participant Information and Consent Form - Teacher	1	04/11/2016
Pre-Task Interview Questions - Teacher	1	05/10/2016
Pre-Task Interview Questions - Students	1	05/10/2016
Post-Task Interview Questions - Teacher	1	05/10/2016

Post-Task Interview Questions - Students	1	04/11/2016
Reflective Portfolio Questions	1	05/10/2016
Appendix: Task Pedagogy	1	05/10/2016