

THE EFFECTS OF A VIRTUAL EXCHANGE ON LANGUAGE SKILLS AND
INTERCULTURAL COMPETENCE

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ABSTRACT

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This dissertation explores the effects of a cross-cultural, cross-lingual virtual exchange on students' foreign language skills and intercultural competence. Specifically, the dissertation investigates the effects of students' participation in a twelve-week telecollaborative exchange on their use of syntactic complexity in foreign language writing as well as their self-assessment and demonstration of intercultural competence.

The basis for this study was a telecollaborative project between a third-year German class at a US university and an advanced English class at a German high school. The study combined the use of one-on-one, group-on-group, as well as reflective computer-mediated communication tools, and aimed at investigating cultural and linguistic competence as impacted by an electronic exchange. At the heart of the study were 19 tandem e-mail partnerships between the American learners of German and the German learners of English. The partners each wrote two e-mails per week in their target languages discussing pre-assigned cultural topics. In addition, both classes met for two class-to-class videoconferences in which they discussed cultural topics of their own interest. One of them was held in German and one in English. Additionally, there was a reflective component to the study. The American students kept a bi-weekly blog in which they reflected on their learning experience, exchanged ideas and learned from and with each other.

The research questions explored the effects of the virtual exchange on the American students' interest in cultural learning, use of syntactic complexity in their writing, self-assessment of intercultural competence, and development of intercultural competence. Based on sociocultural theory (Lantolf, 1994), pushed-output hypothesis (Swain, 1995) and Fantini's (2000) model of intercultural competence, the analysis included qualitative and quantitative measures and incorporated a variety of data sources including e-mail transcripts, blog transcripts, student essays and pre- and post-surveys.

The results showed that there was no statistically significant effect of the exchange on students' interest in cultural learning, but that this was high both before and after the exchange. Additionally, the results revealed that the students produced texts with greater syntactic complexity at the end of the exchange as compared to the beginning of the exchange. The students' self-assessment of intercultural competence varied and there were no significant changes. However, the qualitative analysis showed several interesting patterns in the development of intercultural competence, for example the development of cross-cultural awareness and strategies for successful cross-cultural communication. In addition, the analysis revealed a connection between the amount of words written and the overall effects of the virtual exchange on students' intercultural competence and syntactic complexity.

Für meine Zwillingsschwester Christiane.
Und für Robert, dessen Unterstützung unersetzlich war.

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CHAPTER 1

INTRODUCTION

1. Introduction

In this dissertation I explore the effects of a twelve-week cross-cultural virtual exchange between American college and German high school students on the students' language skills and intercultural competence. Apart from language and especially communication skills, intercultural competence has been acknowledged as one of the most important goals for foreign language instruction in the 21st century, and finding ways to foster this competence is of great importance. By investigating the potential of cross-cultural e-mail exchanges for fostering intercultural competence, I wish to contribute to ongoing discussions about how to incorporate the development of intercultural competence in the foreign language classroom.

With the American students as the focal group of this study, I explore the impact of the cross-cultural e-mail exchange on their intercultural competence, their written language skills, as well as their interest in cultural learning. I aim to show the development of intercultural competence throughout the exchange and am exploring a variety of data to analyze my research questions, including e-mail transcripts, class essays, blog entries, video-taped videoconferences, surveys, and in-class discussions. Through this triangulation of data I hope to develop a nuanced picture of the impact of a telecollaborative project on students' intercultural competence, cultural learning interest and language skills. I further analyze the impact of this e-mail exchange on the German students by briefly investigating whether their interest in cultural learning and their self-assessed intercultural competence has been impacted by the exchange.

In this chapter I will give the background and rationale for my dissertation project. I will then introduce my research questions and hypotheses before indicating the importance of the

study. Further, I will define the most important terms for the study and give an outline of the rest of the dissertation.

1.1. Background

The world is becoming more and more globalized and as a result nations are becoming increasingly diverse (Block & Cameron, 2002). In order to communicate successfully and efficiently not only abroad, but also in one's own diverse community, intercultural competence is one of the key skills needed for every day communication in the 21st century. In our own communities, we are surrounded by people from diverse cultural and language backgrounds and we need specific skills to interact effectively with others who may not share our language, worldviews, or cultural beliefs. The United States has always been characterized by its ethnic and cultural diversity. A look at some of the data collected by the US Census further illuminates the diversity of cultures and languages in the United States.

In 2009, approximately 12.5 million legal permanent residents lived in the United States of America (Rytina, 2010). Legal permanent residents come from different countries and cultures in the world, including Mexico, the Philippines, China, India, the Dominican Republic, Cuba, Canada, El Salvador, Vietnam, the UK, Korea, Haiti, Colombia, Jamaica, Germany, Guatemala, Poland, Japan, Peru, and Pakistan. In addition, 10.8 million unauthorized immigrants from myriad places in the world resided in the USA in 2009 – an increase of 27% compared to 2000 (Hoefer, Rytina, & Baker, 2011). Approximately 12,800 immigrant orphans were adopted by US families in 2009. These children come from different backgrounds and bring with them a multitude of cultures and languages. Furthermore, about 75,000 refugees, the majority of which came from Europe, arrived in the US in 2009 (United States Department of Homeland Security, 2010). Between 1990 and 2000, the population of foreign-born individuals in the US had

increased by more than half (Malone, Baluja, Costanzo, & Davis, 2003) to 11% in 2000 (Malone, et al., 2003), and it has increased steadily since then. There has been a steady increase in the foreign-born population in the US (Grieco & Trevelyan, 2010) and in 2007, the foreign-born individuals represented 16% of the total labor force in the US (Newburger & Gryn, 2009). Intercultural competence is not only important because of the diversity within the US, but especially because of the increasing intercultural contacts in the personal and professional lives of US citizens. With globalization, the workforce is changing and becoming increasingly diverse and multicultural (Clark, 2008). This requires of employers and employees skills of intercultural competence to communicate successfully with colleagues domestically and internationally. Cross-cultural competence is extremely important for international business, and many business failures are attributed to a lack of this competence (James, Tomasz, & Salvador, 2006). Many companies nowadays consist of working teams that are multicultural and effective collaboration in a multicultural team requires of all team members a certain level of intercultural competence as well (Alexei & Richard, 2004). Moreover, employers today often have to work abroad for extended periods of time which means that more and more people have to be able to communicate cross-culturally (Norhayati, 2000).

The increasing number of individuals from different countries living or working in the US, and the growth in international trade and business can be seen as one of the many consequences of the world's increasing globalization. Globalization affects societies all over the world, impacts world economy (Fricz, Zita, Csaba, & Wiwczarowski, 2010), and connects countries that may hitherto have had little contact. There is not only an increased diversity within the United States, but also increasing contact between individuals in the US and abroad (Samovar & Porter, 2000a). This can, for example, be seen in the steady increase in US citizens

traveling internationally; while in 1990, 44,619,000 US citizens traveled abroad, in 2009, this number was 61,419,000. Similarly, there has been an increase in the number of international visitors traveling to the US. In 1990, there were 39,363,000 international visitors in the US and in 2009, there were 54,949,000 (US Census Bureau, 2011).

One of globalization's key characteristics is a growth in mobility and migration (Block & Cameron, 2002). With this increase in mobility, more and more individuals and families are moving abroad or working abroad temporarily or permanently. They bring with them their different languages and cultures, resulting in greater multiculturalism, multilingualism, and contact between cultures and languages all over the world. Cultures that may once have been defined by geographic locations are no longer found only in specific parts of the world; they have, to borrow Kramsch's words, become deterritorialized (2008, p. 6). As a result of globalization and the related changes in patterns of immigration, intercultural contact is increasing everywhere (Lochtman & Kappel, 2008; Samovar & Porter, 2000b).

It can be said without a doubt, that in order to successfully master the demands of the 21st century, all individuals require new skills and competencies that enable them to function effectively in this multicultural, multilingual society and globalizing world (Mason & Rennie, 2010; O'Dowd, 2007b). These skills include electronic literacy skills (Guth & Helm, 2010a; M.C.Guerin, Cigognini, & Pettenati, 2010; O'Dowd, 2006a; Shetzer & Warschauer, 2000), because much of today's communication takes place online. Additionally, intercultural competence and skills in intercultural (electronic and non-electronic) communication are more important now than ever (Bok, 2009; Dykstra-Pruim, 2008; Finger, 2008; Lovik, 2008; Lustig & Koester, 2003; Neuliep, 2009; Samovar & Porter, 2000a; Sercu, 2004; Spitzberg & Changnon, 2009; Wagner, 2008), because people come into contact with diverse cultural and language

backgrounds in many areas of their private and professional life: “our mobility, increased contact among cultures, a global marketplace, and the emergence of multicultural organizations and workforces require that we develop communication skills and abilities that are appropriate to a multicultural society and to life in a global village” (Samovar & Porter, 1999, p. 1). Samovar and Porter’s emphasis on both intercultural competence as well as general communication skills summarizes the need for a combination of cultural and language competence. Both intercultural competence and foreign language skills are crucial in order to communicate successfully and effectively with diverse people, encounters with whom are becoming increasingly frequent.

Educational institutions can and should see it as their responsibility to prepare students for the new demands of the 21st century and they “must play a central role in helping prepare younger generations for the cosmopolitan world that awaits them, a world in which they are bound to interaction with foreign nationals and different ethnic groups and feel the influence of different values and cultures on a scale unequalled in previous generations” (Bok, 2009, p. x). Similarly, the National Standards in Foreign Language Education emphasize the need for both language skills and intercultural competence by stating that “We must acquire the ability to understand and be understood in the languages of the worldwide neighborhood” (1999, p. 11). Lustig and Koester (2003) put it succinctly when they say: “both internationally and domestically, competent intercultural communication has become a necessity” (p. 4).

The need for new skills and competencies in the area of intercultural competence and communication has also been emphasized in the Standards for Foreign Language Learning in the 21st century (1999). The Standards state that “The United States must educate students who are linguistically and culturally equipped to communicate successfully in a pluralistic American society and abroad.” (1999, p. 7). The clear emphasis on linguistic and intercultural competence

underlines the necessity to foster both in today's students. Similarly, the American Association of Teachers of German (AATG) Task Force on the Teaching of Culture emphasizes that “cross-cultural understanding and intercultural communication are more essential now than ever, particularly because modern means of communication and transport bring us daily into contact with ‘dem Fremden’ [...] for which we need not only knowledge, but also strategies to interpret, to understand, and to put into perspective what we are experiencing” (Schulz, Lalande, Dykstra-Pruim, Zimmer-Loew, & James, 2005, p. 172). Moreover, fostering intercultural competence is important in order to help raise global citizens that can move effortlessly between cultures and languages (Deardorff, 2004). If we want young generations to become successful members of this modern world, if we want to “educate our youth in a – and for a – changing world” (Schulz, 2007b, p. 88), we have to find means of fostering intercultural competence. Intercultural competence is firmly anchored as a goal in the Standards for Foreign Language Learning (1999) set forth by the American Council on the Teaching of Foreign Languages (ACTFL). According to the guidelines, foreign language instruction should enable students to “communicate and to learn to respond appropriately in a variety of cultures” (1999, p. 245) and in order to do that, students have to have “an understanding of the interdependent and interactive relationship of the perspectives, practices, and products” (1999, p. 257) of a culture.

Additionally, the events of 9/11 have led to an increased appreciation for proficiency in foreign languages. Foreign languages have received more attention due to the US government's need for individuals with advanced language proficiencies who could support the US fight against terrorism (Kramersch, 2005). In addition to the need for interculturally competent citizens for a global world, advanced language skills are important not only in the personal domain, and

in work contexts, but in a different context also for the US nation to “facilitate trade, diplomacy, and collective security” (Robinson, Rivers, & Brecht, 2006, p. 457).

Language classes lend themselves well to the dual goal of fostering (foreign) language skills as well as the development of intercultural competence because of the natural connection between language and culture. Language and culture cannot be regarded as separate from one another, because “language use is indissociable from [...] culture” (Kramsch, 1993a, p. 9). Some claim that culture should be the very heart of foreign language instruction (Sercu, 2005), and that culture is not to be regarded as an “expendable fifth skill” (Kramsch, 1993a, p. 1). In fact, many researchers and educators today agree on the importance of assigning culture a central role in the foreign language classroom (Fantini, 1997b; Finger, 2008; Kramsch, 1993a; Lovik, 2008; Sercu, 2005) and The National Standards in Foreign Language Education (1999) emphasize that “students cannot truly master the language until they have also mastered the cultural contexts in which the language occurs” (p. 31). Nonetheless, incorporating culture in language teaching and enabling students to develop intercultural competence is still an area in need of much clarification and support.

Using technology in foreign language education to facilitate the development of intercultural competence and language skills has been a much supported approach with recent technological advances (Belz & Thorne, 2006b; Blake, 2008; O'Dowd, 2006a). The National Standards for Foreign Language Learning suggest using technology as “a means of providing real-world contact with speakers” (1999, p. 24). The internet offers many opportunities for enhancing intercultural language instruction and a lot of research has been devoted to internet-mediated intercultural foreign language education (Belz & Thorne, 2006b). One of the strongest benefits of using internet technologies for foreign language instruction is, according to Thorne

(2006), the ability of the internet to connect language learners thereby offering opportunities for authentic communication. This allows students to develop both their linguistic as well as intercultural competencies. Especially telecollaboration, the use of online technology to connect language learners in different locations, has been shown to hold a lot of potential for the development of intercultural competence and the advancement of foreign language proficiency, because students can learn directly with and from native speakers of the target language (Brammerts, 1996b; Kern, 1996; O'Dowd, 2006a). As that, telecollaborative projects, as well as other computer-mediated approaches to foreign language instruction, hold a lot of promise for language learning.

1.2. Definition of Terms

One of the main problems about incorporating culture in the foreign language curriculum is the lack of agreement on a single definition of culture. Different academic fields (anthropology, history, linguistics, applied linguistics, cultural studies, etc.) often employ different definitions, emphasizing different aspects of culture. While there are varying definitions of what the term *culture* exactly refers to, I follow the definition of culture put forward by the National Standards in Foreign Language Education. Culture, here, is understood as “the philosophical perspectives, the behavioral practices, and the products [...] of a society” (1999, p. 47).

There is a similar array of definitions of intercultural competence (Altmayer, 2008; Kramersch, 1993b; Schulz, 2007b), from which I use Fantini’s definition of the term to refer to “a complex of abilities needed to perform *effectively* and *appropriately* when interacting with others who are linguistically and culturally different from oneself” (2006, p. 12). While his definition of intercultural competence corresponds in large parts to other scholars’ definitions (Ashwill & Oanh, 2009; Byram, 1997; Deardorff, 2006b), the emphasis he puts on diverse abilities makes

his definition special. Most other definitions speak merely of ‘the ability’ suggesting that intercultural competence is just one skill, not a skill set.

I further use Fantini’s (2005) model of intercultural competence which consists of the dimensions knowledge, (positive) attitudes/ affect, skills, and awareness in addition to target language proficiency. Additionally, his model consist of abilities in three areas, namely establishing and maintaining relationships, communicating with minimal loss or distortion, and collaborating in order to accomplish something of mutual interest or need. I will discuss this model and contrast it to others in the field in chapter two.

In the context of the development of writing skills, the focus of this study is syntactic complexity in foreign language writing. Syntactic complexity can refer to a range of sophisticated linguistic forms, and is sometimes narrowly defined as “the ability to produce writing that shows how ideas and large chunks of information are represented with the use of subordination and embedded subordinate clause” (Sotillo, 2000, p. 84). For this dissertation, syntactic complexity does not only refer to the ability to use subordination but also to the length of language units (overall complexity) and phrasal complexity. This multidimensional definition of syntactic complexity is proposed by Norris and Ortega (2009) and intended to allow a more thorough understanding of the use of syntactic complexity than the use of only one measure of syntactic complexity. The ability to use more sophisticated syntactic structures in a foreign language is one sign for foreign language development and has therefore been selected as the focus of the language analysis for this study.

1.3. Statement of the Problem and Purpose of the Study

The purpose of this study is threefold. Firstly, the study aims to investigate students’ interests in foreign language education. Secondly, the study is intended to explore whether students’ written

language skills improve in the area of syntactic complexity over the course of a virtual exchange. Thirdly, the purpose of the study is to investigate the effects of a virtual exchange on students' self-assessment of intercultural competence as well as their demonstration of intercultural competence in the virtual exchange.

While there seems to be a universal belief in the importance of culture as an integral component of foreign language education (Bennett, 1997; Byram, Nichols, & Stevens, 2001; Byrnes, 2008; Chavez, 2005; Fantini, 1997d; Garcia & Crapotta, 2007; Lochtman & Kappel, 2008; National Standards in Foreign Language Education Project, 1999; Seelye, 1997), we know little about students' interest in a focus on culture in language classes. The Standards for Foreign Language Learning illustrate the connection between language and culture in many ways and it can well be seen in the weave of curricular elements, where knowing about other cultures is for example interwoven with the language system, and communication strategies (1999). In fact, it is highlighted in the Standards, that linguistic knowledge (language proficiency) is central, but language learning today must include "the sociolinguistic and cultural aspects of language" (1999, p. 11) as well. Although the connection between language and culture cannot be denied, it is unclear whether students are aware of this connection and/or how interested students are in expanding their cultural knowledge in foreign language classes.

A study conducted by Chavez (2005) revealed that it is unpredictable if and how much students believe that culture should be included in foreign language instruction. Chavez therefore suggests that the gap between what the profession and what students believe are important components of the language class needs to be bridged, for example by making our goals and the connection between language and culture more clear to students. Little is known about students' interest in cultural learning apart from this study, and the first purpose of this dissertation is to

fill this lack of research by investigating what students' interest in cultural learning is and how it is affected by telecollaboration. Because foreign language education puts such a strong focus on teaching culture and language together, I think it is of great importance to take into consideration how our students feel not only about language learning but learning more about target culture, and if their interest therein can be increased through online communication projects with native speakers.

Apart from a stronger focus on culture, developing specific linguistic skills has been the primary goal of foreign language education for a long time. The Standards for Foreign Language Learning have communication as one of the main goals, and specifically mention the students' development of written language skills in Standard 1.3: "Students present information, concepts, and ideas to an audience or listeners or readers on a variety of topics" (1999, p. 45). This dissertation seeks to further investigate if computer-mediated asynchronous communication, specifically, e-mails, can serve as a tool for helping students improve their written language skills in the domain of syntactic complexity. There have been a variety of approaches to teaching students foreign language writing' skills and employing new technology, especially internet tools, has been suggested in recent years as a good way to foster these skills (Dodd, 2001; Kern, 1996; Mason & Rennie, 2010; Torres & Vinagre, 2007). Connecting language learners with native speakers via online media has been seen as useful in promoting language skills, because it gives students the chance for authentic communication and feedback from native speakers (Brammerts, 1996a; Felix, 2003; Gläsman, 2004; Kern, 1996; Little, 1996; Mullen, Appel, & Shanklin, 2009; O'Dowd, 2006a, 2007b; O'Rourke, 2007). This study investigated the effects of a twelve-week virtual exchange with native speakers on the written language skills of language

learners. I thus wish to contribute to ongoing research about the suitability of online communication tools for the advancement of language skills.

As has been mentioned earlier, a goal that is equally important in foreign language instruction today as the improvement of linguistic skills, is the development of intercultural competence. The importance of including culture in foreign language education and equipping students with intercultural competence and thus prepare them for potential and likely encounters with people from diverse cultural backgrounds has been recognized (Bhawuk & Brislin, 1992; Byram, 1997; Fantini, 1997d; Fritz, Mollenberg, & Chen, 2001; Hammer, Bennett, & Wiseman, 2003; Müller-Hartmann, 2006; Schulz, et al., 2005). Nonetheless, there is still much dispute about the best ways to achieve these goals (Byrnes, 2008; Lochtman & Kappel, 2008; Schulz, 2008; Schulz, et al., 2005). A strong call exists for a better consensus on topics to include and assessment strategies to employ in foreign language instruction to foster intercultural competence (Deardorff, 2006b; Fantini, 2000; Koester, Wiseman, & Sanders, 1993; Schulz, et al., 2005).

Lovik (2008) claims that intercultural competence is a realistic and absolutely necessary goal of foreign language education and Thorne (2006) underlines this by pointing out that “communicative competence alone is no longer adequate as the sole goal of FL learning” (p. 5). The notion that foreign language education in the 21st century has to become intercultural education with a strong focus on the development of skills of intercultural competence is now widely accepted (Dykstra-Pruim, 2008; Lovik, 2008; Sercu, 2004; Thorne, 2006; Wagner, 2008).

Nonetheless, Koreik (2008) criticizes that intercultural competence has become a trend topic, without scholars truly clarifying what the term refers to. The lack of one widely accepted definition of a term has been seen as a problem by many (Finger, 2008; Koreik, 2008). Koreik

(2008) also argues that intercultural competence should not be a goal of foreign language classes, because fostering the development of foreign languages skills is a goal that is in itself very ambitious. He thinks that it would be too much to add intercultural competence as a foreign language education objective, but also admits that because it has become such a popular theme, foreign language educators will not be able to ignore it in the future. His main concerns lie with the measurability and assessment of intercultural competence. Apart from a few cautionary voices against the objective of intercultural competence, the majority of researchers and teachers are in agreement about its undeniable importance.

Online communication between language learners has not only been suggested as a powerful tool for foreign language education, but also for the development of intercultural competence. Chapter two will provide a more detailed summary of the previous research on internet-mediated foreign language education, and especially the use of telecollaboration for language and intercultural learning. Aside from the positive effects on language skills, computer-mediated communication in the form of telecollaboration has been shown to be a useful tool for enabling students to develop intercultural competence (Belz & Müller-Hartmann, 2002; Levy, 2007; O'Dowd, 2007a; Thorne, 2003). Combined with the notion that students nowadays need to be trained in technological skills and should develop electronic literacy (Shetzer & Warschauer, 2000), online communication tools seem to be able to provide a threefold learning potential: they can support students' improvement of foreign language skills, they can help students acquire intercultural competence, and they can give students' the opportunity to develop skills of electronic literacy. Investigating the high potential of internet-mediated communication for foreign language instruction is the overarching goal of this dissertation.

To summarize, the aim of this dissertation is to determine the suitability of telecollaboration, specifically of cross-cultural tandem e-mail exchanges, for (a) fostering intercultural competence and (b) language skills, and (c) increase students' interest in cultural learning. Although many instructors and researchers emphasize the importance of fostering intercultural competence in foreign language instruction (as well as other courses), little is known about students' interest in learning about culture and developing intercultural competence when studying foreign languages. With this dissertation I aim to explore students' interest in studying culture and the impact a telecollaborative project with native speakers of the target language has on this interest.

Moreover, I aim to further explore whether tandem e-mail exchanges are an effective way to foster students' intercultural competence. In spite of the importance attributed to intercultural competence, there are still few successful examples for incorporating this objective in foreign language education (Byram, et al., 2001). While previous studies have claimed that telecollaborative exchanges are an effective way to increase students' intercultural competence (Brammerts, 1996b; Cloke, 2010; Dodd, 2001; Hauck & Lewis, 2007; O'Dowd, 2006a; Vinagre, 2007; Woodin, 2001), they generally fail to give a clear picture of students' development of intercultural competence. With this study I aim to fill this gap by using a pre-test, post-test design and tracing students' exchanges over a period of twelve weeks to be able to determine the students' progress in intercultural competence because of the e-mail exchange. Additionally, most studies employ either qualitative or quantitative measures and look at one communication tool alone. In this study, I use a combination of computer communication tools, including a reflective component, and both quantitative and qualitative measurements. Additionally, in contrast to most studies, I do not look at intercultural competence alone but also investigate the

value of telecollaboration for fostering students' language skills. Specifically, I aim to analyze students' written language skills and development in the area of syntactic complexity. By looking at intercultural competence and language development I aim to present a broader perspective on the effects of virtual exchanges than has been done in most studies so far.

1.4. Research Questions and Hypotheses

In this study, I will investigate the development of intercultural competence and language skills in a semester-long tandem e-mail partnership between American college students studying German and German high school students studying English. I, thus, wish to contribute to ongoing research about ways to foster intercultural competence and writing skills by testing e-mail as a possible tool for these objectives of foreign language instruction.

This dissertation aims to answer the following five research questions:

1. What effect does a semester-long tandem e-mail partnership with native speakers have on written language skills of language learners?
2. What interest do American college students studying German as a foreign language have in learning about German culture and what effect does a semester-long e-mail exchange with native speakers have on this interest in cultural learning?
3. What effect does a semester-long e-mail exchange with native speakers have on the way in which language learners self-assess their intercultural competence?
4. How is intercultural competence displayed and developed through a semester-long e-mail exchange with native speakers?
5. Is there a relationship between the number of words written throughout the exchange and the progress in use of syntactic complexity as well as self-assessed intercultural competence?

There are several hypotheses related to the research questions:

- 1) It is hypothesized, that students improve their written language skills through the e-mail exchange by becoming more complex in their writings.

This hypothesis is based on the claim that second language learning is strongly supported by increased use of the language and that personal exchanges, such as the e-mail exchange proposed in this study, enhance language learning (Blake, 2001). Moreover, practicing the language online (in this study, through e-mails as well as reflective blogs) gives students the chance for increased (written) foreign language production while at the same allowing students to focus on form and content (Kern, 2006).

- 2) It is further hypothesized that students' interest in learning about German culture increases due to the semester-long exchange with individuals with target culture background.

The idea that interest in cultural learning increases due to direct exchange with individuals from the target culture is based on the assumption that contact with the target culture makes students' more curious about the target culture. While results of a pilot study for this dissertation conducted in the spring of 2009 (Schenker, 2012) revealed no significant changes in students' interest in cultural learning after a 6-week e-mail exchange, results from the semester-long exchange are assumed to show a more nuanced picture of changes in the level of students' cultural interest. The hypothesis is based on previous findings of studies which have shown that intercultural exchange can increase students' motivation and interest in continuing to learn the target language and about the target culture (Cohen, 2005).

- 3) It is also hypothesized that students' perceive themselves to be more interculturally competent because of the semester-long exchange with individuals of the target culture.

This hypothesis is based on several studies which have shown that telecollaboration can greatly impact the development of intercultural competence (Belz & Müller-Hartmann, 2002; Levy, 2009; O'Dowd, 2003; O'Dowd, 2008; Spodark, 2001; Thorne, 2003; Ware & Kramsch, 2005).

- 4) It is hypothesized that patterns of development of intercultural competence will emerge in the e-mail transcripts, reflective blogs, essays, and other qualitative data of the participants.

This hypothesis is based on the idea that a combination of measurements, such as self-assessment inventories and reflective statements, should be employed when assessing intercultural competence and that traces of intercultural competence can be identified in the combination of data (Deardorff, 2006; Fantini, 2000; Sinicrope et al., 2007). The combination of e-mails, blogs, essays, and survey answers will give a comprehensive picture of the students' intercultural competence and serve as a kind of portfolio. Portfolios have been shown to be a successful way for assessing intercultural competence (Byram, 1997; Fantini, 2000; Ingusrud et al., 2002; Jacobson et al., 1999; Schulz, 2007; Sinicrope et al., 2007).

- 5) Lastly, it is hypothesized that students need to produce a certain amount of output in order to be able to grow both linguistically as well as interculturally.

This hypothesis is based on the notion that progress in language and intercultural development can only take place when students are given enough opportunities to engage with the assignments and participate in the intercultural exchange. It has been shown that longer study abroad programs have more positive learning outcomes (Dwyer, 2004). Similarly studies have revealed that a certain length of CMC projects is necessary for any changes to be noticeable (Green & Youngs, 2001; O'Dowd, 2006b; Woodin, 1997). In line with these findings, it is

expected that a certain amount of writing by the students is also necessary in order for them to show changes in syntactic complexity and to notice changes in their own intercultural competence.

1.5. Importance and Framework of the Study

This study is important because of three main reasons. Firstly, as mentioned before, this study aims to investigate the *development* of intercultural competence through an e-mail exchange. This has not been sufficiently done in previous studies. While previous studies have claimed that e-mail exchanges or other telecollaborative tools are useful for increasing students' intercultural competence, they have failed to clearly show how intercultural competence is developed or increased through an exchange. Such studies have seemed to take *instances* of intercultural competence as proof for development thereof.

In a smaller study which I conducted in 2009 (Schenker, 2012) I came across the same problem. While it seems easy to find instances of intercultural competence in e-mails, these instances may not be mistaken for development of intercultural competence. Analyzing e-mails as a possible tool for increasing intercultural competence includes more than tracing evidence of intercultural competence within the e-mails.

My study aims to fill this gap by tracing the development of intercultural competence through an e-mail exchange through including a research design that consists of a pre- and post-self-assessment of intercultural competence as well as several data sources for triangulation of data and stronger results. This includes the combination of communication tools (e-mail, videoconferences, and blogs) and the use of both qualitative and quantitative measures. This study is meant to show not only instances of intercultural competence in e-mail transcripts, but also investigate signs of development and causes of this development.

The second importance of the study lies in its goal of determining whether cross-cultural e-mail exchanges may be used to increase students' interest in learning about culture. Because culture is such an important part of foreign language instruction nowadays, it is important to know how language instructors can motivate students to learn more about culture and to be interested in cultural learning.

The third importance of the study can be seen in its intention to explore the development of written language skills. While intercultural competence is becoming one of the main goals of foreign language education, fostering language skills remains one of the most important objectives of foreign language instruction. If telecollaboration can be found to support the development of both intercultural competence and (written) language skills, it would be an extremely beneficial tool for the foreign language classroom.

This study is situated in and supported by sociocultural theory and more exactly pushed output hypothesis. Based on Vygotsky's work, sociocultural theory emphasizes the context of second language learning and claims that learning takes place through mediation of symbolic artifacts or cultural tools, such as language (Gass & Selinker, 2008). Mediation is the main construct of sociocultural theory and it is suggested that humans use aforementioned symbolic artifacts and cultural tools in order to "mediate their own psychological activity" (Lantolf & Thorne, 2006, p. 205) and it is through the interaction with the environment that individuals develop and learn.

In the context of second language acquisition, sociocultural theory suggests that through the interaction between individuals, development takes place and students can acquire new linguistic forms through collaboration with other learners or experts. This interaction through which learners can develop their foreign language skills can take place between the learner and

an expert, such as a native speaker of the language or an instructor, or between two learners. In the case of the virtual exchange conducted for this study, the students had the opportunity to be at once learner and expert – learner of the target language they were studying and expert of their own language which their tandem partner was studying. Through what is sometimes called collaborative dialogue (Swain, Brooks, & Tocalli-Beller, 2002), language learners can construct meaning and language dialogically.

In addition, when foreign language learners use the foreign language they may be prompted to notice linguistic problems, which “can ‘push’ learners to modify their output” and “trigger cognitive processes that are involved in second language learning” (Swain, 1995, p. 371). This so-called pushed output hypothesis suggests that “even without implicit or explicit feedback provided from an interlocutor about the learners’ output, learners may still, on occasion, notice a gap in their own knowledge when they encounter a problem in trying to produce the L2” (Swain, 1995, p. 373). When language learners notice a problem in their language output and are forced to “recognize what they do not know or know only partially” (Swain, 1995, p. 375), they are pushed to modify their output thereby potentially engaging in second language learning. Pushed output may bring learners to produce new or improved linguistic forms thereby assisting them in second language acquisition. In chapter 2 section 2, I will discuss the framework of this study in more detail.

1.6. Web 2.0 and Foreign Language Education

The computer has been used in foreign language education since the 1980s, but only recently have computer applications become a key component in the foreign language classroom (Tella, 1996). There are two main reasons for the increasing incorporation of computers and especially the internet into the foreign language classroom: they have been shown to be successful for

improving language learning (Blake, 2008; Gonglewski, Meloni, & Brant, 2001; Guth & Marini-Maio, 2010; Hughes, 2010; Kern, 2006; L. Lee, 2007a; Little et al., 1999; O'Dowd, 2007b; Pellettieri, 2000; Shetzer & Warschauer, 2000; Spodark, 2001; Thorne, 2003, 2010; Torres & Vinagre, 2007; Vinagre, 2007; Vinagre & Munoz, 2011; Ware & Canado, 2007; Warschauer, 2000) and cultural as well as intercultural learning (Belz, 2007a; Belz & Müller-Hartmann, 2002; Chase & Alexander, 2007; Dodd, 2001; Furstenberg, Levet, English, & Maillet, 2001; Garcia & Crapotta, 2007; Hughes, 2010; Kern, 2006; L. Lee, 1998; Levy, 2007; O'Dowd, 2006a; Schuetze, 2008; Vinagre, 2007; Woodin, 2001).

The promise of the internet lies in its potential of connecting language learners: “Cyberspace is perceived as a utopian middle landscape, where native speakers can have access to one another as linguistic entities on a screen, unfettered by historical, geographical, national or institutional identities” (Kramsch & Thorne, 2002, p. 85). While some teachers are still unsure about including computers in their foreign language classrooms (Blake, 2007), others argue that it is time to teach with more technology, because technology is an everyday part of our students’ lives and they expect its incorporation into their classes (Spodark, 2001). In fact, “computer-mediated communication (CMC) has become a high-stakes, high-frequency context for all manner of professional, academic, and social activity” (Thorne, Black, & Sykes, 2009, p. 803) and is therefore also receiving increasing interest in the context of foreign language instruction.

Internet-mediated intercultural foreign language education has received increasing scholarly attention since the beginning of the 21st century and many terms have been applied to refer to the same or similar concepts. Intercultural learning and interaction has seen many changes as technologies have developed and enabled learners to communicate directly with native speakers online and a variety of Web 2.0 tools have been employed in foreign language

contexts both for the improvement of language skills and for the development of cross-cultural competence and awareness.

Several different concepts have arisen in the context of technology enhanced foreign language instruction; one of the older concepts is that of network-based language teaching (NBLT). NBLT refers to “language teaching that involves the use of computers connected to one another in either local or global networks” (Kern & Warschauer, 2000, p. 1). An important aspect of NBLT is the understanding that the computer itself does not improve language or cultural learning, but that the way in which the computer is used in foreign language education can enhance foreign language learning.

Internet-mediated intercultural foreign language education (ICFLE) is another term used to describe language learning enhanced by computers and the internet (Belz & Thorne, 2006b). Thorne (2006) mentions four different models of ICFLE, namely telecollaboration, tandem learning, the linking of local experts with learners, and internet communities. The latter refers to social groups that form online, for example in massively multiplayer online games or social networks such as Facebook (Sykes & Holden, 2011). They all can serve as tools that, if used effectively, can help to improve students’ linguistic skills and intercultural competence. There are many different ways to make use of the internet for foreign language and intercultural learning, and these four are just some suggestion of how to utilize what the internet has to offer for the foreign language learning context. The goals of ICFLE (as with NBLT) are manifold but the most important ones are the development of linguistic skills and intercultural competence (Thorne, 2006).

While the term NBLT underlines the use of computers in general for the foreign language education context, telecollaboration is a term that has been used to emphasize the use of

computers to bring together different language learners. Telecollaboration is generally understood as intercultural exchange between different language learners (often in different locations) with the dual goal of developing language skills and intercultural competence (Guth & Helm, 2010b). It has been defined as “the use of online communication tools to bring together language learners in different countries for the development of collaborative project work and intercultural exchange” (O'Dowd, 2006a, p. 1). Although this definition refers to language learners in different countries, telecollaboration has also been used as the term to describe language learning via the internet between learners in the same country. Because the main focus of telecollaboration is on intercultural learning, Blake (2008) calls telecollaboration the intercultural approach to computer-mediated communication.

In recent years, the goal of developing electronic literacies has become a third main goal of telecollaboration (Hughes, 2010). With the goals of telecollaboration being essentially the same as those of ICLFE, it is not surprising that telecollaboration and ICFLE are often used synonymously (Belz & Thorne, 2006a). The goals of telecollaboration are achieved through assigning students well-structured activities. The importance of the task design in different telecollaborative environments has been stressed by many researchers (Guth & Thomas, 2010; Mullen, et al., 2009; Müller-Hartmann, 2007; Müller-Hartmann & Von Schocker Ditfurth, 2010; O'Dowd, 2007c; Sercu, 2004).

Another term usually connected to telecollaboration and online language learning is the term tandem learning. Tandem learning, though often associated with learning that takes place outside of the educational context, involves two partners learning with and from each other through the negotiation of different topics (Thorne, 2006). O'Rourke defines it as “an arrangement in which two native speakers of different languages communicate regularly with

one another, each with the purpose of learning the other's language" (2005, p. 434). From this definition it can be seen that the emphasis is on language learning, however, other scholars also point out the goal of learning more about the target culture (Brammerts, 1996b).

The concept underlying tandem learning is that of learner autonomy. This kind of peer learning has been around since WWII, but became more popular in the form of letter exchanges in the 1960s (Brammerts, 1996b). While letter partnerships were once a useful way to connect different language learners, the disadvantage of letters were their slow delivery rate (Johnson, 1996). Today, the concept of pen pals has been expanded to tandem learning within an e-mail context, which has the advantage of being fast, cheap, and convenient (Brammerts, 1996b). Telecollaboration and tandem learning are very similar in that both refer to the exchange of information and cross-cultural communication for the benefit of the learners' language and intercultural skills. In both cases, students are paired and establish a relationship online by exchanging information, discussing topics, and completing assigned tasks. These kind of personal peer exchanges are well suited for increasing students' language skills and intercultural competence (Kern, 1996). Brammerts (1996b) points out several benefits of tandem learning, the main one being the opportunity for communicating with native speakers. Moreover, the language learners can help each other, and learning is easier because students are less inhibited in this context. Students are also enabled to grow individually and to become more autonomous in their learning, while also learning important skills of cooperation and intercultural communication. Tandem learning is also cost-effective and easy to organize (Brammerts, 1996b) and has been shown to provide an atmosphere of trust, in which students are more open to each other, which positively impacts learning outcomes (Kötter, 2002).

1.6.1. Definitions and Characteristics of Web 2.0 Tools

A variety of different Web 2.0 tools have been used in the context of computer-mediated communication in educational contexts. Because of the online interaction between people, Tella (1996) suggests the term computer-mediated human communication, CMHC, to emphasize the human component of this contact. However, the term CMHC is not frequently used. CMC is a unique form of communication, and the language used therein has been analyzed in different studies (Callot & Belmore, 1996; Lotherington, 2005; Merchant, 2001; Werry, 1996; Yates, 1996). CMC can have a very different kind of language characterized by specific styles, informality, the use of emoticons, special lexis, the use of acronyms (Herring, 1996a), language variability and changes in spelling (Lotherington, 2005). Lotherington explains that “established conventions of socially accepted language standards are morphing in the disintermediated Internet environment” (2005, p. 125). Depending on the pedagogical implementation and methodological design, CMC tools can hold great potential for foreign language education (Blake, 2008).

While CMC is typically subdivided into asynchronous and synchronous communication, temporality is not the only important distinction when it comes to using Web 2.0 tools for computer-mediated communication purposes. Other characteristics by which to distinguish these tools include “their degree of anonymity, modality, and spatiality” (Smith, Alvarez-Torres, & Zhao, 2003, p. 705).

Some CMC tools afford the language learners a greater degree of anonymity, for example text-based synchronous communication in internet chat rooms. Here, students can use a pseudonym and do not have to reveal any personal information. Other CMC tools, such as face-to-face chat or videoconferences are less anonymous. The anonymity of a specific CMC tool can

impact the learning outcomes and participation in the CMC project and as summarized by Smith et al. (2003), for example through its impact on student inhibition, amount of self-disclosure, and degree of social distance. In some cases, higher levels of anonymity can be positive, while in others they can negatively impact learning in CMC environments.

Different CMC tools include different modalities; some are fully text-based, others include audio, and yet others are video-based and include graphics as well. The modality of a CMC tool also impacts the learning that takes place in its environment, because different modalities have different effects on the learners. For example, it has been revealed that in CMC environments with different modalities, students engage in more interpersonal communication while also going off-task more than in CMC environments with only one modality (Smith, et al., 2003). It is suggested that too much modality can have a distracting effect.

Spatiality is another distinguishing characteristic between CMC tools. It refers to the amount of spatial distance afforded by the tool. Some CMC tools do not allow the learners to manipulate spatial distance, while others include control over “the spatial arrangement of the settings, their avatars, and other objects” (Smith, et al., 2003, p. 708) for example. Similarly to a high degree of modality, high levels of spatiality have been found to have a distracting effect on students. Too much spatiality can contribute to students going off-task in CMC environments, while low spatiality seems to help students stay on task better. However, low spatiality, like low modality, also seems to encourage less interpersonal communication.

Due to the different effects of the various degrees of modality, anonymity, and spatiality in different CMC tools, language educators must make informed decisions before choosing any CMC tool for foreign language contexts. While each tool has its own advantages and challenges,

it is important to keep in mind that the specific learning outcomes always depend on how the tool is operationalized (Smith, et al., 2003).

Temporality is still the main characteristic used to distinguish between different forms of CMC. Asynchronous communication takes place at different times, while synchronous communication takes place at the same time (Beatty, 2010). There are oral and written synchronous and asynchronous tools (Meskill & Anthony, 2010). The most typical asynchronous tool is e-mail. So-called second generation asynchronous tools include wikis and blogs (Blake, 2008). Other asynchronous tools are discussion forums and bulletin board systems (Cziko, 2004). The most commonly used synchronous tool is text-based chat (instant messenger). Other synchronous tools include videoconferencing and video chat. CMC also includes communication within MMOGs (massively multiplayer online games) (Sykes & Holden, 2011), MOOs (Multi-user domains), social networking sites such as Facebook, or Twitter, and even PDAs and cell phones (Beatty, 2010). While many CMC tools are text-based, there also audio-based CMC tools, such as asynchronous voice recordings, or synchronous audio or video chats through AIM, Yahoo Messenger (Cziko, 2004), or Skype (Guth & Marini-Maio, 2010).

Both asynchronous and synchronous CMC can have specific benefits while also presenting different challenges. One important benefit of all CMC tools is the possibility of connecting language learners from different parts of the world (Thorne, 2006). Moreover, online communication can give students access to native speakers of the language with whom they may interact in authentic contexts (Thorne, 2006). Further advantages for both asynchronous computer-mediated communication (ACMC) and synchronous computer-mediated communication (SCMC) include their focus on student-centered learning (Olaniran, 2009), an

increase in student motivation (Gläsman, 2004; O'Dowd, 2006a), the independence and peer learning it offers (Dodd, 2001), the access to authentic information (Gläsman, 2004), the equal student participation (O'Dowd, 2007b), the increase in interaction (Thorne, 2006), the opportunities for reflection and learning (O'Dowd, 2006a; Schneider & Von der Emde, 2006), its potential for intercultural learning and collaborative learning (O'Dowd, 2006a), the feeling of personal empowerment it gives to students (Warschauer, 1996b), and the increase in exposure to language (O'Dowd, 2007b), to name just a few.

Asynchronous CMC has some specific advantages over synchronous CMC, the most important one being the flexibility it brings with it (Ahern, 2008). Students do not have to be on the computer at the same time, which means they can read and reply to messages at their own convenience. This makes it especially well-suited for connecting language learners from across the world, when time differences make meeting online at the same time difficult or impossible. The ability to overcome time zones is one of the strong advantages of ALCMC (Rösler, 2007). Moreover, it is advantageous that different institutions do not have to match up their teaching schedules to allow for learners to be connected asynchronously (Gläsman, 2004).

Another advantage of ALCMC is that students have more time to reflect and think about their answers, which may make their responses more thoughtful (Meskill & Anthony, 2010; Rösler, 2007; Rudestam & Schoenholtz-Read, 2010). This advantage also means that ALCMC is better suited for lower levels of language learners, because they cannot be expected to produce foreign language as instantaneously as may be necessary in real-time interaction (Gläsman, 2004; Olaniran, 2009). Additionally, students often feel less pressured in ALCMC and don't get embarrassed because they aren't put on the spot and have time to formulate their ideas (Olaniran, 2009). Because students have more time to compose their answers, they can also give feedback

to their partner about language issues, so that both students can learn from each other (O'Rourke, 2007). Another advantage lies in the ease of storing ACMC messages (Ahern, 2008), which means that learners can go back to previous messages and re-read or refer back to them, and track their own learning (Meskill & Anthony, 2010).

Meskill and Anthony (2010) list a number of other advantages of ACMC: it is convenient, it connects learners, it levels the playing field between learners, it offers an authentic and appropriate audience, and it offers rich (sometimes multimedia) information. More benefits include the opportunity to use reference materials to improve the communication (Gläsman, 2004; Stockwell, 2010), the development of learner autonomy, and the chance for student creativity due to prolonged preparation time (Gläsman, 2004). Additionally, when using ACMC, potential technical problems (such as server breakdown, slow internet connection, bad audio quality, or others) can be reduced (Murphy, Gazi, & Cifuentes, 2009).

Synchronous computer-mediated communication also has some specific advantages, one of the most important ones being that it is instantaneous communication, which makes the online interaction dynamic and resemble real-life communication (Pellettieri, 2000). Especially when using voice chat, SCMC can function like oral communication and give students the chance to practice their language skills in an authentic context (Pellettieri, 2000). Through the instant communication, students can learn how to co-construct meaning, and they can negotiate their understanding of the topics to be discussed (O'Rourke, 2007).

Although SCMC has the benefit of immediate communication, and students can potentially even see each other, it may bring with it a lot of pressure for students, especially shy ones (Rösler, 2007). Additionally, there may be problems with the technology, such as sever breakdowns or network issues that may make instant communication online difficult and

frustrating for students (Rudestam & Schoenholtz-Read, 2010). Nonetheless, the greater amount of spontaneity that SCMC offers correlates positively to more social interaction between students (Rudestam & Schoenholtz-Read, 2010). Additionally, students can ask each other questions and get answers immediately, which can help with their language skills and grammatical competence (Pellettieri, 2000).

The instantaneity of SCMS makes it less suited for beginning language learners, and Olaniran (2009) even suggests that it can prevent language learning when students do not have the required language skills. Others, however, claim that it is precisely the immediacy of the communication that makes it well-suited for language learning (Gläsman, 2004; Pellettieri, 2000). Additionally, the text produced in SCMC environments is typically shorter in nature which would also support its use in beginning language classes. Other advantages of SCMC include the convenience, connectivity, membership to a group or tandem, communication in authentic contexts with an appropriate audience, rich information exchange, and real-time learning and interaction (Meskill & Anthony, 2010).

Both ACMC and SCMC tools can offer a variety of benefits depending on how they are adapted for the purposes of foreign language and intercultural learning. Studies comparing ACMC and SCMC tools and their effects on language skills and intercultural competence show different results. A study comparing the benefits of SCMC and ACMC in the form of chat-room activities and e-mails revealed no significant differences between the two forms of CMC (Perez, 2003). The vocabulary enrichment and student motivation appeared to be about the same. Although the study showed that more words were produced in the SCMC environment, Perez (2003) regrets that some students switched from participant to observer in the chat context

because they felt overwhelmed with the amount of input. Students enjoyed the use of both CMC tools with half the students preferring the chats and the other half preferring the e-mails.

In contrast, Sotillo (2000) revealed differences between APMC and SCMC tools. One of the differences outlined in the study was the greater variation of topics that were discussed in the synchronous environments because students would more often deviate from one topic and talk about other issues. Additionally, the study confirmed that synchronous communication tends to encourage the use of informal language (Herring, 1996b), while asynchronous communication often showed more formal writing characterized by more syntactic complexity. While students showed more critical questioning of ideas and concepts in asynchronous environments, the quantity and quality of the contributions was sometimes limited in APMC.

As can be seen, both SCMC and APMC have specific advantages and when planning the incorporation of CMC tools into the foreign language classroom, one must weigh the advantages and challenges of both and choose the tools that best fit the specific needs of the learners. It has been suggested that a combination of APMC and CMC tools may be most beneficial (Chase & Alexander, 2007). The overview of different benefits and challenges of CMC tools has shown that these tools can serve the dual purpose of fostering language skills and intercultural competence if operationalized successfully and that teachers have to consider their class objectives carefully before deciding on which CMC tools to use. In chapter two I will discuss virtual exchanges and their use of CMC tools in foreign language education in more detail.

1.7. Outline of Dissertation

This dissertation will be comprised of five chapters, the first of which is this introduction. In chapter two I will give a literature review summarizing the status of foreign language education in the US, SLA and the development of writing skills, previous research on intercultural

competence, the use of virtual exchanges in foreign language education, and the discussions on culture and intercultural competence. Chapter three will cover the methodology I am utilizing for the dissertation and give the context of the study, introduce the participants, explain the instruments, and describe the data collection and analysis procedures. In chapter four I will present the research findings. There will be one subchapter for each of the five research questions: 1. What effect does a semester-long tandem e-mail partnership with native speakers have on written language skills of language learners?; 2. What interest do American college students studying German as a foreign language have in learning about German culture and what effect does a semester-long e-mail exchange with native speakers have on this interest in cultural learning?; 3. What effect does a semester-long e-mail exchange with native speakers have on the way in which language learners self-assess their intercultural competence?; 4. How, if at all, is intercultural competence displayed and developed through a semester-long e-mail exchange with native speakers?; 5. Is there a relationship between the number of words written throughout the exchange and the progress in use of syntactic complexity as well as self-assessed intercultural competence? The fifth chapter will then be dedicated to summarizing and discussing research findings, to explaining the limitations of the study and to giving suggestions for further research.

CHAPTER 2

LITERATURE REVIEW

2. Literature Review

2.1. Foreign Language Education in the US

Foreign language education in the US and elsewhere must constantly adapt to the rapidly developing and ever-changing world. To respond to the changes in society, the foreign language profession has undergone many transformations in the last decades, including an expansion from the focus on literary texts (Birckbichler, 1990) to a more connected approach to teaching language, culture and literature (MLA Ad Hoc Committee on Foreign Languages, 2007), the inclusion of an increasing variety of technological tools (Blake, 2008), the emphasis of communicative language teaching as well as proficiency assessment (C. B. Mitchell & Vidal, 2001), and many more. While the development of language skills has long been a primary focus of foreign language education, one of the major developments in foreign language education in recent years has been a shift toward a larger emphasis on culture as well as the development of intercultural competence as important objectives alongside the development of linguistic skills.

The MLA Ad Hoc Committee on Foreign Languages explain that the goal of foreign language education today should be “educated speakers who have deep translingual and transcultural competence” (2007, p. 3). They emphasize that “deep cultural knowledge and linguistic competence are equally necessary” (2007, p. 2) in order to understand people from different backgrounds. This emphasis illustrates the dual objective of fostering language skills and cultural competence in the foreign language classroom of the 21st century. In addition to linguistic competence, the importance of all students to “develop and maintain proficiency in English and at least one other language” (National Standards in Foreign Language Education

Project, 1999, p. 7), the need for transcultural competence and cultural knowledge are required by “both the global economy and our ethnically diverse society” which make it imperative that citizens “understand the languages, traditions, and histories of other cultures as well as their own” (MLA Teagle Foundation Working Group, 2009, p. 4). In this objective for foreign language learners, the strong connection between language and culture is transparent and must be reflected in foreign language teaching today.

The emphasis on culture and intercultural competence alongside language and communication skills as part of foreign language education is also reflected in the National Standards for Foreign Language Learning in the 21st century (1999). Along with communication, connection, comparison, and communities, culture is one of the five interconnected goal areas (the five C’s) which constitute foreign language education, and the Standards emphasize that “language and culture is part of the core curriculum” (p. 7). The five C’s of the National Standards refer to: communication, and the ability to communicate in different languages in a variety of modes; cultures, and the ability to understand the contexts of languages; connections to other people and sources of information; comparisons between one’s native language and culture and the target language and culture; and communities, and the ability to be a part of different groups in different locations and contexts.

In the Standards it can be seen that culture and language are interconnected and that competence in both is crucial in order for students to gain the ability to communicate cross-culturally and cross-lingually. Foreign language education must take the interconnectedness of language and culture as well as the necessity to prepare students culturally and linguistically into account. According to the Standards, the overarching goal of foreign language education is for students to “learn to interact appropriately in the target language” (1999, p. 33) and in order to do

that, students should “gain knowledge and understanding of other cultures” (National Standards in Foreign Language Education Project, 1999, p. 9). The ACTFL Performance Guidelines also emphasize the importance of culture as part of foreign language education. One of the six performance descriptors used pertains to cultural awareness, and how the “student’s cultural knowledge [is] reflected in language use” (Swender & Duncan, 1998, p. 5).

Most foreign language instructors and researchers today are in agreement about the importance and value of fostering intercultural competence in foreign language classes (Bhawuk & Brislin, 1992; Byram, 1997; Deardorff, 2004; Fritz, et al., 2001; Hammer, et al., 2003; Lovik, 2008; Müller-Hartmann, 2006; Schulz, 2007b; Schulz, et al., 2005; Thorne, 2006). However, there is much dispute about the most effective way to achieve this significant foreign language objective (Byrnes, 2008; Lochtman & Kappel, 2008; Schulz, 2008; Schulz, et al., 2005; Wagner, 2008) and there is also much debate about what intercultural competence means (Altmayer, 2008; Dooly, Masats, Müller-Hartmann, & De Rodas, 2008; Koreik, 2008; Levine, 2008). Instructors and researchers alike call for deeper consensus on how to assess and foster intercultural competence (Deardorff, 2006b; Fantini, 2000; Koester, et al., 1993; Schulz, et al., 2005).

In addition to the importance of allowing students to become proficient in another language (National Standards in Foreign Language Education Project, 1999), computer literacy is another essential qualification in today’s society (O’Dowd, 2006a). Computer literacy, or electronic or digital literacy, can be defined as “the ability of students to use computers and the Internet as tools for general purposes” (Ehrmann, 2004). In light of the technological advances that are characterizing our society, electronic literacies are crucial prerequisites for students which can help prepare them for the changing demands of the 21st century.

One way to combine the aforementioned goals of foreign language education in the 21st century – the development of linguistic skills, intercultural competence, and cultural knowledge – as well as the important objective of fostering electronic literacy, is through computer-mediated communication projects with representatives of the target language. Through a virtual exchange, the development of intercultural competence can be fostered (Blake, 2008), language skills can be acquired (Brammerts, 1996b; Ware & Canado, 2007), cultural knowledge can be gained (O'Dowd, 2006a) and electronic literacies can be developed (Shetzer & Warschauer, 2000)

The following sections will introduce the theoretical framework of the dissertation, factors of second language acquisition as well as measures of language development, and will summarize literature on the development of (inter)cultural competence and (written) language skills in the context of computer-mediated communication. Definitions of culture and intercultural competence as well as models of intercultural competence will be outlined and compared and important studies on the development of intercultural competence and writing skills in the context of online communication will be summarized. Furthermore, the theoretical and empirical foundation for including virtual exchanges in foreign language education will be presented.

2.2. Second Language Acquisition Framework

This study is primarily situated within the framework of sociocultural second language learning theory. Sociocultural theory is based on the work of Lev Vygotsky, a Russian psychologist (Lantolf & Thorne, 2006). The main idea of sociocultural theory is that mediation is the process through which mental functions develop in humans. This process is supported by cultural artifacts or tools, which humans use to direct their behavior and mental activity. Language is

seen as the central tool for this process of mediation (R. Mitchell & Myles, 2004). Moreover, the developmental processes of the human mind do not occur in isolation but through interaction with others and the environment (Lantolf & Thorne, 2006). It has therefore been suggested that (foreign language) learning can be seen in the dialogue between individuals (Swain & Lapkin, 1998).

Regulation is an important concept in sociocultural theory and it pertains to the capability for independent functioning. According to sociocultural theory, the learner moves from object-regulation, to other-regulation, to self-regulation and from there to internalization (Lantolf & Thorne, 2006). The object-regulation phase refers to the phase in which individuals are fully controlled by other objects in order to achieve a task (to use the example given by Lantolf and Thorne (2006), a child that relies on building blocks to solve a math problem would be object-regulated). In the stage of other-regulation, “the activity of individuals is organized and regulated (i.e. mediated) by others” (Lantolf, 2000, p. 14), for example parents, teachers, siblings, or peers. Here, other individuals give assistance and make it possible for the individual to achieve specific tasks. In the stage of self-regulation, the individual is capable of achieving tasks without or with only minimal assistance. This is possible due to the process of internalization, “making what was once external assistance a resource that is internally available to the individual” (Lantolf & Thorne, 2006, p. 200). In order to be fully proficient in another language, an individual must reach the stage of self-regulation.

Sociocultural theory in general suggests that self-regulation can be achieved through scaffolding. Scaffolding is the term used to refer to the assistance given to learners in the stage of other-regulation. Through scaffolding, learners can complete tasks which they would not be able to complete without the assistance from others. I focus in this dissertation on pushed output

hypothesis which has been said to contribute to internalization as well (Swain, 2005). Pushed output hypothesis proposes that when language learners are pushed to achieve linguistic performances that are beyond their actual level of linguistic ability, they can produce improved language structures (Swain, 1995). Helping learners reach a new level of foreign language performance may show the internalization of linguistic knowledge as suggested by sociocultural theory as the last stage in regulation. The claim made by pushed output hypothesis is that pushing students to modify their output can support their second language acquisition.

Supported by sociocultural theory, pushed output hypothesis explains that through collaborative dialogue, language learners solve problems together thereby increasing their linguistic knowledge (Swain & Lapkin, 1998). As outlined by sociocultural theory, learning takes place in interaction because mediation is dialogically based. Collaborative dialogue between language learners can occur in speaking or writing and it can help language learners to produce more accurate linguistic structures through being pushed by another individual to modify an original output (Swain, 2005). By communicating together or solving problems and tasks collaboratively, new strategies and structures can “become part of the participants’ own mental activity” (Swain, 2005, p. 478) and bring the language learners closer to the stage of internalization.

Pushed output can have three functions. The main function of pushed output is the noticing or triggering function (Swain, 2005). This occurs, when language learners become aware of a problem while producing the target language which then pushes the language learner to produce modified output. Learners can become aware of linguistic problems because of external feedback such as a request to clarify or because of internal feedback. The modified or “pushed” output arises because new or different mental processes are triggered. As Swain (1995)

explains, “output is one of the triggers for noticing” (p. 373) leading language learners to change their output, because they have realized that they are unable to express what they want to express, or because they have noticed some other gap in their own knowledge of the target language. Through changing their output, it is assumed that language learners can acquire certain aspects of the second language.

In its metalinguistic function, pushed output can occur when language is used to “reflect on language produced by others or the self” which in turn “mediates second language learning” (Swain, 2005, p. 478). As outlined above, sociocultural theory emphasizes that mediation through tools, such as language, supports the development of cognitive functions. Output, “speaking, writing, collaborative dialogue, and/or verbalizing” (Swain, 2005, p. 478), can be understood as such a tool of mediation which can help individuals to regulate their cognitive behavior.

The third function of pushed output is the hypothesis testing function (Swain, 2005). This function suggests that learners may use output to try out a hypothesis they may have about how to express something in speaking or writing. That means, they may modify their output in order to attempt to express some meaning more accurately or to convey a message more successfully. This often occurs after learners have received a request for clarification or other feedback. It has been suggested that this form of modified output does indeed indicate that language learning is taking place.

In the context of a virtual exchange, the cross-cultural communication with a native speaker of the target language and the need to discuss assigned topics may act as a trigger for learners to notice gaps in their own linguistic abilities and may push them to adapt their output and use, among other things, syntactically more complex structures to get their meaning across.

Without the need to communicate effectively cross-culturally and explain certain cultural phenomena, the participants in the virtual exchange may not have the opportunity or need to experiment with more complex structures. Modifying their output to express more complex ideas may prove fruitful as it has been suggested that “‘pushing’ learners beyond their current performance level can lead to enhanced performance a step which may represent the internalization of new linguistic knowledge” (Swain, 1995, p. 374).

While pushed output hypothesis focuses mainly on language learning, sociocultural theory in general is a theory of learning, and thus applies both to language learning as well as cultural learning. Thus sociocultural theory and pushed output hypothesis together is a well suited framework for this study which looks at both language learning and intercultural competence. Through the computer-mediated communication (e-mail) between German and American students, both partners are at once experts (native speakers) and novices (learners) and both sides can assist the other in learning the language and culture and developing intercultural competence by pushing the self and the other through internal and external feedback to modify output in order to answer questions, clarify demands, and discuss the assigned tasks.

2.2.1. The Development of Second Language Writing

As emphasized in the Standards for Foreign Language Learning (1999), students must develop communication skills in a foreign language. Communication skills do not refer only to the ability to communicate orally in a foreign language, but also to the ability to communicate in writing. In fact, communicative competence is crucial in order to enable students to interact successfully as well as interpret information obtained through a variety of media effectively. The development of writing skills can be found in the Standards, as it is emphasized that students should not only develop skills in discussing and presenting information through speaking but also in written

modes. Because the context of this study is primarily a text-based virtual exchange, the next section will be dedicated to briefly summarizing second language writing issues. I will concentrate specifically on the development of complexity in foreign language writing as this is the selected focus in the study.

Research on the development of writing skills in foreign language education has increased in the last decades and is increasing still (Polio, 2003). As summarized by Polio (2003), research has examined the product of the writer, the writing process, the writer him/herself as well as the context of writing. Research has also investigated the role of the teacher. The effects of computer use on the development of writing skills and literacy in general has also been a focus of much recent research (Pennington, 2003). In fact, it has been suggested that using the computer in foreign language writing instruction can have motivational effects on the learners (Hyland, 2003).

In general, three constructs have been connected to the analysis of second language development: complexity, accuracy, and fluency (Pallotti, 2009). These three variables have been the predominant concepts in applied linguistics research since the 1990s (Housen & Kuiken, 2009). The acronym CAF (complexity, accuracy, fluency) can be used to describe these variables that have been investigated in numerous studies in second language research (Housen & Kuiken, 2009). Language fluency can be defined as “the capacity to produce speech at normal rate and without interruption” (Skehan, 2009, p. 510). The concept of fluency has typically been analyzed for oral language production (Housen & Kuiken, 2009) and research has shown that fluency is a “multidimensional construct, in which sub-dimensions can be recognized” (Pallotti, 2009, p. 591). Drawing on a vast array of research, Wolf-Quintero et al. (1998) suggest that fluency means “that more words and more structures are accessed in a limited time” (p. 14).

They further explain that “Fluency is not a measure of how sophisticated or accurate the words or structures are, but a measure of the sheer number of words or structural units a writer is able to include in their writing within a particular period of time” (Wolfe-Quintero, et al., 1998, p. 14). The emphasis of fluency measures appears to be on the production of language within a predetermined time frame.

Several studies have analyzed fluency development in second language contexts. Research has suggested that planning activities in foreign language classes, including pre-task, within-task planning and rehearsal, have beneficial effects on overall fluency developments (Ellis, 2009). Additionally, opportunities for using the target language outside of the classroom has also been found to correspond to fluency development (Derwing, Munro, & Thomson, 2008). It has been suggested, that extensive grammar practice may not necessarily contribute to improvement in oral fluency (Taguchi, 2008)

Language accuracy is generally regarded as the least ambiguous concept (Housen & Kuiken, 2009; Pallotti, 2009). It refers to “the degree of conformity to certain norms” (Pallotti, 2009, p. 592) or “the ability to be free from errors while using language to communicate in either writing or speech” (Wolfe-Quintero, et al., 1998, p. 33). Problems with the concept of accuracy revolve mainly around the issue of the ideal of the native speaker, because errors are generally determined based on a comparison with native language use (Housen & Kuiken, 2009). There are some doubts about whether accuracy measures can give reliable information about language development (Wolfe-Quintero, et al., 1998), but Pallotti (2009) argues, that the concept of accuracy is at least “well-defined and coherent” (p. 592). However, Pallotti (2009) warns against classifying errors based on gravity because these measures tend to obscure accuracy and development.

The last of the three language development constructs is that of complexity. It has been said to be the most problematic and ambiguous construct (Housen & Kuiken, 2009; Pallotti, 2009). This is especially true because it can be used to refer to very different aspects of the foreign language production (Pallotti, 2009). Pallotti (2009) questions whether the diverse types of complexity that have been identified (lexical, interactional, propositional, for example) should be considered as “dimensions of the same construct or as different constructs altogether” (p. 593). Measures of lexical diversity or density have been employed in the investigation of the vocabulary knowledge of second language learners, for example (Johansson, 2008)

In spite of its ambiguity, measures of grammatical complexity have often been employed in second language research. Grammatical complexity generally refers to the use of more sophisticated forms by the language learner (Wolfe-Quintero, et al., 1998). Measuring syntactic complexity is important, because language development correlates to an increase in syntactic proficiency (Ortega, 2003). These measures, then, are useful in determining the “effects of a pedagogical intervention on the development of grammar, writing ability, or both” (Ortega, 2003, p. 492).

Wolfe-Quintero, Inagaki, and Kim (1998) compare several studies of development in second language writing concerned with the measures of complexity, accuracy and fluency. By analyzing several studies, the authors attempt to discover which measures are most indicative of second language writing development. In their comprehensive analysis, they suggest that the best fluency measures so far are words per T-unit, words per clause, or words per error-free T-unit. A T-unit can be defined as a main clause and any connected subordinate clauses regardless of punctuation (Wolfe-Quintero, et al., 1998). The best grammatical complexity measures according to their analysis include measures of dependent clauses per clause, as well as clauses

per T-unit. To measure lexical complexity, the authors suggest a word type or sophisticated word type measure. In the context of accuracy measures, it is suggested that error-free T-units or errors per T-unit were the most successful measures.

Ortega (2003) analyzed and compared six longitudinal studies of second language writing and concluded that in order to determine changes and development in a second language learner's writing skills, learners need to be observed and evaluated over a period of at least a year in college foreign language instruction. As a result of her analysis of different studies, she suggested that two or three months instruction may produce small developments in English as a second language writing and very small developments in foreign language writing (Ortega, 2003).

Research has suggested that planning opportunities before a writing task positively influence the writing outcome in terms of greater fluency, syntactic variety as well as accuracy. Students who were not given the opportunity to pre-plan their writing tasks achieved less positive writing results (Ellis & Yuan, 2004). Additionally, it has been shown that students who were exposed to the target language at an earlier age were able to develop their second language (and first language) writing skills more strongly (Arecco & Ransdell, 2002). Specifically, children who were exposed to an L2 before the age of 12 appeared to produce L2 writing more fluently and of higher quality. Differences have been revealed between the development of writing skills in a second and a foreign language (Ortega, 2009).

While second language learners seem to benefit from their early exposure to the second language, other studies have suggested that early exposure to a foreign language in classroom contexts will not result in greater writing proficiency if this exposure is limited to one setting and short time spans (Celaya & Naves, 2009). Additionally, Celaya and Naves (2009) found that

accuracy, fluency, and complexity in writing do not develop simultaneously, and that younger and older students develop these sub-sets of writing skills at different rates. Not surprisingly, it has also been suggested that second language writing development is impacted by the way students acquired writing skills in their native language (Rinnert & Kobayashi, 2009).

The development of complexity in writing is an important area of second language research because it can contribute to a better understanding of the factors impacting a language learner's writing proficiency and sophistication. The multidimensional concept of complexity can be applied to a range of second language domains, including lexical complexity (Fellner & Apple, 2006), syntactic complexity (Ortega, 2003), and grammatical complexity (Wolfe-Quintero, et al., 1998).

Ellis and Yuan (2004) found out that second language writers improve their use of complex structures if they are given the opportunity to plan their writing task before completing the writing task. Specifically, their study showed that students were able to use more subordination, as well as greater lexical variety than those students who did not participate in pre-planning writing activities. Similarly, Sauro and Smith (2010) investigated syntactic complexity in synchronous chat environments and confirmed that online planning activities increase the use of syntactic complexity. In contrast the pre-planning which influenced syntactic complexity in Ellis and Yuan's (2004) study, online planning refers to planning activities that take place during the writing process. According to these two studies, both types of planning activities can positively impact the use of syntactic complexity. When analyzing second language writing in the context of computer-mediated communication, it has also been suggested that asynchronous communication enables learners to develop their syntactic complexity more strongly than synchronous communication (Sotillo, 2000). The findings outlined above explain

this phenomenon. In asynchronous communication, students have more opportunities for engaging in pre-planning and online planning activities which has been said to correspond to an increase in syntactic complexity.

In addition to the impact of planning activities on the syntactic complexity of foreign language writing products, the type of writing prompts have also been found to correspond to the syntactic complexity used by foreign language learners (Way, Joiner, & Seaman, 2000). In a study of French learners' writing, the bare prompt (a plain explanation of the task), resulted in the lowest use of syntactic complexity, while the vocabulary prompt (a prompt including also a vocabulary list) and the prose model prompt (the plain task prompt with an example letter to reply to) elicited higher levels of syntactic complexity as measured by a T-unit analysis. Additionally, the type of writing appears to influence syntactic complexity as well. Expository writing showed higher levels of syntactic complexity than descriptive writing.

In all, syntactic complexity has been selected as the focus for the linguistic analysis in this study. Syntactic complexity can be useful in determining second language learners' writing development, because as language learners progress in their linguistic development, their syntactic knowledge and performance abilities also grow (Ortega, 2003). Fluency and accuracy have not been selected as the focus in this dissertation, because fluency is best measured when students have to produce language in a given time frame which is not the case in this exchange, and accuracy measurement requires valid definitions of errors which may not be applicable to students who may be at different levels in their linguistic development.

Syntactic complexity measures can help to understand how a language learner is making use of his or her syntactic repertoire and how this repertoire is evolving. Syntactic complexity can be measured in a variety of ways including length-based measures (Norris & Ortega, 2009),

amounts of coordination (Bardovi-Harlig, 1992) or amounts of subordination (Norris & Ortega, 2009). Norris and Ortega (2009) explain that there are several different measures in use, many of which, however, measure the same thing. They warn against using measures that really target the same issue because of the redundancy of such an analysis. Likewise, they suggest combining measures that focus on diverse dimensions of complexity in order to reveal a more accurate picture of language development. Thus, Norris and Ortega (2009) emphasize the need for a multidimensional approach to measuring syntactic complexity. Specifically, they suggest jointly analyzing at least three dimensions of syntactic complexity: complexity via subordination, global or general complexity, and subclausal complexity via phrasal elaboration. Although several studies focus solely on subordination measures in their analysis of syntactic complexity (Rodriguez, 1998; Warschauer, 1996a), Norris and Ortega (2009) explain that that this gives an inadequate picture of the overall syntactic complexity of a second language learner. Subordination measures should be only one of many measures of syntactic complexity (Ortega, forthcoming 2012).

2.3. Culture, Intercultural Competence and Foreign Language Education

2.3.1. Definitions of Culture

Until the 1980s, culture was only part of foreign language education in the USA as factual knowledge (O'Dowd, 2006a). The focus on communicative teaching around that time largely disregarded the cultural backgrounds of the students. Although some teachers still believe that the primary goal of foreign language education is the development of linguistic skills (Lang-Melcher, 2000), culture has become increasingly important in the context of foreign language education. The turn toward more cultural teaching that went beyond the transmission of factual knowledge came about in the 1990s and Kramsch's (1993a) *Context and Culture in Language*

Teaching is an early example of this turn. Today, there is little argument about the important role of culture in foreign language classes (Bennett, 1997; Finger, 2008; Kern & Warschauer, 2000; Lochtman & Kappel, 2008; Lovik, 2008; Samovar & Porter, 1999; Schulz, 2008; Seelye, 1997; Williams, Warren, & Olaniran, 2009).

Although most researchers and instructors agree on the importance of culture in foreign language education, there is little consensus about what culture actually is (Storme & Derakhshani, 2002), how it can be defined (Finger, 2008), what aspects of it should be taught (Kramsch, 1993b; Schulz, et al., 2005), and how to assess cultural knowledge (Schulz, 2007a). The uncertainty of how culture should be understood correlates to an ongoing struggle of how to teach and assess it (Byrd, Hlas, Watzke, & Valencia, 2011). In fact, one study on Japanese teachers' attitudes toward teaching culture in English Foreign Language (EFL) classes revealed that while they believed culture to be a crucial part of their teaching, they did not incorporate culture as strategically and frequently in their classrooms as other learning objectives (Stapleton, 2000).

The Standards, which are supposed to serve as guidelines for teachers, have been criticized for not sufficiently outlining how cultural understanding can be fostered in the foreign language classroom (Storme & Derakhshani, 2002). This criticism echoes general concern about how to best incorporate and assess culture in the foreign language classroom. In the following section I will outline some definitions of culture that have been suggested and contrast the different understandings of culture.

Kramsch (2008) explains that the concept of culture itself is problematic today especially because of globalization and the associated rise in multiculturalism. According to Kramsch (2008) culture has been removed from its connection to just one nation, one territory, and one

history and has instead become “denationalized”, “deterritorialized”, and “dehistoricized” (2008, p. 6). She claims, that culture is now fragmented, and her emphasis that culture is not a monolithic entity, is mirrored in the understanding of culture by other scholars, who claim that culture is not a homogenous entity (Altmayer, 2008; Belz & Thorne, 2006a; O'Dowd, 2006a). Warschauer (2009) supports the idea that new changes due to globalization challenge our understanding of culture.

Several definitions of culture have been suggested over time, some of which go in the same direction, while others offer a rather different perspective. Byram (1997), who worked in the field of language education as well as intercultural studies, suggests that culture can be understood as “the beliefs and knowledge which members of a social group share by virtue of their membership” which can also be called “shared meanings” (p. 39) of this social group. Byram’s (1997) definition focuses on the particular perspectives of a group and his definition of culture is similar in the inclusion of perspectives to the one put forward by the National Standards of Foreign Language Education (1999), which state that culture includes “the philosophical perspectives, the behavioral practices, and the products – both tangible and intangible – of a society” (p. 47). All three, perspectives, practices, and products, are interconnected. The practices include the ways in which individuals in this social group interact. The products refer to things that are produced by this social group, such as books, tools, foods, laws, music, games. The perspectives are the values, meanings, ideas, and attitudes of the social group. The products and practices evolve out of the perspectives, which impact both the groups’ social behavior patterns as well as the cultural products they produce. In line with this understanding of culture, Kramsch (1995), a foreign language professor, also summarizes the two main definitions of culture as the products (a definition stemming from the humanities) and

the attitudes, beliefs and behaviors (a definition stemming from the social sciences) of a social group.

In an article on stereotypes and teaching German, Webber (1990), who also works in the field of foreign language education and research, suggests a definition of culture as "the totality of characteristic patterns of thought, behavior, and self-expression through which individual members of a national, linguistic, or ethnic group or subgroup react to, make sense of, and seek to satisfy, basic human needs" (p. 132). Though more complex in its wording, this definition, too, emphasizes behavior and beliefs of a social group. The individual mentioning of different kinds of groups (national, linguistic, ethnic, other subgroups) underlines Kramersch's (2008) idea of the denationalizing and deterritorialization of culture. We cannot speak of *one* German culture, or *one* American culture, and this must be reflected in our teaching.

Working in the field of cultural studies, Kramer (2008) explains culture as "die gesamte Lebensweise einer Gesellschaft bzw. einer gesellschaftlichen Teilgruppe unter Einschluss ihrer Selbstinterpretationen und der Zeichensysteme, in denen sie erfolgen" (p. 42). Defining culture as the way of living of a society or social group makes it a very broad definition that could encompass all the aspects mentioned in the other definitions as well. Kramer (2008) also suggests that individuals attain their cultural identity through the processes in which they differentiate themselves from other people, nations, or cultures: "aus beiderseitigen Erfahrung der Differenz [werden] die jeweiligen Identitäten geformt" (p. 45). According to this understanding, our cultural identities are developed in delineation to other cultural identities.

The strong link between culture and communication is expressed in Samovar and Porter's notion of the concept of culture (Samovar & Porter, 1999). They emphasize that culture permeates everything and can be found everywhere and in all aspects of life. According to

Samovar and Porter (1999) “culture is ubiquitous, multidimensional, complex, and all-pervasive” (p. 7). Therefore, they claim, no one definition can do it justice. It simply encompasses too many aspects. Nonetheless, they attempt a definition by stating that “we shall define culture as the deposit of knowledge, experience, belief, values, attitudes, meanings, social hierarchies, religion, notions of time, roles, spatial relationships, concepts of the universe, and material objects and possessions acquired by a group of people in the course of generations through individual and group striving” (1999, p. 7). This definition appears to be more precise in the components of culture. However, on closer analysis the definition merely gives more details of what is subsumed under the overarching categories of perspectives, practices, and products in other definitions. To put it more briefly, they summarize that culture is “a complete pattern of living. It is elaborate, abstract and pervasive” (Samovar & Porter, 1999, p. 10). Neuliep (2009) offers a definition of culture which is almost identical to the one given by Samovar and Porter (1999), and focuses also on the patterns of a social group. For Neuliep, “culture is defined as an accumulated pattern of values, beliefs, and behaviors, shared and an identifiable group of people with a common history and verbal and nonverbal symbol systems” (2009, p. 17).

According to Samovar and Porter (1999) there is consensus on some features of culture even though definitions may show discrepancies. Those features include that culture is learned and transmitted from one generation to the next, that it is based on symbols, that it never stays the same but is changing and changeable, and that it is ethnocentric. The emphasis of ethnocentrism of culture, however, is in contrast to some other notions of culture such as Warschauer’s (2009), who emphasizes the necessity to reconceptualize culture in light of globalization, and Kramsch (2008) who claims that cultures are becoming denationalized.

In spite of the importance of culture in the National Standards for Foreign Language Learning and the ACTFL Performance Guidelines, a study by Ricardo-Osorio (2008) showed that the National Standards are rarely used to create assessment of foreign language skills and knowledge of target culture at the college level. This may in part have to do with the fact that the Standards were developed for K-12 (as Ricardo-Osorio suggests), but also with the problem that there is still much argument about the concept of culture and how to teach it.

Some interesting metaphors are suggested in the following definition of culture: “Culture is tacitly assumed to be a survival kit carried as a backpack by members of our species going about their business” (Magala, 2005, p. 7). From the field of cross-cultural management, Magala (2005) goes on to say that culture includes cultivation of both land and mind, and in general of human civilization. For him, it includes all the practices in which individuals of a society engage in order to make sense of their world, as well as their values, norms and ways. It can be seen that although the metaphor of the survival kit may be a new image, the premise of the concept does not differ much from the other definitions given above.

Similarly, the definition of culture put forward by Lustig and Koester (2003), both from the field of communication studies, follows the same general direction as the other definitions that have been suggested in the field of foreign language education or communication. They define culture “as a learned set of shared interpretations about beliefs, values, and norms, which affect the behaviors of a relatively large group of people” (2003, p. 30). They also mention history, ecology, technology, biology, institutional networks, and patterns of communication as factors that impact differences between cultures.

Another definition of culture is outlined by Hofstede, a researcher of organizational culture, in his book *Cultures and Organizations: Software of the mind* (1991). Hofstede (1991)

compares culture to computers and suggests the analogy of mental programming, where individuals learn patterns of thinking, behaving, or feeling and culture is the *software of the mind*. He explains that the mental programming takes place in the individual's environment and all life experiences contribute to the programming. Furthermore, Hofstede (1991) distinguishes between culture one and two. Culture one is for him civilization (education, literature, art...), and culture two is "the collective programming of the mind which distinguishes the members of one group or category of people from another" (1991, p. 5). The second understanding of culture is the one he adopts for his book.

While culture is learned, Hofstede (1991) also explains that the mental programming is impacted by human nature, which is universal, and also by an individual's personality, which is unique. Because we all are part of many groups, we all have a variety of layers of mental programming inside of us (Hofstede, 1991). This means that all individuals, though part of a larger culture, are influenced by the subgroups they are also a member of, and everyone's cultural identities differ because of the different influential factors in their lives. Hofstede (1991) also offers some thoughts on the differences between national cultures, and does in fact use the remainder of his book to explain these and suggest how intercultural conflict can be avoided on the basis of this knowledge. What distinguishes one national culture from another is for example, its relation to authority, its conception of self, and its ways of dealing with conflict (Hofstede, 1991).

This brief summary of definitions of culture in the context of intercultural training and foreign language education shows consensus on some main features of culture. Most definitions emphasize some combination of the products, perspectives, and behaviors of a social group. As that, the definition put forward by the National Standards of Foreign Language Education (1999)

seem to have chosen a well-suited, generally accepted definition of culture, which shall be adopted for the remainder of this dissertation as well. To sum up, in line with the definition given by the National Standards, culture shall henceforward be defined as the interconnection between the products, practices, and perspectives of a group of people.

2.3.2. Students' Interest in Cultural Learning

There is universal consensus on the important value of culture in the foreign language classroom (Bennett, 1997; Finger, 2008; Kern & Warschauer, 2000; Kramsch, 1993a; Lochman & Kappel, 2008; Lovik, 2008; Samovar & Porter, 1999; Schulz, 2008; Seelye, 1997; Williams, et al., 2009) and the National Standards in Foreign Language Education (1999) emphasize that “students cannot truly master the language until they have also mastered the cultural contexts in which the language occurs” (p. 31). However, little is known about students’ interest in cultural learning in their foreign language classes. In fact it has been suggested that one reason why students do not choose to take German classes is their lack of interest in German culture (Love, 1987). It is therefore crucial to obtain an understanding of what students are interested in and how they can be motivated to learn about German culture and language.

Chavez (2005) emphasizes that “there is no immediate reason to accept our students’ interest in foreign language culture as a fact” (2005, p. 31). She points out that there is a clear divide between what teachers believe should be taught and what students want to be taught and regrets that “many students do not share our consensus view that culture – however understood – has a firm legitimate place in the language classroom” (Chavez, 2002, p. 135).

A study conducted by Chavez (2005) revealed that it is unpredictable if and how much students believe that culture should be included in foreign language instruction. For example, most students who took her survey said that more than half of the cultural components typically

included in language courses should be learned by German majors only. In a different study, Chavez (2002) found out that some students believed that culture in the foreign language classroom competes with language teaching, and some believed that culture is not teachable, or at least not in the foreign language context. In general, Chavez (2002) revealed that there are discrepancies between teachers' and students' beliefs of the importance of culture, the sequence of its teaching, the scope of cultural knowledge, and the relationship that exists between language and culture.

Similarly, Dechert and Kastner (1989) revealed that there was a mismatch between students' specific interests in regard to target culture learning and the topics covered by standard textbooks. Their study concluded that topics of regular everyday life enjoyed the strongest interest of undergraduate students enrolled in German. The authors suggest that students' particular interests must be taken into consideration when planning classes and selecting textbooks.

Because of these discrepancies, Chavez (2005) suggests that the gap between what the profession and what students believe are important components of a language class needs to be bridged. This can for example be done by making our goals and the connection between language and culture clearer to our students. Additionally, she suggests that we should use the cultural expertise of instructors in other departments and professional development opportunities for remaining culturally competent.

In general, little is known about students' interest in cultural learning, and among other things, this dissertation study aims to fill this lack of research by further investigating students' interest in cultural learning and the effects of telecollaboration thereon. Because foreign language education puts such a strong focus on culture today (The National Standards for

Foreign Language Learning suggest Culture as one of their five core curricular elements), it is crucial to take into consideration how our students feel about the stronger emphasis on culture, and if their interest therein can be increased through online communication projects with native speakers.

2.3.3. Definitions of Intercultural Competence

Intercultural competence has been widely discussed for many years after first having been introduced to language education in the 1980's (Fantini, 2006). Not only have a variety of definitions of intercultural competence been proposed but a multitude of terms have been used to discuss this phenomenon. Fantini (2006) mentions for example cross-cultural awareness, global competitive intelligence, cultural competence, cultural sensitivity, ethno-relativity, international competence, transcultural communication, global competence, global competitive intelligence, cross-cultural adaptation, metaphoric competence, effective inter-group communications, intercultural interaction, biculturalism, and multiculturalism as alternative terms for intercultural competence. While a variety of terms might exist, most scholars seem to use either intercultural (communicative) competence (Alexei & Richard, 2004; Belz, 2003; Burwitz-Melzer, 2001; Byram, 1997; Camilleri, 2002; De Wachter & Decavele, 2004; Deardorff, 2004; Fantini, 2000; García & Biscu, 2005; Koester, et al., 1993; Liaw, 2006; Lussier et al., 2007; Lustig & Koester, 2003; Mark, 2004; Müller-Hartmann, 2006; O'Dowd, 2006a; Seelye, 1997; Sercu, 2004; Spitzberg, 2000; Starkey, 2003) or cross-cultural competence/communication (Fowler, 1995; Ingulsrud, Kai, Kadowaki, Kurobane, & Shiobara, 2002; James, et al., 2006; Y. Y. Kim, 1988; Magala, 2005; Norhayati, 2000; Williams, et al., 2009).

The term *intercultural competence* seems to be the most widely used and accepted and will therefore be adopted for the remainder of this dissertation. This does not mean that other

terms are not equally well-suited but the predominance of this term suggests a general agreement among researchers and instructors which shall be supported in this work.

The definitions of intercultural competence are varied and different aspects of this skill are emphasized by different scholars. In the following section, I will briefly summarize some of the definitions that have been proposed in the context of foreign language education and intercultural training. I will then introduce some of the models of intercultural competence that have been employed or suggested for foreign language and intercultural training contexts.

Byram's (1997) definition of the term intercultural competence stresses the communicative aspect. He uses it to refer to the ability to function effectively within one's own as well as other cultures, and to the skill to engage in meaningful and successful interactions with individuals from diverse cultural backgrounds in one's own language. Unlike Fantini (2009) and Deardorff (2009), Byram (1997) also distinguishes between intercultural and intercultural communicative competence, the latter referring to the skills to interact within one's own and other cultures in a foreign language.

Belz explains that in foreign language learning contexts, intercultural competence is usually "loosely defined as an awareness and/or understanding of foreign attitudes, beliefs, values, and (linguistic) practices" (2003, p. 68). This summary seems to reflect well the components of intercultural competence that occur in many definitions of intercultural competence by other scholars. However, the definition does not emphasize any knowledge or skills, which are generally underlined in many other definitions.

Another brief but concise definition is the following, offered as a summary of what most definitions of intercultural competence seem to have in common: intercultural competence is "the ability to step beyond one's own culture and function with other individuals from

linguistically and culturally diverse backgrounds” (Sinicrope, Norris, & Watanabe, 2007, p. 1). This definition is very general, and focuses only on a certain, rather vague ability, without including specific attitudes or knowledge, both of which are important components of many definitions of intercultural competence.

Chen and Starosta (2000) combine the terms intercultural competence, intercultural awareness, and intercultural sensitivity in their understanding of intercultural communication. They, thus, distinguish between the cognitive, affective, and behavioral aspect of intercultural communication. They suggest that “intercultural awareness (cognition) is the foundation of intercultural sensitivity (affect) that in turn leads to intercultural competence (behavior)” (p. 407). They define intercultural competence as “the behavioral aspect of intercultural communication. It refers to the ability to behave effectively and appropriately in intercultural interactions” (p. 407). Intercultural awareness, they explain, “is the cognitive aspect of intercultural communication. It refers to the understanding of cultural conventions that affect how people think and behave” (p. 407). Last but not least, they define intercultural sensitivity as “an individual’s ability to develop a positive emotion towards understanding and appreciating cultural differences in order to promote appropriate and effective behavior in intercultural communication” (p. 408).

The combination of affective, cognitive and behavioral aspects as constituents of intercultural competence is also underlined in Camilleri’s (2002) understanding of intercultural competence. Speaking of the acquisition of intercultural competence as a life-long journey, Camilleri (2002) calls attention to the need for developing specific cognitive, affective, and behavioral traits for successfully mastering the demands of intercultural encounters. Specifically, she suggests a) “developing cognitive complexity in responding to new environments”, b)

“motivating affective co-orientation towards fresh encounters,” and c) “directing behavior to perform various interactions with additional social groups” (p. 23). Focusing on affective, cognitive, and behavioral aspects of intercultural competence is promising, because it is a good attempt to cover the breadth of sub-skills which comprise the complexity of intercultural competence.

Guth and Helm (2010a) emphasize the transferability of intercultural competence in their definition of intercultural competence as “a transversal skill that can serve learners in numerous contexts that extend beyond the classroom and the specific language being learned” (p. 18). Fantini (2009), on the other hand, maintains that intercultural competence is more than one skill, but rather a set of different skills. He suggests the following definition of intercultural competence: “intercultural competence may be defined as complex abilities that are required to perform *effectively* and *appropriately* when interacting with others who are linguistically and culturally different from oneself” (p. 458). The notion of intercultural competence as a set of skills required for successful and appropriate interaction with people from diverse cultural and linguistic backgrounds is supported by many researchers.

Deardorff (2009), for example, puts forward a similar definition as Fantini (2009), also focusing on the effectiveness and appropriateness of intercultural communication as the key defining factor of intercultural competence. She proposes, that intercultural competence “is defined as the *effective* and *appropriate* behavior and communication in intercultural situations” (p. 479). Unlike Chen and Starosta (2000), whose definition included cognitive, behavioral and affective aspects, and Fantini’s (2009) definition, which highlights the combination of different skills, Deardorff’s (2009) definition emphasizes the behavioral aspect of intercultural competence. Deardorff (2004) also points out that a definition of intercultural competence has to

include more than cultural knowledge, for “knowledge alone is not enough to constitute intercultural competence” (p. 15). Skills and certain attitudes towards the interaction with individuals from different backgrounds have to develop along with cultural knowledge in order to become interculturally competent.

A somewhat different definition is suggested by Lochtmann and Kappel (2008). In their book, *The World a Global Village*, they first suggest that one could define intercultural competence specifically in reference to the skill “to use formal and informal language in appropriate situations” (p. 12). The definition here gets narrowed down to formal vs. informal language use and defining intercultural competence in such a limited way seems to miss some important features of intercultural communication. However, the authors later attempt to widen their definition a bit when explaining that they will “use the term ‘intercultural competence’ in order to refer to both linguistically and culturally based behavior patterns that are made use of in interactional situations” (Lochtmann & Kappel, 2008, p. 30). Thus, similarly to Deardorff (2009), the focus of this definition is on the behavioral aspect of intercultural competence. Interesting Lochtmann and Kappel’s (2008) definition is the explicit collapse of intercultural competence and intercultural communicative competence into one term – intercultural competence. While others, such as Byram (1997), specifically distinguish between the two, Lochtmann and Kappel (2008) explain that intercultural competence always carries the implication of a communicative competence (and has linguistic and sociolinguistic components) and a terminological distinction is therefore superfluous.

Another definition of intercultural competence that focuses on different aspects is offered by Lustig and Koester (2003). They propose that intercultural competence always depends on the context and therefore requires a combination of appropriate and effective behavior, specific

knowledge, motivation and actions that are suited to the situation. Again, it can be seen that intercultural competence is regarded as a combination of different skills, here in the areas of behavior, knowledge and motivation. Similarly, Lussier et al. (2007) also suggest three dimensions of intercultural communicative competence, which for them consist of knowledge, knowing how, and being. They further claim that intercultural competence includes “interacting effectively across cultures” (p. 25), which means “accomplishing a negotiation between people based on both culture-specific and culture-general features that are on the whole respectful and favourable to each” (p. 25).

While some researchers only use the term intercultural competence, others speak only of intercultural communicative (or communication) competence. The distinction, or rationale for choosing either, is not always clear. Neuliep (2009), for example, defines intercultural communication competence “as the degree to which you effectively adapt your verbal and nonverbal messages to the appropriate cultural context” (p. 393). He goes on to say that this skill depends on knowledge, motivation, as well as specific skills. Thus, although Neuliep (2009) calls this intercultural communication competence, he suggests a definition that corresponds largely to the definition given by Lustig and Koester (2003), for example.

Lochtmann and Kappel’s (2008) claim that intercultural competence always contains a communicative aspect seems logical. In the remainder of this dissertation, the term intercultural competence will be used to refer to the complex skills required for successful and effective communication and interaction with people from diverse cultural and linguistic backgrounds, regardless of which language is chosen for the interaction. The definition of intercultural competence adapted for this dissertation corresponds most closely to the one by Fantini (2009).

Another concept that emerges in the discussion on intercultural competence is that of the intercultural speaker. According to Byram et al. (2001) the intercultural speaker has abilities for interaction with different individuals, can accept various perspectives and ideas of the world, and is able to mediate between them. I believe that any individual that can be said to be interculturally competent can likewise be called an intercultural speaker, since communication is at the center of intercultural competence.

The following table (1) is a summary of the different definitions of intercultural competence that have been outlined above.

Table 1 *Summary of Definitions of Intercultural Competence*

SCHOLAR	DEFINITION OF INTERCULTURAL COMPETENCE
<i>Belz (2003, p. 68)</i>	Intercultural competence is “defined as an awareness and/or understanding of foreign attitudes, beliefs, values, and (linguistic) practices.”
<i>Byram (1997, pp. 70-71)</i>	Intercultural competence is “the ability to interact in their own language with people from another country and culture, drawing upon their knowledge about intercultural communication, their attitudes of interest in otherness and their skills in interpreting, relating and discovering, i.e. of overcoming cultural difference and enjoying intercultural contact.” Intercultural communicative competence is the ability “to interact with people from another country and culture in a foreign language.”
<i>Camilleri (2002, p. 23)</i>	Intercultural competence requires the development of cognitive, affective, and behavioral traits, specifically it requires a) “developing cognitive complexity in responding to new environments”, b) “motivating affective co-orientation towards fresh encounters,” and c) “directing behavior to perform various interactions with additional social groups.”
<i>Chen and Starosta (2000, pp. 407-408)</i>	Intercultural competence is “the behavioral aspect of intercultural communication. It refers to the ability to behave effectively and appropriately in intercultural interactions.” Intercultural awareness “is the cognitive aspect of intercultural communication. It refers to the understanding of cultural conventions that affect how people think and behave.”
<i>Fantini (2009, p. 458)</i>	Intercultural competence “may be defined as complex abilities that are required to perform effectively and appropriately when interacting with others who are linguistically and culturally different from oneself.”

Table 1 (cont'd)

<i>Guth and Helm (2010a, p. 18)</i>	Intercultural competence is “a transversal skill that can serve learners in numerous contexts that extend beyond the classroom and the specific language being learned.”
<i>Lochtmann and Kappel (2008, p. 30)</i>	Intercultural competence refers to “both linguistically and culturally based behavior patterns that are made use of in interactional situations.”
<i>Lussier et al. (2007, p. 25)</i>	Intercultural competence includes three dimensions: knowledge, knowing how, being. It also includes “interacting effectively across cultures” which means “accomplishing a negotiation between people based on both culture-specific and culture-general features that are on the whole respectful and favourable to each.”
<i>Lustig and Koester (2003)</i>	Intercultural competence depends on the context and requires of the individual a variety of appropriate and effective behavior strategies in addition to knowledge, motivation and actions.
<i>Neuliep (2009, p. 393)</i>	Intercultural communication competence is “the degree to which you effectively adapt your verbal and nonverbal messages to the appropriate cultural context.”
<i>Sinicrope et al. (2007, p. 1)</i>	Intercultural competence is “the ability to step beyond one’s own culture and function with other individuals from linguistically and culturally diverse backgrounds.”

2.3.4. Models of Intercultural Competence

From this brief overview of definitions of intercultural competence from the field of language education and intercultural training it can be seen that different aspects of intercultural competence are emphasized in the various definitions. However, there is some agreement on certain features, such as effective and appropriate communication skills, and the behavioral aspect of the competence. Along with the multiplicity of definitions comes a likewise large array of models of intercultural competence. Spitzberg and Changnon (2009) review a variety of more and less known models of intercultural competence and divide them into five types of models: (1) *Compositional models* are those that identify key elements of the competence without showing how these elements are connected; (2) *co-orientational models* conceptualize “the interactional achievement of intercultural understanding” (p. 10); (3) *developmental models*

show the stages of intercultural competence as a progressive development; (4) *adaptational models* focus on the multiplicity of interacting and interdependent people who impact the adjustment to one another; and (5) *causal process models* identify specific relations and interconnections between the elements of intercultural competence. As an example for compositional models, Spitzberg and Changnon (2009) posit Howard Hamilton, Richardson, and Shuford's (1998) model consisting of the components attitudes, skills, and knowledge. The article mentions Fantini's (1995) Intercultural Interlocutor Competence Model, as well as Byram's (1997) Intercultural Competence Model as examples for co-orientational models. As examples for developmental models, the authors discuss the Intercultural Maturity Model by King and Baxter (2005) as well as Bennett's (1986a) Intercultural Sensitivity Model. The adaptational models include among many others Kim's (1988) Intercultural Communicative Competence Model. Arasaratnam's (2008) Model of Intercultural Communication Competence is given as an example for a causal process model.

Within the article, Spitzberg and Changnon (2009) compile a substantial list of factors and concepts which they found to be associated with intercultural competence in their review of models. This list contains over 300 sub-factors for the factors motivation, knowledge, skills (higher-order), macro-level skills/competencies, skills, attentiveness, composure, coordination, expressiveness, contextual competencies, outcomes, and context. The authors suggest that this extensive list of terms should be integrated into a more straight-forward model.

Spitzberg and Changnon (2009) show that in spite of many differences, there are striking similarities between the models they discuss. They voice three main concerns about these models. Firstly, there is a lack of physiological and emotional aspects in the models. Secondly, the concept of adaptability is vague and has not been validly measured. And thirdly, the models

may not be generalizable cross-culturally because they have mainly been developed in a Western context. The article also calls for a re-assessment of where competence is located (in the individual, or in the interaction itself?) and for ways to identify the most appropriate model or models. The authors conclude their article by pointing out that the validity of most of the existing models of intercultural competence has not been tested in a systematic way yet and that “more useful and conceptually integrated models (and measures)” (p. 45) should be developed.

2.3.4.1. Kramsch: A Sphere of Interculturality

According to Kramsch, intercultural competence encompasses the ability to put one’s own culture in relation to the target culture, a step which contributes to a better understanding of the target culture (Kramsch, 1993a). In intercultural foreign language education, teaching about the target culture alone is not sufficient. Instead, Kramsch (1993a) suggests that a process of reflection on both the target as well as native culture are crucial elements of intercultural teaching. Likewise, she suggests that intercultural teaching must include the teaching of strategies with which students may learn to understand foreignness, as well as the inclusion of within-culture differences pertaining to cultural factors of age, gender, religion and others.

Kramsch (1993a) outlines a cross-cultural model on the basis of learners’ perceptions of their membership in their own (C1) culture as well as the target (C2) culture. In her circular model, the innermost circle represents the real C1, the learner’s actual membership in his/her own culture. The next circle represents C1’, the learner’s perception of his/her self, while the third circle C’’ represents the learner’s perception of others, namely the target language community. C’’ represents the images language learners possess about the target culture, which may be stereotypical and inaccurate. In fact, Kramsch emphasizes that “German self-perception

can be quite different from the way Americans view German reality” (1993a, p. 209) and vice versa.

Because of this discrepancy, the model of intercultural competence suggested by Kramsch (1993a) includes the development of a third perspective, “that would enable learners to take both an insider’s and an outsider’s view on C1 and C2” (1993a, p. 210). This third place is at the heart of Kramsch’s (1993a) understanding of intercultural competence and it refers to the intersection between a learner’s own culture and cultures the learners is being exposed to through classroom learning, study abroad, or other cross-cultural encounters. The development of this third place is necessary in order to overcome the natural discrepancy between one’s perception of self and other which may prevent an unbiased outsider’s perspective. Kramsch (1993a) suggests, that to create this third place necessary to be able to understand one’s own and another culture, it is important that the language learner is seen as a creator of meaning. In fact, language learners have to be supported as they attempt to make meaning of the various differences they encounter between their own and target culture perception. Kramsch (1993a) emphasizes, that the third place is a personal place, different and changing for every language learner and it is the task of the language instructor to encourage students to find their own third place which helps them make meaning of themselves and their perceptions of their own and target culture.

2.3.4.2. Byram: Intercultural Communicative Competence Model

One model of intercultural competence which has frequently been cited and used in the educational field is that developed by Byram (1997) and explained in his book *Teaching and Assessing Intercultural Communicative Competence*. His model of intercultural communicative competence suggests five factors in intercultural communications: (1) attitudes of openness and curiosity (*savoir être*), (2) knowledge of self and other (*savoir*), (3) skills of interpreting and

relating (*savoir comprendre*), (4) skills of discovery and interaction (*savoir apprendre/faire*), and (5) critical cultural awareness / political education (*savoir s'engager*). Byram (1997) goes on to formulate specific educational objectives based on this model which are designed for language and culture learning.

Byram's (1997) model is multidimensional in that it encompasses different components of intercultural competence, namely knowledge, skills of discovery and interaction, attitudes, and skills of interpreting and relating. In his model, these four components together should support the student to achieve a fifth objective of intercultural competence, which Byram (1997) calls critical cultural awareness. While Belz (2003) criticizes the choice of wording for the skills components because, according to her, the word skill sounds too much as though it were easily learned, the wording of skills seems appropriate for the corresponding objectives. However, the choice to posit two separate skill factors appears somewhat confounding and having one skill component that includes the different objectives may have sufficed.

The educational objectives outlined by Byram (1997) are specific and detailed, and do not outline different levels of intercultural competence to be attained at different stages throughout the education process. However, Byram (1997) does discuss the usefulness of assigning levels of attainment of intercultural competence when assessing it in the context of foreign language education. Specifically, he suggests that using portfolios would be a good way to "allow levels to be set for each component" of intercultural competence "with criteria specifying levels of attainment appropriately for each competence" (Byram, 1997, p. 107). Nonetheless, he also points out that establishing levels is not without problems especially for the attitude factor. Belz (2007a) is critical of Byram's (1997) suggestion of a threshold of intercultural competence which can be assessed.

To make assessing intercultural competence in an educational context easier, Byram (1997) goes on to explain what kinds of activities learners would engage in to meet these objectives. He also points out that not all of his objectives can be met in a classroom setting and suggests experiences outside the conventional educational setting, as well as learners' own experiences as locations where students may develop their intercultural competence. Because some of his objectives pertain to residence in the target country, it remains unclear how, if these objectives are crucial components of intercultural competence, students can achieve them without studying abroad.

According to Byram (1997), his model includes three main features: the ideal of the intercultural speaker (as opposed to the native speaker ideal which is predominant in some other models), educational objectives for acquiring intercultural competence in an education setting, and specific places of learning and roles of instructors and students. In Byram's model (1997), there is an relationship between linguistic and sociolinguistic competence, sociolinguistic and discourse competence, and all three of them and intercultural competence. Additionally, his model shows tangled lines for the different components of intercultural competence to emphasize precisely the way in which the factors are intertwined.

Many educators and researchers have made use of Byram's (1997) model in their educational practices or research designs (Belz, 2007a; Dooly, 2008b; Hu, 2008; Kramer, 2008; Lussier, et al., 2007; Sercu, 2004; Wagner, 2008). O'Dowd (2006a), for example, bases many of his studies on this model because he finds it practical and relevant, especially for classroom contexts and he believes that the elaboration of the model makes it well suited for the educational context. However, in his study (O'Dowd, 2006a), it appears that O'Dowd makes use only of the five overarching components of intercultural communicative competence of Byram's (1997)

model and does not deal with the specific objectives that students should acquire to be interculturally competent. Thus, even though he commends the specificity of the objectives outlined in Byram's (1997) model, he does not use it for the assessment of intercultural competence in his study.

Although many studies utilize Byram's (1997) model, it has also been met with criticism by some scholars. Points of criticism include, for example, the specificity of the model, the assumption that all learners are or will be visiting the target country (Belz, 2007a; Helm & Guth, 2010), and the underlying notion of culture which overlooks subcultures and diversity. Other concerns about the model include the lack of consideration of online contexts and their impact on intercultural learning (Helm & Guth, 2010), although the rise of Web 2.0 tools came after the original publication of Byram's (1997) book.

Because they believe that the model is in itself the most complete example of a model of intercultural competence, Helm and Guth (2010) attempt to expand Byram's (1997) model to incorporate new online contexts. They call these contexts telecollaboration 2.0, and explain that they don't necessarily prepare students for study or visits abroad, but help students "to learn to operate [...] effectively in multilingual, multicultural global networks using any number of languages" (Helm & Guth, 2010, p. 72). In expanding Byram's (1997) model, Helm and Guth (2010) incorporate the concept of new online literacies. They situate the domain of telecollaboration 2.0 within a framework of three dimensions, which they call the operational, the cultural, and the critical. In their framework, they attempt to combine new online literacies with the development of intercultural communicative competence and foreign language learning.

An expansion of Byram's (1997) model to include the new online learning contexts seems to be a good way to update Byram's (1997) model, which was developed before online

learning tools became popular. Revising his objectives to fit online contexts may be a necessary step if the model should be continued to be used in research and educational practices. Especially the assumption of learners going abroad needs to be rethought and could be replaced with the increasing contact with native speakers which can easily be facilitated through online tools today.

2.3.4.3. Fantini: A Construct of Intercultural Competence

Fantini works at the School for International Training in Vermont and has published numerous articles on intercultural competence and training. Fantini (1997c) suggests that developing intercultural competence is both a challenge and an opportunity that brings many benefits, as it offers “the possibility of transcending the limitations of one’s singular world view” (p. 13). He believes that foreign language education needs to put a stronger emphasis on intercultural matters, so that students can become more tolerant and appreciate otherness. As parts of intercultural competence, Fantini (1997c) suggests that students need “the awareness, attitudes, skills, and knowledge that will make us better participants on a local and global level, able to understand and to empathize with others in new ways” (pp. 13-14), and he believes that foreign language education can achieve this goal by exposing students to different languages, cultures, and views.

Fantini (2000) explains that when characterizing intercultural competence, the principal themes that researchers seem to agree on include the abilities to (1) “establish relations”, (2) “to communicate with minimal loss or distortion”, and (3) “to achieve or attain a level of compliance among those involved” (Fantini, 1997c, p. 3). Fantini (2000) suggests that these skills are desirable both in intercultural encounters as well as in interpersonal relationships in general. Because language is highly important in interpersonal and intercultural communication, it is also

a fixed component of the model outlined by Fantini (2000). Fantini (2000) proposes a model of intercultural competence that is comprised of five components: attitude, awareness, knowledge, skills, and host language proficiency. While many models include specific traits important for successful intercultural communication, such as “respect, empathy, flexibility, patience, interest, curiosity, openness, motivation, a sense of humor, tolerance for ambiguity, and a willingness to suspend judgment” (Fantini, 2000, p. 28), Fantini’s model does not include specific characteristics needed to be interculturally competent. In fact, he raises the question how (if at all) these attributes can (or should) be developed in students who do not possess these traits already.

Language competence is an important an explicit aspect of Fantini's (2000) intercultural competence model, because language and culture and communication are so closely related. Fantini (2005) claims that being able to communicate in the target language is beneficial for intercultural learning, because language serves “as a road map to how one perceives, interprets, thinks about, and expresses one’s view of the world” (Fantini, 2000, p. 27). Fantini (2005) explains that without knowing or learning another language, individuals are limited “to continue to think about the world and act within it, only in one's native system” and this “deprives the individual of one of the most valuable aspects of the intercultural experience” (2005, p. 2). This is why target language proficiency plays a large role in his model of intercultural competence. Similarly to Fantini’s (2005) belief in the importance of target language proficiency as part of intercultural competence, Byram (1997) suggests that intercultural competence develops out of students’ language learning experiences. Thus, while in his model the proficiency in another language is not part of his model of intercultural competence, it is part of the developmental process of intercultural competence and therefore equally important.

The dimensions of intercultural competence for Fantini (2000), awareness, attitudes, skills, knowledge, and proficiency in the host language, overlap with Byram's (1997) categories of intercultural competence, which includes knowledge, two sets of skills, attitude, and awareness. Fantini (2000) does not offer a comparison between his and Byram's (1997) model, but the main differences are the lack of specific educational objectives which Byram includes, the emphasis on proficiency in target language, and the component of awareness. In Byram's (1997) model, awareness refers to critical cultural awareness or political education which means "an ability to evaluate critically and on the basis of explicit criteria perspectives, practices and products in one's own and other cultures and countries" (Byram, 1997, p. 53). In Fantini's model, awareness refers to self-awareness and reflection and it leads to "deeper cognition, skills, and attitudes just as it is also enhanced by their development" (2000, p. 29).

Fantini (2000) explains that while knowledge of the host culture and specific skills are more easily assessable in educational settings, awareness and positive attitudes are equally important. Awareness, according to Fantini (2000), is different than the other components of intercultural competence because it develops out of the other components while at the same time benefitting their development. Because of the significant role of awareness in the development of intercultural competence, Fantini (2000) suggests a figure of intercultural competence that has awareness at its center, with attitudes, skills, and knowledge circling around it.

Apart from these dimensions of intercultural competence, Fantini (2000) points out that intercultural competence is a developmental process, it is on-going and lifelong: "one is always in the process of 'becoming,' and one is never completely 'interculturally competent'" (p. 29). Nonetheless, Fantini (2000) suggests different developmental levels, summarized in the chart

below, which can help to assess current levels of intercultural competence. Table 2 summarizes these levels from Fantini (2000, p. 30).

Table 2 *Levels of Intercultural Competence by Fantini (2000)*

Level	Name	Example
1	Educational Traveler	- participants in short exchange programs (4-6 weeks)
2	Soujourner	- longer cultural immersion (4-8 months)
3	Professional	- staff working in a intercultural context
4	Intercultural/Multicultural Specialist	- individuals involved in international training, educating, consulting, advising

These levels have been developed on the basis of internal institutional needs of the School for International Training and in reference to their program offerings (Fantini, 2012). Fantini's (2000) model of intercultural competence, though similar to Byram's (1997) model, lacks the specificity of the individual objectives available in Byram's (1997) model. This has advantages and disadvantages. Byram's (1997) objectives may make it easier for implementation in the classroom because it gives teachers specific guidelines to use for planning intercultural teaching. At the same time, the specificity may be too much so that one does not know how one could possibly achieve all of the objectives. Fantini's (2000) less specific model is valuable for teachers who want to develop intercultural competence in their students without worrying about the multifarious objectives given in Byram's (1997) model. As these may be overwhelming for teachers, especially those not used to intercultural teaching, Fantini's (2000) general framework may serve as a guiding principle for teachers who would have to identify themselves what knowledge and skills to foster, and how to improve attitudes and awareness. While the categories are similar, Fantini's (2000) model leaves room for teachers to emphasize what they find most important in intercultural competence development. Additionally, the self-

assessment form provided by Fantini (2000) and discussed in the following section can serve as valuable guidelines for teachers.

Accompanying Fantini's understanding of intercultural competence are some suggestions for assessing intercultural competence in a YOGA (Your Objectives, Guidelines, and Assessment) form (2000). This form is meant as a self-assessment tool that can help individuals examine their level of intercultural competence. It is based on the developmental levels outlined above: educational traveler, sojourner, professional, intercultural specialist. It is divided into the five components which comprise Fantini's (2000) model: awareness, attitude, skills, knowledge, and language proficiency. The language proficiency statements are based on the ACTFL proficiency guidelines.

The YOGA form is a shortened version of the "Assessment of Intercultural Competence" (AIC) survey (Fantini, 2006). Both the YOGA form and the AIC survey are self-assessment surveys which are built around the factors knowledge, attitude, skills, awareness, and language proficiency. In a research project conducted by the Federation of The Experiment in International Living, the validity of the AIC was confirmed (Fantini, 2006). The shorter YOGA form can help teachers who want to use this model of intercultural competence to develop their own guidelines and objectives for teaching. Because the self-assessment statements are separated by developmental levels, it is accessible for a variety of educational contexts and less overwhelming than the detailed educational objectives outlined in Byram's (1997) model.

2.3.4.4. Deardorff: Pyramid Model of Intercultural Competence

Another model of intercultural competence has been suggested by Deardorff (Deardorff, 2006a). She developed this model based on a research study that analyzed questions of intercultural competence development and assessment through an in-depth investigation of different data

defining and assessing intercultural competence “as a student outcome of internationalization in higher education” (Deardorff, 2006a, p. 242). The study was based on a questionnaire given to 24 administrators in charge of internationalization higher education institutions in the US, as well as a three-round Delphi study including 23 intercultural specialists from the US (21), Canada (1), and the UK (1). A “Delphi technique can be used when there is a need for identified experts who are not geographically close to arrive at consensus on a particular issue” (Deardorff, 2006a, p. 244). The findings of the study were used to develop a pyramid model of intercultural competence. They revealed that both intercultural specialists and administrators of higher education preferred more general definitions of intercultural competence. Because of that, the components of intercultural competence which the scholars agreed upon, are also more general and in need of specialization.

The pyramid model of intercultural competence differs in many ways from the previous two models presented. At the top of the pyramid, Deardorff (2006a) suggests the desired external outcomes which include appropriate behavior and communication to meet one’s goals. Next, she suggests the desired internal outcomes, consisting of adaptability, flexibility, an ethnorelative view, and empathy. The third level of the pyramid consists of two separate components: knowledge and comprehension, and skills. The double-sided arrow between knowledge/comprehension and skills shows the interrelatedness of the two. Knowledge and comprehension includes cultural self-awareness, deep understanding and knowledge of culture, culture-specific information, as well as sociolinguistic awareness. The skill component refers to the skills of listening, observing, and interpreting, as well as the skills of analyzing, evaluating, and relating. The last level and foundation of the pyramid model is that of attitudes. Here, Deardorff (2006a) refers specifically to the attitudes of respect, openness, and curiosity and

discovery. Attitudes are the basis of the pyramid model, because according to Deardorff (2006a), all else is built on it and achievement in higher levels are always dependent on the attainment of lower levels. This model is a presentation of the results of the study conducted and it can be entered at any of the pyramidal levels.

Deardorff (2006a) points out that possessing lower level components will enhance acquisition of higher level components, but it is not a prerequisite to start developing intercultural competence on the base level of the pyramid. Deardorff (2006a, p. 254) also presents her model in a different visual format, the process model of intercultural competence. This model contains the same components as the pyramid model but emphasizes the movement that takes place between different components of the model thereby underlining the complex process of acquiring intercultural competence.

Although Deardorff (2006a) suggests that the model she proposes can be used for developing assessment indicators and can also serve as a basis for assessing intercultural competence, to my knowledge the model has not been adopted by other researchers yet. One issue with the model is its theoretical foundation, which is made up of the consensus of international specialists. It appears to be a comprehensive model that is more specific than Fantini's (2000) and less specific than Byram's (1997), and as that it may be a good compromise between too much and too little specificity.

2.3.4.5. Bennett: Developmental Model of Intercultural Sensitivity (DMIS)

The developmental model of intercultural sensitivity was developed by Bennett (1986b) and first explained in his 1986 article. Subsequent articles explained the model further (Bennett, 1986a) and used it as the basis for the development of the intercultural development inventory (Hammer, et al., 2003), an assessment tool for intercultural competence. The model outlined by Bennett

(1986b) serves as a framework for “conceptualizing dimensions of intercultural competence” (Hammer, et al., 2003, p. 421). The model outlines steps in the development of intercultural competence which are to be seen in a progression of one’s world view. The cultural worldview in this model is what distinguishes one particular culture from another. With a more progressive world view, individuals are able to experience intercultural encounters more successfully. The model assumes that as individuals become more aware of cultural difference, they also become more competent in intercultural relations. Thus, the central notion of this model is that individuals develop their intercultural sensitivity through the ability to face cultural differences in a more intricate or involved manner.

The six steps outlined in the model are three ethnocentric and three ethnorelative orientations. The first set includes denial, defense, and minimization, and the second set includes acceptance, adaptation, and integration (Hammer, et al., 2003). In the first three stages of this model, the individual experiences his/her own culture as “central to reality” (Hammer, et al., 2003, p. 421), whereas in the second three stages, the individual experiences it within the larger context of other cultures.

The denial stage refers to a state of mind in which individuals accept their culture as the only real culture, which means that one is unaware of any cultural differences at this point. The defense stage is similar to the denial stage, but here individuals understand their culture as the only culture that is possible or practicable. Individuals in this stage may experience cultural differences, but other cultures are usually seen as inferior. Defense Reversal then refers to the stage in which another culture is seen as superior to one’s primary culture. In the minimization stage, individuals begin to see similarities between cultures.

In the stage of acceptance, individuals begin realizing that their culture is only one among many. Individuals become aware of differences without being prejudiced and thinking of one culture as superior to another. The next stage, adaptation, brings individual to the point where they can expand their worldviews to “include relevant constructs from other cultural worldviews” (Hammer, et al., 2003, p. 425). Individuals now learn how to feel empathy, and they learn to adapt their behavior, cognition, and feelings to different cultural experiences. The last stage, integration, “is the state in which one’s experience of self is expanded to include the movement in and out of different cultural worldviews” (Hammer, et al., 2003, p. 425).

This model of intercultural sensitivity is the basis for the intercultural development inventory (IDI), a tool designed to assess individuals’ level of intercultural competence (stage of intercultural sensitivity) (Hammer, et al., 2003). Several analyses were conducted to ensure that the IDI is consistent with the developmental model of intercultural sensitivity and the validity of the assessment tool was verified.

While the IDI has been shown to be a successful tool for assessing intercultural competence and has been used by many researchers (D. Durocher, Jr., 2009; D. O. Durocher, Jr., 2007; Pedersen, 2010), the fact that the inventory has been commercialized makes it unfit for educational use. Most teachers or researchers who are interested in investigating intercultural competence are on a limited budget, but using the IDI requires attendance of a three-day seminar with a high seminar fee, as well as purchase of the inventory for each student. Although this assessment tool seems to be successful, other means of assessing intercultural competence should be sought and/or developed, that do not put a financial strain on institutions and are, thus, readily accessible to instructors and researchers alike.

2.3.4.6. The Assessment of Intercultural Competence

A study by Deardorff (2006b) revealed that scholars and administrators at higher education institutions believe that intercultural competence can be measured, and thus assessed. Much research has been done on assessing intercultural competence, both in academic settings as well as in non-academic institutions. However, Fantini (2000) points out that assessment of intercultural competence in educational settings is more difficult than in other environments, because of the need for giving students grades.

Sinicrope et al. (2007) give a comprehensive summary of assessment tools developed and used in recent years. They distinguish between indirect and direct assessment tools, indirect ones referring mainly to self-assessment inventories. While different inventories have been developed over the past decades to assess intercultural competence, recent research indicates that the use of inventories as the single measurement is not sufficient to assess intercultural competence and that a combination of measurements should be used (Deardorff, 2006b; Fantini, 2000; Sinicrope, et al., 2007).

Most researchers suggest using portfolios (Byram, 1997; Fantini, 2000; Ingulsrud, et al., 2002; Jacobson, Sleicher, & Maureen, 1999; Schulz, 2007a; Sinicrope, et al., 2007) or interviews (Byram, 1997; Sinicrope, et al., 2007; Straffon, 2003) for assessing students' intercultural awareness. Other assessment tools that have been suggested include qualitative measurements such as observations, case studies, self-evaluations, and peer evaluations (Deardorff, 2006b; Fantini, 2000). It has also been emphasized that assessment of intercultural competence needs to be ongoing and should be conducted at several different points throughout the intercultural experience (Dooly, 2008b; Fantini, 2000).

A study by Vogt (2006) employed Byram's (1997) model of intercultural competence to investigate the students' development of intercultural communicative competence in a telecollaborative project. The study explored only the attitude component of Byram's (1997) model and concluded that the attitude component cannot be measured in an e-mail exchange even when combined with other instruments including essays, journal entries, and follow-up interviews. However, the study suggests that e-mails can be useful for teachers to see evidence of these attitudes, which can help teachers give better feedback.

There are several assessment inventories available to use for measuring and assessing intercultural competence. The Cross-Cultural Adaptability Inventory (CCAI) is one such available tool, and was first developed by Kelley and Meyers in 1987 (Nguyen, Biderman, & McNary, 2010). According to the developers of the instrument, it is a self-scoring assessment guide that can help individuals realize their current level of intercultural adaptability in four main skill areas: Emotional Resilience, Flexibility, Perceptual Acuity and Personal Autonomy (Meyers, 2011). The tool is meant to measure individuals' potential to adapt to another culture. The validity of the instrument has been confirmed (Nguyen, et al., 2010) and the instrument has been used in a variety of contexts, including study abroad, medical students training, and others (Sinicrope, et al., 2007). The tool has been commercialized and is available for purchase only, which makes it less suitable for educational contexts.

Another available tool for assessing intercultural competence is the Behavioral Assessment Scale for Intercultural Competence (BASIC). It has been developed by Koester and Olebe (1988) and is based on the work of Ruben (1976). Ruben's (1976) model consisted of seven dimensions of intercultural competence: display of respect, interaction posture, orientation to knowledge, empathy, self-oriented role behavior, interaction management, and tolerance for

ambiguity. To assess an individual's intercultural competence, Ruben (1976) suggested observing the individual in a situation similar to that being trained for. He developed three types of individuals, depending on their level of intercultural competence. In a later study, the seven dimensions were expanded to nine dimensions (Sinicrope, et al., 2007). Koester and Olebe (1988) modified this model to an eight-item scale and changed the rating descriptions to be used by untrained observers. Their test of the scale confirmed its validity and they suggest that it can be used "reliably by nonexpert, non-native English speakers to assess the communication of another person" (Koester & Olebe, 1988, pp. 242-243).

Bhawuk and Brislin (1992) developed a measurement for intercultural sensitivity, called the Intercultural Sensitivity Inventory (ICSI). The rationale behind this inventory is that individuals must show a willingness to adapt their behavior in different cultural contexts. Bhawuk and Brislin (1992) emphasize the importance of intercultural sensitivity in the business context, as well as personal contexts involving communication with people from diverse cultural background. Their inventory is based on the concepts of individualism and collectivism, open-mindedness and flexibility, time, and living arrangements. The self-assessment inventory consists of 46 Likert-Scale items in three sections. In the first section, individuals answer the questions while imagining living and working in the USA. In the second section they answer the same questions while imagining living and working in Japan. In the third section they answer items referring to flexibility and open-mindedness. In their study (Bhawuk & Brislin, 1992), the authors concluded that three or more years of cross-cultural experience may be necessary to develop a level of intercultural sensitivity that is needed to perform in high cross-cultural environments and businesses.

Another possible assessment tool is the Intercultural Development Inventory (IDI) (Hammer, et al., 2003), developed by Bennett, Hammer, and Wiseman and based on Bennett's model of intercultural sensitivity (Bennett, 1986b). The IDI, a 50-item scale for self-assessment with an additional ten background questions, is intended to measure individuals' attitude towards cultural differences (Hammer, et al., 2003). Highly commercialized, it can only be used by trained raters who participated in a three-day seminar. The inventory has to be purchased for each student along with the rating kit. The inventory itself has been widely used and its validity has been confirmed (Sinicrope, et al., 2007), however, the cost of its use is a clear disadvantage. The AIC (Assessment of Intercultural Competence) inventory, developed by Fantini (2000) is another possible assessment tool for intercultural competence with the advantage of being freely available. The inventory is in a YOGA format (Your Objectives, Guidelines, and Assessment) and is intended as a self-assessment form. It is based on Fantini's (2000) model of intercultural competence and thus contains the different developmental levels of intercultural competence with separate items to rate for each level. The levels are educational traveler, sojourner, professional, and intercultural/multicultural specialist. Like his model (2000), the form consists also of the different areas of intercultural competence and has individuals self-assess their competence in these: awareness, attitudes, knowledge, skills, and language proficiency. Individuals rate themselves on a 0-5 Likert-Scale and Fantini (2000) suggests also being assessed by an outside observer, for example a host in the target culture. The form is a shorter version of a longer, 211 item and seven sections assessment form, developed by Fantini and the Federation of the Experiment in International Living (Fantini, 2006). The validity of this assessment tool has been verified (Fantini, 2006).

To sum up, there are many assessment tools for intercultural competence out there, but many of them are not freely available. Most of the inventories are self-assessment forms and should be combined with other measurements because the reliability of self-assessment is unclear. The AATG task force on the teaching of German (Schulz, et al., 2005) has emphasized the need for professional consensus on what should be the objectives of intercultural competence in foreign languages, what weight should be given to the development of intercultural awareness, and what assessment should be used. Similarly, Schulz (2007a) summarizes the difficulties of assessing cultural knowledge and intercultural competence, in spite of their importance in foreign language education. She points out that these objectives cannot be measured adequately with traditional assessment forms, such as essays or quizzes. Consequently, she suggests the introduction of a culture learning portfolio, which could be incorporated into foreign language classes.

2.4. The Development of Intercultural Competence through CMC

The changing world of the 21st century makes it imperative that students develop some degree of intercultural competence as part of their foreign language education (Belz, 2003; Bok, 2009; Dykstra-Pruim, 2008; Finger, 2008; Kramsch, 1998; Lovik, 2008; Lustig & Koester, 2003; Müller-Hartmann, 2006; Neuliep, 2009; Samovar & Porter, 2000a; Sercu, 2004; Spitzberg & Changnon, 2009; Thorne, 2010; Wagner, 2008; Williams, et al., 2009). Nonetheless, some researchers and instructors are more skeptical about including intercultural competence as a goal in foreign language education. Altmayer (2008), for example, sees it as problematic to work with a simplifying dichotomy of own and other culture and calls for a reconceptualization of intercultural competence that transcends a homogenous understanding of culture.

Apart from some concern about the lack of one accepted definition or the over-ambitiousness of the objective of intercultural competence, for most educators today, intercultural competence is an essential objective in their teaching (Belz, 2003; Bok, 2009; Dykstra-Pruim, 2008; Finger, 2008; Kramsch, 1998; Lovik, 2008; Lustig & Koester, 2003; Müller-Hartmann, 2006; Neuliep, 2009; Samovar & Porter, 2000a; Sercu, 2004; Spitzberg & Changnon, 2009; Thorne, 2010; Wagner, 2008; Williams, et al., 2009). However, some teachers of German as a foreign language in Germany regard the teaching of language skills as their primary obligation and are still skeptical towards the new concept of intercultural competence and its integration in foreign language classes (Lang-Melcher, 2000).

Research has identified primarily four major ways to foster intercultural competence: (a) through drama activities, (b) through literature, (c) through study abroad, and (d) through internet-mediated education (online learning). In addition to these four main tools, instructors have experimented with a variety of other approaches to increase students' intercultural competence. In the following section I will focus on the fourth approach, as this is the focus of this dissertation.

Intercultural competence can be developed through participation in computer-mediated communication (CMC). Computer-mediated communication refers to communication that is mediated by computers between humans (Herring, 1996a). In chapter 1, I have already summarized some of the most used CMC tools and outlined some of their general benefits and challenges. In the remainder of this dissertation I will work with the term CMC to refer to any kind of communication and interaction taking place with the help of the computer, and telecollaboration to refer to specifically to peer learning taking place by connecting language learners online.

CMC is typically subdivided into asynchronous and synchronous communication. Asynchronous communication takes place at different times, while synchronous communication takes place at the same time (Beatty, 2010). There are oral and written synchronous and asynchronous tools (Meskill & Anthony, 2010). The most typical asynchronous tool is e-mail. So-called second generation asynchronous tools include wikis and blogs (Blake, 2008). Other asynchronous tools are discussion forums and bulletin board systems (Cziko, 2004). The most commonly used synchronous tool is text-based chat (instant messenger). Other synchronous tools include videoconferencing and video chat. CMC also includes communication within MMOGs (massively multiplayer online games) (Sykes & Holden, 2011), MOOs (Multi-user domains), social networking sites such as Facebook, or Twitter, and even PDAs and cell phones (Beatty, 2010). While many CMC tools are text-based, there also audio-based CMC tools, such as asynchronous voice recordings, or synchronous audio or video chats through AIM, Yahoo Messenger (Cziko, 2004), or Skype (Guth & Marini-Maio, 2010).

Both asynchronous and synchronous CMC tools have been said to have positive effects on students' intercultural competence. Studies have revealed that CMC projects that connect language learners online can encourage intercultural learning because students come into contact with representatives of the target language and culture (O'Dowd, 2006a; Thorne, 2006). Connecting language learners from different parts of the world allows the exchange knowledge and information about cultures and enables students to learn from and with each other in a collaborative online environment. This authentic context for learning (Brammerts, 1996b; Thorne, 2006) has been suggested as one of the main factors positively impacting intercultural competence and linguistic development.

Additionally, it has been revealed that reflection of participation in CMC projects is a crucial part of intercultural learning which should take place both before and after the actual engagement with CMC contexts (Levy, 2007). It has been suggested that intercultural competence can develop through CMC because students receive more subjective and personal information about the target culture by communicating with members of the culture which help them understand not only facts but perspectives and views of target culture members (O'Dowd, 2007a). Students with prior travel experience abroad have been said to be able to benefit more from participation in CMC and achieve higher levels of intercultural competence (Lu, Yang, Peng, & Chou, 2004). CMC participation has also been shown to support mature language learners in their improvement of intercultural competence (Stickler & Emke, 2011).

Myriad CMC tools, including discussion forums, chats, videoconferences and e-mails have been analyzed in their effects on intercultural competence. O'Dowd (2006b), for example, found that German and American students participating in a CMC project developed intercultural competence when using ethnographic interviewing skills in videoconferences and e-mails to learn more about their partners from another culture. The analysis based on Byram's model of intercultural competence (1997) revealed that students were able to improve their knowledge of the target culture especially through e-mail, while the videoconferences assisted them in developing their skills of discovery and interaction. The effects of telecollaborative e-mail and other virtual exchanges on the development of intercultural competence and language skills will be discussed in more detail later. Other ways in which students improve their intercultural competence through participation in videoconferences include their increase in awareness of cross-cultural differences and target culture knowledge, their willingness to learn about the target

culture, and their critical evaluation of specific aspects of both their own and target culture (H. J. Lee, 2009).

Discussion forums have also been shown to have positive effects on students' intercultural competence development when used in educational contexts. Students who used online forums to discuss cultural readings with members from other cultures, for example, were able to increase their cultural knowledge about their own and the target culture as well as learn to regard topics from a new perspective (Liaw, 2006). Cross-cultural discussion in discussion forums has been demonstrated to support the development of critical cultural awareness when students were able to critically reflect on their learning, when they asked each other questions, and when they used specific learning strategies, such as using outside sources for composing their messages and self-correcting their compositions (Basharina, 2009). Similarly, Schuetze (2008) suggests that students who established personal relationships to their CMC partners, asked many wh-questions and used examples to explain their opinions have been said to be more successful at improving their intercultural competence. Participating in public discussion forums, not just online forums set up for the educational context, has also been shown to hold opportunities for developing intercultural competence (Hanna & De Nooy, 2009). However, it has also been pointed out that students need to be made aware of different cultural conventions and expectations in terms of participation and interaction in online discussion forums, so that they may enjoy the benefits of cross-cultural communication in these environments (Hanna & De Nooy, 2003). Students use different styles of discourse in CMC and cross-cultural differences in this area should be discussed with students to assist them in the intercultural learning experience (Chun, 2011).

Similar to discussion forums, online chat rooms can also be an environment in which students can improve their skills in the area of intercultural competence. Participation in cross-cultural chat rooms has been shown to improve students' cultural knowledge (L. Lee, 1998) and their intercultural learning experience through the opportunity to negotiate for meaning and ask for clarification (Tudini, 2007). Jin and Erben (2007) analyzed chat interactions between learners and native speakers of Chinese and showed that students improved their intercultural competence in several areas including greater sensitivity for intercultural differences.

In the area of development of curiosity and interest in the target culture, MOO's (multiple user domains object-oriented) have been revealed to have positive effects (Donaldson & Kötter, 1999). The use of blogs has also been investigated and it has been suggested that it can help study abroad students maximize their awareness of cultural differences (L. Lee, 2012), and that it can be an intercultural learning tool for both students abroad and students remaining at home who can learn from each other (Elola & Oskoz, 2008).

While different CMC tools been shown to be supportive of the development of different aspects of intercultural competence, studies have also revealed that different cultural communication patterns may impede intercultural learning in CMC environments (Basharina, 2009; Murphy, et al., 2009; O'Dowd & Ritter, 2006). Different cultural worldviews may also be a cause for misunderstandings in CMC contexts (Zaltsman, 2009), but they can be used for additional intercultural learning when made a point of explicit discussion (Schneider & Von der Emde, 2006; Ware & Kramsch, 2005). Another problem of CMC tools that has been pointed out is the length of participation in CMC projects. It has been mentioned, that shorter CMC projects may not allow students to develop any critical cultural awareness (O'Dowd, 2006b) and that in

fact there may not be any noticeable cultural knowledge gain through short CMC projects (Green & Youngs, 2001).

Due to the potential challenges of incorporating CMC tools in foreign language education, it has been suggested that future language teachers should be prepared for the potential of developing intercultural competence through CMC by participating in telecollaborative online projects during their teacher education (Müller-Hartmann, 2006). By exploring CMC tools themselves, student teachers can become familiarized with the tools and learn about potential challenges (Arnold & Ducate, 2006).

2.4.1. Virtual Exchanges in Foreign Language Education

Many names have been used to describe virtual exchanges, including telecollaborative exchanges (O'Dowd, 2006a), tandem exchanges (Brammerts, 1996c) or online exchanges (Schneider & Von der Emde, 2006). Virtual exchanges can take many different forms, but they all have in common that individuals get connected through some form of CMC online. Virtual exchanges can take place between learners of the same language in the same or different classes (Ozdener & Satar, 2008). Students in those exchanges can meet online in chat rooms or discussion forums, for example, and exchange opinions and learn collaboratively a target language. Virtual exchanges can also be conducted for teacher candidates (Arnold & Ducate, 2006; Belz & Müller-Hartmann, 2003). In that context, virtual exchanges can help future teachers familiarize themselves with Web 2.0 tools and learn first-hand about the benefits and challenges of different tools. It is also a good way for future teachers to expand their intercultural competence themselves.

Moreover, virtual exchanges can take place in a variety of formats between learners of a language and native speakers of that language. For example, German students learning English can collaborate in a virtual exchange with English students learning German. Many different

projects of that kind have been conducted and they have utilized many different CMC tools including MOOs (Donaldson & Kötter, 1999; Kötter, 2003), e-mail (Aitsiselmi, 1999; Belz, 2005; Little, et al., 1999), discussion forums (Schuetze, 2008), synchronous chat (text-based and voice-based) (Hauck & Youngs, 2008; L. Lee, 1998; Tudini, 2007; Wilden, 2007), or videoconferences (Kinging, 1998; L. Lee, 2007b; O'Dowd, 2006b; Sanders, 1997), to name some of the most frequent tools.

Additionally, while most virtual exchanges appear to include the connection of two classes, sometimes three (Basharina, 2009) or more (Stickler & Emke, 2011) classes in different countries or cultures are connected through a virtual exchange. E-mail is the most frequently used of all the available telecollaborative ACMC tools today (Gläsman, 2004) and it is the basis for the majority of virtual exchanges. Having been used for over 15 years, it is also the oldest form of ACMC that has been used in the educational context (Cziko, 2004; Kötter, 2002).

E-mail exchanges, or eTandems (Cziko, 2004) usually consist of language learners in different countries who spend half the time writing in their native, the other half in the target language. Different types of e-mail exchanges can be organized for language classes, for example e-mail exchanges with student-student exchange teams (tandem learning), group exchanges (where either the whole class gets partnered with another class, or groups are formed within each class), teacher-student exchanges, exchanges between learners of the same language, exchanges between different language learners (native speaker-language learner), and many more (Torres & Vinagre, 2007).

Holding a high educational value (Warschauer, 1997), e-mail exchanges offer the same benefits as many other CMC projects. These include the following: students have opportunities to improve their language skills (Appel, 1999) for example through expanding their vocabulary

knowledge (Dodd, 2001), they can increase their language awareness (Vinagre, 2007), students can grow cross-culturally, for example through critical incidents (Ware & Kramsch, 2005), students enjoy this kind of learning (Greenfield, 2003; Liaw, 1998), they may participate equally in this student-centered learning form (Gonglewski, et al., 2001), students may feel a sense of self-empowerment (Von der Emde, Schneider, & Kötter, 2001), students can learn to understand each other through this dynamic learning experience (Kinging, Gourvès-Hayward, & Simpson, 1999), e-mails offer a maximized potential for intercultural learning and social interaction (Belz & Müller-Hartmann, 2002; Kern, 2006), students usually feel engaged and can learn effectively and efficiently (C. Kim, 2008) and students can increase their computer skills (Greenfield, 2003).

The benefits of using e-mail exchanges for foreign language classes are manifold. The technology itself and the ease of its use are main advantages. Students are generally used to writing e-mails and are familiar with this technology (Gläsman, 2004). Although in a study by Thorne (2003), US undergraduate students saw e-mail as an inappropriate medium for student-student communication, this finding was not confirmed in other studies. In the present study, this concern could also not be confirmed.

Other technological advantages that support the incorporation of virtual exchanges based on e-mails into the foreign language classroom are the fastness of delivery and the relative inexpensiveness of its use (Brammerts, 1996b). Time flexibility is another main advantage. Students can work at their own convenience. They can edit their texts at home, they can share them with others through forwarding, they can attach files, and they can easily keep a record of all messages (Gläsman, 2004; Kötter, 2002). Student motivation and high student participation are also key benefits of e-mail exchanges (Appel & Gilabert, 2002; Godwin-Jones, 2003; Little, et al., 1999; Rodriguez, 1998; Ushioda, 2000; Warschauer, 1996b). Additionally, e-mail

exchanges are suitable for different language learners. Through e-mail exchanges we can address differences that are prevalent in today's multicultural classrooms, in students' interests and needs, their learning styles and specific strengths and weaknesses (Felix, 2003).

E-mails are especially useful for shy students, young language learners, and high apprehensive college students. Shy students, who have difficulties opening up in the larger class context, often feel less inhibited in a personal one-on-one e-mail exchange (Kötter, 2002). Young language learners benefit from e-mails especially because it is a good motivation tool and gives them ample opportunities for reading and writing in context (Torres & Vinagre, 2007). High apprehensive college students also benefit from using e-mails, not just for cross-cultural exchange but in the classroom for purposes of peer feedback. In a study investigating differences of peer evaluations between high and low apprehensive first year college students, Mabrito (1991) found out that high apprehensive students preferred feedback given to them via e-mail communication over feedback given in face-to-face communication. Virtual exchanges based on e-mail communication, thus, seem to be well suited for many different types of language learners.

From a theoretical standpoint, virtual exchanges are supported by pushed-output theory, which suggests that language learners can benefit from having the opportunity to modify their output which can occur when they receive internal or external feedback, for example in the form of clarification requests from their partners. Additionally, these exchanges are supported by sociocultural theory which suggests that in the interaction with expert speakers of the language, students can gain language and cultural knowledge. In a virtual exchange, language learners can exchange their knowledge of their own culture and language enabling them to be experts as well as novices. This opportunity for collaborative learning can help students achieve higher language

levels, because they can push each other to modify their output, test different hypotheses about their language production, and notice own linguistic problems which they can then try to solve.

2.4.2. Curricular and Pedagogical Motivation for Virtual Exchanges

Virtual exchanges can offer students the opportunity to learn language and culture in integrated ways. Language and culture cannot be separated (Samovar & Porter, 1999) and virtual exchanges are an ideal way to enable students to better understand the intricate relationship between the target culture and language. In response to the emphasis of the MLA Ad Hoc Committee on Foreign Languages on the imperative need for students to develop both profound foreign language and target culture competence (2007), virtual exchanges may be a solution that can offer students the opportunity for the development of the crucial translingual and transcultural competence.

Being connected with representatives of the target culture online can enable students to learn about the target culture and gain deeper knowledge and cross-cultural awareness which is an important step in order to achieve the MLA Ad Hoc Committee's objectives. At the same time, through language feedback and questions for clarification for example, the participants in virtual exchanges can push each other to produce modified output and can support each other in the acquisition of foreign language skills, thereby developing the second objective outlined in the MLA report (2007), linguistic competence.

Virtual exchanges can also be a good way to address the Standards for Foreign Language Education (1999), which similarly to the MLA report have outlined the importance of preparing students to communicate in another language through linguistic skills but also through cultural competence. In fact, a virtual exchange is able to address all five goal areas outlined in the Standards: students can improve their **communication** skills in the target language while at the

same time gaining deeper levels of understanding and knowledge about the target **culture**; students learn to not only make **connections** between their own and the target culture but they also create personal connections to target culture members with whose assistance they learn to draw new cross-cultural and cross-lingual comparisons thereby increasing their understanding of their own and target culture and language; and students are able to become members of and get to know different **communities** in the context of the virtual exchange.

Additionally, the need for the development of electronic literacy skills can also be addressed through virtual exchanges. The importance of equipping students with digital literacy skills is now more crucial than ever, because “the rise of digital media has ushered in new paths to the pursuit and attainment of knowledge” (MLA Teagle Foundation Working Group, 2009, p. 6) and students must learn how to access and use the information available through different electronic media today. In line with the Standards for Foreign Language Learning (1999), students can be given many opportunities for utilizing and becoming more familiar with new technological tools through virtual exchanges.

Last but not least, virtual exchanges are an excellent way to bring students into direct contact with native speakers of the language, and for many students who will never have the opportunity to travel or study abroad, this may be the closest opportunity for direct interaction with representatives of the target culture. For those students who do get the opportunity to travel or study abroad, virtual exchanges may be a good way to begin learning about the target culture and language and it can aid in preparation for future visits to the target culture. This may reduce experiences of culture shock and may assist students in increasing the benefits of study abroad through having been better prepared for the cross-cultural experience.

2.4.3. Empirical Evidence for Benefits of Virtual Exchanges

Virtual exchanges have been investigated in multiple studies and results have shown that virtual exchanges can have positive effects on students' intercultural competence as well as their foreign language skills. In this section, I will first summarize empirical evidence for the benefits of virtual exchanges on intercultural competence and then for the development of language skills.

A very important benefit of e-mail exchanges as well as other CMC tools is the contribution to students' development of intercultural competence and their gain in cultural knowledge (Appel & Mullen, 2002; Basharina, 2009; Belz, 2003, 2007a; Belz & Müller-Hartmann, 2003; Chun, 2011; Dodd, 2001; Gonglewski, et al., 2001; Liaw, 2006; Müller-Hartmann, 2006; O'Dowd, 2003, 2006b; Woodin, 2001). The development of intercultural competence is a benefit not only for structured e-mail exchanges between high school or college students but has also been found to be a benefit in exchanges between older language learners (Stickler & Emke, 2011).

Even though an exchange between Mexican and US American students has revealed negative impacts on the Mexican students' regard for the other culture, the exchange nonetheless proved to expand the students' cultural perspectives (Meagher & Castanos, 1996). The problems in this exchange were attributed to culture shock, and may be eliminated through longer exchange duration. Findings from a study between high school students in the US and Taiwan (Lu, et al., 2004) suggested that the development of intercultural competence is higher in students who have previously traveled abroad or who have had other intercultural experiences.

In most studies based on e-mail projects, students were able to develop intercultural competence through the exchange with learners from another culture (Belz & Thorne, 2006b; Liaw, 2006; Lu, et al., 2004; O'Dowd, 2003, 2006a, 2006b, 2007c; Ware & Kramsch, 2005).

Students have also been shown to learn about the history of the target culture and gain historical and cultural awareness (Kern, 1996). In e-mail exchanges, students can discover and reflect on different cultural behaviors, beliefs, and concepts and this enriches their understanding of culture and their interaction within their own as well as other cultures (Liaw, 2006).

Because e-mail exchanges can serve to foster students' intercultural competence, Müller-Hartmann (2006) suggests including telecollaborative projects for teachers in teacher education. Such e-mail projects between student-teachers not only help these future teachers to develop their own intercultural competence, but they can also make student-teachers feel more at ease about incorporating telecollaborative projects in their own teaching. Participation in online projects is a good way to prepare future students for the use of computer-mediated communication in their teaching. After conducting a telecollaborative study with student-teachers in Germany and the USA, Müller-Hartmann (2006) comes to the conclusion that these future teachers can use the experiential learning situation to develop their own intercultural competence and their knowledge base necessary for planning and conducting telecollaborative projects themselves.

Another study suggests combining e-mail exchanges with videoconferences, because a combination of ACMC and SCMC tools can foster different skills (O'Dowd, 2006b). O'Dowd (2006b) points out that while e-mails allow students to write in great detail, the face-to-face situation in the videoconference can serve to clarify doubts more quickly, and can allow students to understand perspectives of other students besides their e-mail partner. He suggests that combining these two tools is useful, because students can get to know their partner better through the videoconference which makes the students more relaxed and open in their e-mail communication.

In addition to developing intercultural competence, virtual exchanges based on e-mails can also serve to improve students' foreign language skills in all aspects of language learning (Kabata & Edasawa, 2011). Students can improve their vocabulary knowledge (Dodd, 2001; Kabata & Edasawa, 2011), their reading skills (Taki & Ramazani, 2011), their knowledge of language structures (Aitsiselmi, 1999), and more.

There are a variety of reasons for this. Firstly, e-mails, like other ACMC tools, allow for reflection and (self-)correction which can support language development (Gläsman, 2004; Torres & Vinagre, 2007). Secondly, students have increased opportunity for practicing the language and they get native speaker feedback (Kötter, 2002). Thirdly, students get authentic input from native speakers (Basharina, 2009; Belz, 2007b; Gläsman, 2004), which also helps students expand their vocabulary (Dodd, 2001). Because of the immediacy of the exchange, students can ask follow-up questions which may contribute to their language understanding (Gläsman, 2004). Students also become more aware of linguistic similarities and differences and improve their overall language awareness (Appel, 1999; Dodd, 2001; Gläsman, 2004). Fourthly, students learn to focus on form (Johnson, 1996). Ware and O'Dowd (2008) analyzed student feedback given in e-mails from a sociocultural perspective and revealed that feedback can maximize language learning. This can occur because students can assist each other through scaffolding. This specific language assistance enables students to function in the zone of proximal development and from there to achieve higher language levels. Ware and O'Dowd (2008) also found out that students only gave peer feedback when specifically instructed to do so. This should be taken into consideration when planning an e-mail exchange.

Fifthly, not only do students receive more (authentic) language input (Belz, 2007b; Gläsman, 2004), but they also produce much more output (Rodriguez, 1998). This way, they get

the chance to practice the language in a meaningful way, which greatly enhances their linguistic competence (Belz, 2007b; Van Handle & Corl, 1998). One of the reasons for the linguistic benefits of e-mail exchanges is the interpersonal connection that is established between the exchange partners. This helps students learn better and be more engaged in the learning process (Kern, 1996). The personal motivation that develops as a result of the personal connection to a language partner strongly correlates to the positive learning outcomes in e-mail exchanges.

Several studies have explored the suitability of telecollaboration for fostering students' pragmatic competence (Belz, 2006, 2007b; Belz & Kinginger, 2002, 2003; Kinginger & Belz, 2005; Thorne, 2003). Pragmatic competence refers to the ability to understand utterances not only based on the meaning of words, but through recognizing "what is meant even when it isn't actually said (or written)" (Yule, 2002). Belz (2007b) explains that using data from CMC can be helpful in improving students' pragmatic competence because it provides authentic data of actual language use by native speakers. On study, for example, investigated the use of German modal particles as part of pragmatic competence and revealed that students are able to increase their awareness of this pragmatic feature when using their own data from online exchanges and teacher guidance (Belz & Vyatkina, 2005). In a different study, the use of address form in German and French telecollaborative exchanges was explored and it was revealed that the social interaction that takes place in telecollaboration can assist students in learning the importance of different address forms (Belz & Kinginger, 2002).

A study conducted between Japanese and Canadian students revealed that while all language skills can be fostered through an e-mail exchange, the amount and type of learning are dependent on the proficiency level of the students (Kabata & Edasawa, 2011). This is explained by the fact that students with low proficiency, for example, do not usually pay as much attention

to grammatical items, and may not be able to pick up on grammatical structures without explicit explanation or specific correction.

In contrast to the notion that all language skills can improve through e-mail exchanges (Kabata & Edasawa, 2011), students' own perceptions of linguistic improvements may differ. In one study, for example, students felt that they improved their skills in the areas of writing and speaking, but did not feel that they made progress in grammatical knowledge (Greenfield, 2003). Other studies also do not support the idea that e-mail exchanges can foster all language skills. Liaw (1998), for example found out while the exchange had positive effects on writing skills, positive effects on students' reading skills could not be detected. Liaw (1998) mainly underlines the usefulness of e-mail to increase students' communication in the language to be studied.

Belz (2006) suggests not only using e-mail exchanges for foreign language improvement, but compiling a contrastive learner corpus of telecollaborative data for use in the classroom, so that students may improve their second language pragmatic competence. The author points out that telecollaborative projects are mainly unmonitored by the teacher and that this makes it difficult to discern what kind of learning actually takes place. Using a corpus-based approach allows teachers to support the students' learning process by giving them comparative information and analyzing different language aspects together.

Similarly, Ware and Kramsch (2005) suggest making use of incidents of tension or miscommunication in telecollaborative exchanges in courses focusing on language awareness or discourse analysis, to enable students to learn more about the online medium as well as its constraints. Students should develop tools for the analysis of online communication transcripts, so that they can be better prepared for intercultural communication themselves.

Although the linguistic benefits of telecollaborative e-mail exchanges appear to be high, some research has shown that a short duration of the e-mail exchange may hinder the improvement of language skills. Woodin (1997), for example, conducted an 8-week e-mail exchange between learners of Spanish and English and noted that eight weeks was not enough to observe noticeable change in students' language skills. Although one tandem partnership showed promising results, the general results remained inconclusive. The same holds true for the development of intercultural competence through e-mail exchanges. The length of the exchange is not always long enough to guarantee any noticeable results (O'Dowd, 2006b).

2.4.4. Empirical Evidence for Challenges of Virtual Exchanges

Aside from aforementioned positive effects of e-mail exchanges, research has also pointed out various challenges of these kinds of virtual exchanges. Possible problems include institutional constraints, pedagogical problems and societal expectations (Basharina, Guardado, & Morgan, 2008; Belz & Müller-Hartmann, 2002; Little, et al., 1999; Warschauer, 1997), and tensions and miscommunication between the learners (Basharina, et al., 2008; Belz, 2002; Levy, 2007; P. Ware, 2005; White, 2007). Problems may also arise due to challenges of cooperation between instructors (Basharina, et al., 2008) or inadequate preparation of instructors (Arnold, 2007; Müller-Hartmann, 2006; O'Dowd & Ritter, 2006a).

Many challenges of telecollaboration are connected to technology, although technical problems are usually more problematic in SCMC (Belz, 2002; Liaw, 2006; Little, et al., 1999). In an e-mail exchange conducted between an English and French Middle school (Dodd, 2001), several technical difficulties were encountered. Students sometimes didn't have adequate computer skills, or access to a computer at home, for example. When writing e-mails in school, some students needed more time than others and felt uncomfortable under the pressure.

Additionally, students sometimes forgot to bring copies of their emails for in-class discussion. Another possible disadvantage is the delay that may occur in receiving and sending messages (Kötter, 2002) which may lead to student frustration. This happened in only one of 16 cases in a smaller study I conducted in the spring of 2009 (Schenker, 2012). For this and other reasons, e-mail exchanges, like other telecollaborative projects, have to be carefully planned (Kötter, 2002).

The languages that are used for communication in e-mail exchanges may present problems as well, for example when students have different language levels (Gläsman, 2004; Kern, 1996). This was the case in a year-long e-mail exchange between learners of English and Spanish in Madrid and Dublin, some of which were majors and some minors (Vinagre, 2007). Although this may be a problem with other CMC tools as well, e-mails may contain an abundance of linguistic errors and be difficult to understand for the recipient (Beatty, 2010).

Further problems may occur when there is an uneven number of students in both classes, when one side of the partnership does not respond, or when a partnership stalls (Gläsman, 2004). Kramsch and Thorne (2002) conducted e-mail projects between French and American students and found out that the students use different genres in writing. They concluded that unawareness of the differences in these genres will prevent students from truly understanding the partner's culture. The length of an e-mail exchange can present another problem. One semester or only several weeks may not be long enough to enable students to develop intercultural competence (O'Dowd, 2006), or to improve language skills (Woodin, 1997), and may in fact lead to a negative attitude towards the other culture (Meagher & Castanos, 1996). Another problem may be a lack of students' ability to explain their own language and grammar to their e-mail partner thus supporting the acquisition of specific linguistic skills (Brammerts, 1996b). Likewise,

maintaining a high level of student motivation may become an issue especially when problems arise out of infrequent response patterns (Kern, 1996).

2.4.5. The Role of the Teacher in Virtual Exchanges

Due to the various problems associated with telecollaboration, researchers emphasize the important role of the teacher in online communication projects (Appel, 1999; Belz, 2003; Byram, 1997; Johnston, 2008; Kern, 1996; Lord & Lomicka, 2004; O'Dowd & Ritter, 2006; Owen, Pollard, Kilpatrick, & Rumley, 1998; Spodark, 2001; Ware & Kramsch, 2005). In fact, Belz (2003) suggests that the teacher is more important in internet-mediated teaching than was previously assumed because of the challenges of the electronic medium. O'Dowd (2007a) identifies four major roles of the teacher in telecollaborative projects: organizer, intercultural partner, model and coach, source and resource. The teacher not only has to facilitate these projects, but also has to take an active role in establishing successful learning opportunities for the students (O'Dowd, 2007a). Due to the new role of the teacher in telecollaboration, O'Dowd (2007a) suggests that teachers should receive specific training in online interaction, and also practice how to deal with potential problems that may arise. Teachers should also get the chance to experiment with different CMC tools so they may learn how to choose the one that is most suitable for their specific needs.

The need for teachers to be educated in the use of online communication tools is confirmed by Müller-Hartmann (2006). He emphasizes the necessity for future foreign language teachers to learn how to incorporate telecollaboration into the foreign language classroom by experiential learning and model teaching. Additionally, Kern (2006) points out that the teacher ought to be knowledgeable about both cultures to facilitate the learning process.

In a further article, O'Dowd and Eberbach (2004) investigated the role of the teacher in telecollaboration and came up with four tasks for the teacher. Firstly, the teacher should raise the students' awareness of intercultural learning by showing them how they can benefit from intercultural online exchange through in-depth reflection and openness. Secondly, the teacher needs to train learners to make effective contributions to the online exchange. Thirdly, students need to be taught to engage in dialogic instead of monologic communication. This ensures true interaction and learning to take place. Fourthly, the teacher also needs to learn how not only to establish but also maintain a positive relationship with the instructor from the partner class.

2.4.6. Factors Impacting Virtual Exchanges

There is a plethora of factors impacting the success of a telecollaborative project. Hauck (2007) lists linguistic competence, affective variables, the learning context, and cultural learning as the main factors. Differences in language proficiency may lead to misunderstandings and tensions, a point that has also been made by Belz (2001). Affective variables include different level of motivations on both sides of the exchange. These kinds of differences and their effect on the exchange have been identified as a main factor impacting telecollaboration by many researchers (Belz, 2001; O'Dowd & Ritter, 2006; Ware, 2005). Moreover, creating affective learning experiences can help students develop greater learner autonomy (Ushioda, 2000).

Belz (2001) conducted a study and revealed some sociocultural factors at play in cross-cultural German-American telecollaboration. There are several social and institutional issues which may impact the use of language in telecollaborative projects and the language learning that ensues. One factor is the difference in value of German (as a foreign language) in the US and English (as a foreign language) in Germany. This results in different proficiency levels and may be detrimental to the exchange, when shorter e-mails as a result of lack of language skills

are interpreted negatively. Technological issues, such as access to internet or computer labs, are another factor that may contribute to varying lengths of emails. Interpreting short responses as lack of enthusiasm could be a misinterpretation of the situation and have negative effects on the exchange.

In another study, Belz (2002) again mentions that contextual factors (technological knowledge, for example) and the general setting of a telecollaborative project (access to computers and academic schedules, for example) may impact the effectiveness and the outcomes of a telecollaborative project. Nonetheless, Belz (2002) encourages other instructors not to shy away from telecollaboration because of potential problems, but to use these problems as an instance of learning. In spite of the challenges of using telecollaboration in foreign language instruction, it has been argued that even emerging problems can become a learning tool for students (Ware & Kramsch, 2005).

A qualitative study conducted by Ware (2005) investigated factors that may lead to failed communication in German-American telecollaboration. The first tension mentioned by Ware (2005) results from different expectations and norms for telecollaboration. These include differences in expectations, in interactional purposes, and in using linguistic conventions. Because differences in expectations may lead to tensions in telecollaboration, White (2007) stresses the importance of raising students' awareness of these possible differences in expectations and norms.

The second tension in telecollaboration mentioned by Ware (2005) stems from social and institutional factors. These include, for example, differences in the social value of learning the target language, and differences in motivation based on grading. These factors corroborate strongly to those mentioned by Belz (2001). Likewise, Ushioda (2000) points out that different

course obligations may lead to varying degrees of participation and cause frustration and lack of motivation. This links directly to the third tension brought up by Ware (2005): individual differences in motivation and use of time. In Ware's (2005) study, the American students appeared to be less enthusiastic about the exchange, which they attributed to the time pressure they were under. This is related to differences in the time put into the exchange. Although the American students had unrestricted access to the internet, they put less time into the e-mail exchange than their German partners.

Ten factors for tensions in telecollaboration are explained in an article by O'Dowd and Ritter (2006). The potential areas for problems in telecollaboration include: (1) the learners' levels of intercultural competence, (2) the learners' motivation and expectations (as mentioned by Belz (2001)), (3) the relationship between the two teachers of the exchange classes, (4) the task design, (5) the way learners are matched with each other, (6) the dynamics of each group of learners, (7) the students preparation for the exchange (pre-exchange briefing), (8) technology, (9) the organization of the project, and (10) the prestige of the target language and culture. The last factor underlines the problem pointed out by Belz (2001) and Ware (2005). The fact that different value is attached to the respective target languages may impact the telecollaborative success. The issue of technology is also brought up by Hauck (2008), who emphasizes that students' level of multimodal competence impacts the outcomes of telecollaboration.

Apart from these factors that may lead to tensions in telecollaboration, Ware (2005) also mentions a few factors that may lead to successful e-mail partnerships. For example, students who "mirrored one another's interactional features by responding to and elaborating upon questions, using personal forms of address, following up on other-initiated topics, and converging on a conversational tone" (Ware, 2005, p. 77) were able to establish a successful e-

mail partnership. Additional reasons for the success of an exchange included frequent exchange of e-mails, the development of an open relationship with the exchange partner, and the open exchange of opinions on different topics.

Similar results were found in studies by O'Dowd (2003) and Schuetze (2008). O'Dowd (2003) indicates that students were most successful in their intercultural learning when they were able to express their feelings and opinions openly, when they were encouraged to critically reflect on their own culture, and when they engaged in an open dialogue with their partner about both cultures. Schuetze (2008) suggests that students were most successful in developing intercultural competence when they asked wh-questions, when they shared personal experiences and gave many examples, and when they found additional material not provided by the course. Because certain features of e-mail exchanges have been shown to generate more success, O'Dowd (2003) underlines the importance of the task-design in telecollaboration.

In another article, O'Dowd (2007a) summarizes findings from three different telecollaborative projects and suggests that telecollaborative projects are most successful in promoting cultural awareness when they contain the direct comparison of cultural topics. Additionally, a reflective exchange of opinions supports the cultural learning process more than mere information exchange. O'Dowd (2007a) also points out that telecollaboration best supports the development of intercultural competence when different telecollaborative tools are used. This finding confirms findings from another study conducted by the same author (2006b) which analyzed the suitability of combining e-mail exchanges with videoconferencing. Nonetheless, a study by Hauck (2008) showed contrary results. Here, the combination of ACMC and SCMC tools did not achieve the pedagogical aim of connecting learners better.

Last but not least, O'Dowd (2007a) indicates that telecollaboration is greatly enhanced if students received specific guidance and training for the participation in these projects. This includes teaching students how to interact successfully online, how to explain cultural phenomena well, and how to analyze cultural descriptions. White (2007) further stresses the need for students to be prepared for CMC, and the different language practices involved therein, because of the new challenges and possible tensions that may arise. She suggests that teachers need to prepare students "to deal with global communicative practices online, in all their complexity" (White, 2007, p. 325). Moreover, teachers and students alike need to be aware of potential differences in expectations and norms of different language learners and teachers. Several factors should be taken into consideration in order to increase student motivation in telecollaborative projects. Appel and Gilabert (2002) propose that student motivation is impacted by the degree to which students get to be involved in the decisions surrounding the project. Moreover, students' interest in the discussion topics and their expertise in these topics affect their motivation. The use of certain media tools and materials is another factor contributing to student motivation. Because student motivation has a strong impact on the general success and outcome of a telecollaborative project, these factors should be play a role in the planning phase.

2.4.7. Preview of Study in Response to Previous Research

While previous studies have suggested that virtual exchanges can support language learners' development of intercultural competence and language skills, few studies have analyzed the development of intercultural competence and language skills together. Additionally, few studies have traced the development of intercultural competence throughout a virtual exchange and through incorporation of different CMC tools. The present study aims to contribute to research about the benefits of virtual exchanges by investigating both how written language skills and

intercultural competence are affected by the exchange and by attempting to trace developmental patterns of intercultural competence in connection and comparison to students' own perception of their intercultural competence.

In the following section I will outline the methodology of this study. Then, I will answer my research questions and analyze the findings. Last but not least I will summarize the findings, present limitations and point out areas for further research.

CHAPTER 3

METHODOLOGY

3. Methodology

In this chapter, I will outline the methodology of my research study. The study I conducted was based on a twelve-week virtual exchange and was intended to investigate the effects of participation in a cross-cultural and cross-lingual online exchange on students' interest in learning about culture, their written language skills in the area of syntactic complexity, as well as their self-assessment and demonstration of intercultural competence. While previous research has primarily focused on investigating one computer-mediated communication tool, this project combined e-mail as the primary communication tool with class-to-class videoconferences, and reflective blogs. Additionally, unlike most other studies, both qualitative and quantitative analyses were used to answer the research questions and explore the myriad effects of virtual exchanges. In the following, I will present the context of the project, and give information on the participants, the tasks, the instruments, and the data analysis used.

3.1. Context

This dissertation examines a 12-week long tandem partnership between a US college class studying German and a German high school class studying English through video conferencing, reflective blogging and email exchanges. The focus of the study was the development of intercultural competence, cultural curiosity and language proficiency. The e-mail exchange was the central component of the exchange and it consisted of partnerships of two and three students. The e-mail exchange was complemented by two videoconferences, reflective blogs kept by the US students, and in-class discussions of the e-mail exchanges. In addition, the class essays of the

US students were also related to the virtual exchange because students chose topics of interest from their e-mail exchange to discuss in the essays.

The goal of this study was to examine the influence of the cross-cultural and cross-lingual exchange on the development of intercultural competence, cultural curiosity and language proficiency of the American participants. By connecting students with representatives of the target culture students were given the chance to communicate with native speakers of the target language and this study focused on the changes in students' foreign language skills, cultural knowledge, and intercultural competence. In the exchange, all students were given the opportunity to discuss a variety of cultural issues in the target language with representatives of the respective cultures (see appendix B for complete list of topics). This study investigated how students were able to develop because of the assistance and through the interaction with a representative of the target culture.

The idea and plan for the study arose out of a smaller study which I conducted in the spring of 2009 (Schenker, 2012). The current study was intended to expand the earlier project, by allowing for a longer duration of the e-mail exchange (12 instead of 6 weeks), by using a combination of communication tools, and by increasing the data sources to improve triangulation of data. Additionally, by using a higher proficiency level of students, language levels were intended to be more comparable and allow for a more in-depth and bilingual exchange.

The outcomes of the pilot study revealed that intercultural competence can be exhibited in e-mails. The current study expanded the research questions, and allowed for the investigation of both language and intercultural development. Moreover, the new study combined several communication tools. The pilot study (Schenker, 2012) revealed no change in students' interest in cultural learning through telecollaboration. Additionally, only the demonstration of

intercultural competence in e-mails was investigated. This dissertation is intended to explore the effects of a virtual exchange on language skills and intercultural competence as well as students' general interest in learning about the target culture in their foreign language classes through a combination of computer-mediated communication tools including reflective components, and through quantitative and qualitative analysis methods.

3.2. Participants

The sample in this study consisted of all 19 students in one section of a third-year German class at a Midwestern US university, and selected (31) students in an eleventh grade English class at a high school in rural Germany. The third year German class in the US was selected because of the level of German which was deemed high enough for participating in an e-mail exchange with native speakers in the target language. First- and second-year classes were not selected because their level of German is lower which would make communicating about various cultural topics in the target language more difficult. Additionally, the class was chosen because the professor of the class had agreed to incorporate a virtual exchange in this section of the third-year German class, thereby also making this class a sample of convenience. The professor of the class was very receptive to the idea of a virtual exchange and while he did not have access to the e-mails, he was able to read the students' blogs, participated in the videoconferences and discussed the virtual exchange with his students in class.

The other two sections of the third-year class were taught by different instructors and did not participate in the project. The project was incorporated in the curriculum of only one section and was substituted for other homework assignments which the other sections had to complete. The class that participated in the exchange did not have to do more work than the other sections but was involved in different types of activities due to the virtual exchange.

The class in Germany was selected because of personal connections between the researcher and the instructor of the class. Knowing the instructor personally made it easy to organize and plan the project together, without any problems in miscommunication, differences in opinions or problems due to untimely responses. The instructor of the English class in Germany and principal of the high school had also collaborated during the pilot study (Schenker, 2012) and was eager to give his students the opportunity to interact directly with native speakers of English.

A high school class was chosen instead of a college class because the semester schedules between German and US universities differ in a way that would have made a twelve-week exchange impossible. The schedules of German high schools and US universities are similar enough to allow for a longer duration of a virtual exchange. In spite of the different educational levels, the students were similar in age. The German students were between 16 and 18 years of age, and the American students were between 18 and 23 years old.

All 19 US students and 31 German students participated in the virtual exchange. Initially, the project was intended to be a tandem e-mail exchange; each US student was supposed to be paired with one German student and they were supposed to establish an e-mail partnership. However, due to the large number of students who wanted to participate from Germany, some adjustments had to be made to the initial plan. We set up 21 partnerships. Nine of the US students were assigned one German e-mail partner. The other ten of the US students were assigned two German e-mail partners, who either wrote their e-mails together, took turns writing the e-mails, or, in some cases, both sent individual e-mails to the US partner. The table below illustrates the individual partnerships and indicates the partners' gender, number of e-mails sent

and total number of words written. In the following table, the American students are identified by the letter “E” and their German partner(s) by the letter “K” (for Klasse, *class* in German).

Table 3 *Summary of Individual Partnerships*

Student	Gender	E-mails Sent	Words Written Total
E001	M	26	1807
K020	M	18	1977
K021	M		
E002	M	11	876
K018	F	10	1201
E003	M	21	2092
K014	F	17	2601
E004	M	19	3350
K029	M	13	2830
E005	F	24	4279
K007	M	22	1737
K019	M		
E006	F	20	2154
K015	F	12	1323
E007	F	14	1367
K010	M	12	1389
E008	F	21	3224
K004	M	10	1484
E009	F	18	1949
K001	F	15	3318
K011	F		
E010	F	13	1017
K017	M	11	1024
E011	M	19	2044
K027	M	14	1499
K028	M		
E012	F	24	5642
K016	M	16	5228
K030	M		
E013	F	20	2722
K022	F	17	3105
E014	M	18	4967
K006	M	15	4985
K009	M		

Table 3 (Cont'd)

E015	F	22	1377
K003	M	14	1032
E016	F	20	6697
K013	F	22	8926
E017	F	17	3411
K002	F	15	2790
K026	F		
E018	F	21	4443
K008	M	15	4215
K023	M		
E019	F	19	3486
K005	F		
K031	F		

3.3. Procedure

The e-mail exchange was planned and organized in a fall semester and implemented the next spring semester. During the first week of the spring semester, the instructor and the researcher explained the project to the US class, while the instructor of the German class explained the project to the German class. The American students were given an overview sheet of the exchange (see appendix C for the instruction sheet). The German students wrote short introductions about themselves that were sent to the researcher who together with the instructor let the US students pick their e-mail partner. The e-mail partnerships were determined the second week of the US spring semester and the third week was used for the beginning of the e-mail exchange which was informal and did not have any discussion topics yet.

During the first week of the US spring semester, the students of the US class were also given the consent forms to sign, as well as the pre-surveys. Students filled out the pre-surveys in English in class and handed them back to the researcher, who is the only person who has access to the surveys. All 19 students enrolled in the class, signed the consent forms, completed the surveys, and participated in the e-mail exchange.

The German class was sent the pre-survey via e-mail. The German students completed the pre-surveys in German and sent them via e-mail back to the instructor over the course of the next two weeks. Out of the 31 German students who participated in the e-mail exchange, 26 completed and returned the pre-survey.

The third week of the US spring semester was the first week of the actual e-mail exchange with the first discussion topic given. This week was also the week of the first videoconference, held in English. The remainder of the semester was spent on the e-mail project with students writing a minimum of two e-mails per week each week (except for during US spring break and German winter break).

The other parts of the project were carried out as indicated above. The videoconferences took place in week 3 and 12 of the spring semester in the US. The first one was conducted in English, the second one in German. Both were videotaped and transcribed for analysis. The blogs were kept only by the US students as indicated in their syllabus. The e-mail exchange in this section of the third-year German class took the place of other online activities (discussion forums, for example) that were assigned in the other two sections. That way, the experimental group did not have more work to complete than the other sections. It was, however, the only group communicating directly with native speakers of the target language.

At the end of the spring semester, the students of the US class were given the post-survey in class. This took place the second to last week of the semester, just after the exchange had ended. All 19 students enrolled in the class completed the post-survey. The German class was sent the post-survey via e-mail and responses were also collected via e-mail, although the reply rate was slow and low. Of the 31 students who had participated in the e-mail exchange, 21 filled out the post-survey. Altogether, 19 students completed both the pre- and post-surveys and only

those 19 students were used in the quantitative analysis part of the study. Data analysis began one month after the end of the US spring semester, once data collection was completed.

3.4. Communication Media

The goal of the study was to measure the effects of the virtual exchange on, (a) students' written language skills, (b) students' interest in cultural learning, (c) students' self-assessment of intercultural competence, and (d) students' demonstration of intercultural competence in the exchange. To allow students to develop their written language skills and intercultural competence, the following treatment was implemented: email exchange, video conference, reflective blogs, and class discussions.

E-mail was chosen as the primary tool for communication with native speakers, because previous research has confirmed the high potential of this tool both for language learning (Ahern, 2008; Belz & Kinginger, 2002, 2003; Brammerts, 1996a; Cziko, 2004; Dooly, 2008b; Little, et al., 1999) and the development of (inter)cultural competence (Belz, 2007a; Gonglewski, et al., 2001; O'Dowd, 2003, 2006a, 2007a; Vogt, 2006). E-mail was also chosen as the primary medium for communication because of the ease of its use (Gläsman, 2004) and its cost-effectiveness (Brammerts, 1996b). Students are generally used to writing e-mails and their familiarity with the technology is an advantage in getting the project started efficiently and having it run smoothly. Additionally, e-mail was chosen because it is an asynchronous tool.

The asynchronous tool was selected instead of other synchronous tools because it gives students enough flexibility (Ahern, 2008) to complete the tasks at their own convenience. It also gives students more time to compose their e-mails and think about what they would like to say without being put on the spot (Meskill & Anthony, 2010; Rösler, 2007; Rudestam & Schoenholtz-Read, 2010). Additionally, it allows them to consult resources while they both

produce language and try to make sense of the language from their partners' messages. This is also helpful for shyer students who feel less inhibited in the non-face-to-face environment of an e-mail exchange (Olaniran, 2009).

Additionally, although the time difference to Germany is only six hours it can get tricky to find a time where both partners can meet and e-mail is a good way to overcome this problem (Gläsman, 2004; Rösler, 2007). Problems due to technical breakdowns can also be avoided through e-mail (Murphy, et al., 2009) as students can easily use a different computer or send their e-mail at a later time. Moreover, it is easy to store the e-mails, to attach files to e-mails, and to forward the e-mails to the researcher, which makes it convenient for data collection purposes. Previous positive results of e-mail projects further supported the choice of this medium, especially the fact that students generally enjoy participating in e-mail exchanges (Appel & Gilabert, 2002; Godwin-Jones, 2003; Little, et al., 1999; Rodriguez, 1998; Ushioda, 2000; Warschauer, 1996b).

To prevent students from learning only about one partner's opinion and overgeneralizing new information, the e-mail exchange was complemented by reflective blogs, in-class discussions, and videoconferences. The videoconferences were selected as a group-to-group communication tool to give students the opportunity to interact in real-time with the partner class, to practice speaking in the target language and to hear authentic target language spoken, and to get to know a larger variety of opinions on different topics. Additionally, the videoconferences would allow students to feel part of a larger community of language learners which was deemed a good addition to the isolation of the tandem partnership. This advantage of synchronous communication was also pointed out by Meskill and Anthony (2010).

The reflective blogs were only kept by the American students and they were added to the exchange to give students a venue for reflection and discussion among each other that was separate from the German partners. The decision of incorporating blogs into the project was based on the recommendations of several scholars, that using a variety of approaches when trying to assess intercultural competence is more successful (Deardorff, 2006b; Fantini, 2000; Sinicrope, et al., 2007). Previous research has suggested that blogs are a good tool not only for self-reflection for students, but also as a tool to further language skills and cultural competence (Alm, 2009; Carney, 2009; Compennolle & Abraham, 2009; Elola & Oskoz, 2008; Hourigan & Murray, 2010; Negueruela-Azarola, 2009; Yang, 2009).

Because most of the communication in the exchange took place in one-on-one e-mail partnerships, the reflective blogs were included to give students the opportunity to deal with the positive and negative emotions and experiences and get feedback from peers. Through the blogs, students could see what their peers were experiencing and dealing with and they could help each other with problems. Last but not least, because the US instructor was not reading his students' e-mails, the reflective blogs were chosen to give the instructor a chance to see what the exchanges were dealing with and to intervene in instances of tensions or miscommunication. This is important in order to prevent student frustration and to facilitate successful learning (Appel, 1999; Belz, 2003; Byram, 1997; Lord & Lomicka, 2004; O'Dowd & Ritter, 2006; O'Dowd, 2007; Spodark, 2001; Ware & Kramsch, 2005).

The in-class discussions of the e-mail exchange were selected as an important part of the project as a result of shortcomings from the similar 2009 telecollaborative study (Schenker, 2012). In that study, no in-class discussions took place and students were unable to exchange opinions and learn more through the mutual discussion of the cultural topics. To give students

more chances to grow culturally, regular in-class discussions of the e-mail exchanges were scheduled and the students were able to learn from and with each other. Similar to the blogs, this was an important step in order to ensure that students had a venue for dealing with any emotions caused by the exchange and to help each other with questions and problems, as well as to help students realize that their exchange partner is only one member of the target culture and that other German students may present different opinions and ideas.

3.4.1. Instruments

In the following section I will outline the instruments that were used to answer the research questions. The instruments used include e-mails as the primary communication tool, videoconferences, reflective blogs, class essays, and pre- and post-surveys.

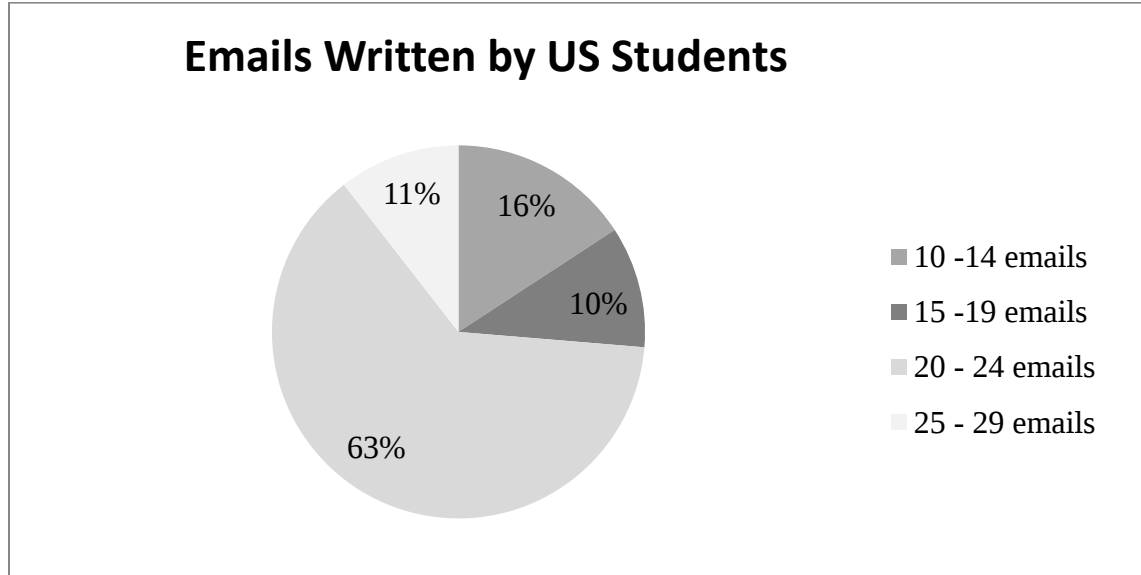
3.4.1.1. E-mails

Altogether, the e-mail project covered 12 weeks (not counting the breaks) and students had to write a total of 20 e-mails. All the e-mails were sent directly to the researcher by adding her into the CC line. The students were expected to write a minimum of two e-mails per week, for each assigned week of the exchange. During the three weeks of school break, students were encouraged to continue writing e-mails but were not given any topics or graded on these e-mails. The e-mails were written in each student's foreign language: the US students wrote in German, and the German students wrote in English. Code-switching was permitted but not used very often. Toward the end of the exchange, students were encouraged to write in their native languages for parts of the e-mails to give their partners an idea of how a native speaker writes. This suggestion was taken up by several students. At the beginning of the exchange, as well as throughout, the students were encouraged to give each other feedback on language issues, but were not given specific guidelines or correction codes.

Each week the students had specific topics to discuss in their e-mails (see appendix B for complete list of topics). These topics were chosen in cooperation with the instructors of both classes. They corresponded in large parts to the syllabus and textbook of the US class. The US instructor and the researcher of the study compiled a list of possible discussion topics which were then sent to the German instructor. All but two topics corresponded directly to the US textbook. The students were given the weekly discussion topics with the due dates at the beginning of the e-mail exchange.

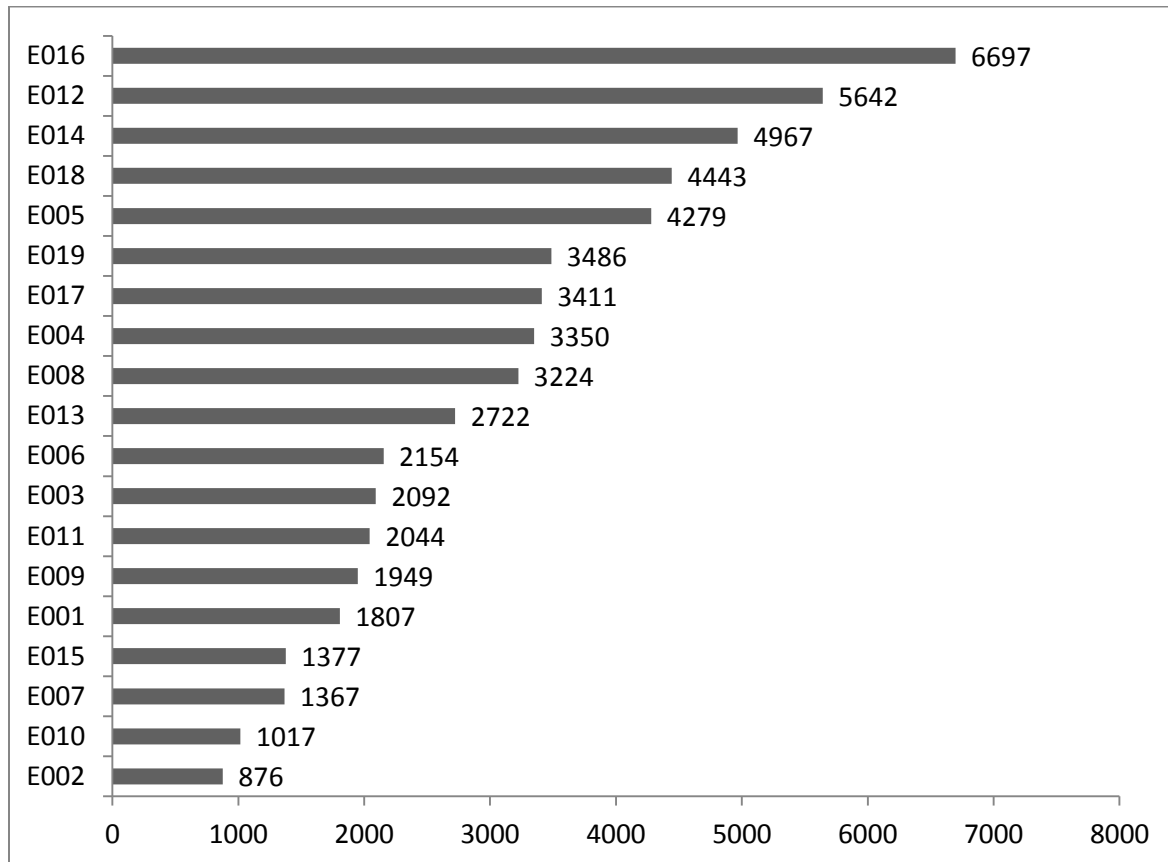
While all e-mails were forwarded (CCed) directly to the researcher of the study, they were not made available to any of the instructors. The researcher kept a log of each student's emails and informed the US instructor of the e-mail count, because it was part of the US students' homework grade. While students were supposed to write two e-mails per week, they were permitted to make up for missed points by writing more than two e-mails in previous or subsequent weeks. This was especially important, because the exchange was not part of the homework grade for the German students and therefore they sometimes took more time to reply. Altogether, students were supposed to write 20 emails throughout the 12 week e-mail exchange. Chart 1 below shows the number of e-mails written by the US students, and it can be seen that the majority of students (63%) wrote the required number or more.

Figure 1 *Number of E-mails Written by US Students*



The number of words written in each e-mail differed greatly, and the total number of words written over the course of the exchange ranged from 876 to 6697. The chart below shows how many words were written by each US student. It can be seen that student E016 wrote the highest number of words (6697) and that student E002 wrote the lowest number (876).

Figure 2 *Number of Words Written by US Students*



The e-mails were used to analyze the language development and the demonstration of intercultural competence of the American students.

3.4.1.2. Videoconferences

Following O'Dowd's suggestion (2006b), it was decided to combine the e-mail exchange with two synchronous class-to-class videoconferences. As O'Dowd points out (2006b), this gives students the chance to establish a better connection to their e-mail partners by seeing them face-to-face, and to get to know other students' perspectives, which may enhance the overall experience of the e-mail exchange. Additionally, this synchronous tool was chosen to also give students an opportunity to practice their spoken language skills in real time.

The first videoconference took place during the second week of the e-mail exchange. It was held completely in English. The instructor of the German class moderated the conference after each class had compiled a list of topics they were interested in discussing. For the videoconference, the US class met during the regular class time in a different building and room, where videoconference equipment was available. The German class had to take the train to the nearby university-city, where they were able to use the videoconference room of the university. Due to time differences, the German class had to go there after school, in the early evening. The second videoconference took place in the second to last week of the 12 week e-mail exchange and was held completely in German. A student from the German class moderated the conference this time, because students had voiced concern over the number of talking that was done by the instructor at the first videoconference. Again, topics were collected in both classes and then discussed together at the conference. While the videoconferences were an important part of the exchange, they ended up not being used for data analysis purposes, because individually each student said only a couple of sentences which could not be seen to contribute to the analysis of the individual students' development of intercultural competence.

3.4.1.3. Blogs

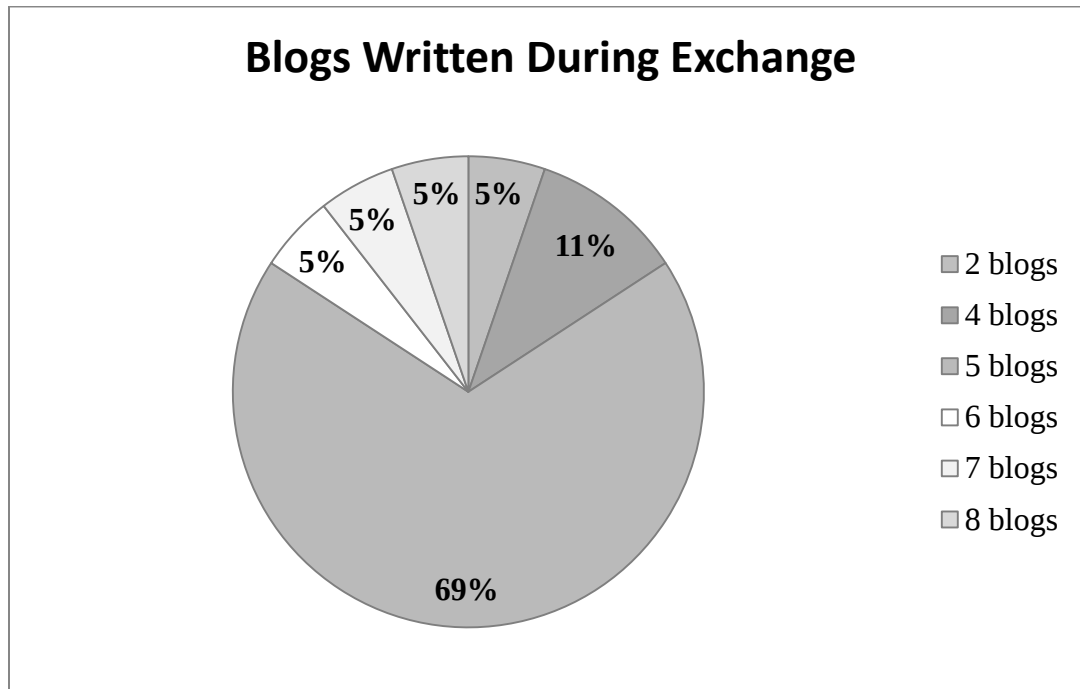
In addition to the e-mails and videoconferences, the US students had to keep a reflective blog about their experiences from the e-mail exchange. Students were assigned to write one blog entry every other week starting in week two of the exchange. Additionally, the American students were supposed to read the other students' blogs and comment on a different student's blog every other week as well. Hereby it was hoped that students find similarities and differences between their experiences and avoid thinking about German culture in monolithic ways. Of course, students were allowed to read and comment on as many blogs as they wished in addition to the

assigned ones. For purposes of data triangulation, the reflective blogs were intended to give the researcher a better insight into students' thoughts outside of their e-mail correspondence and to give students an opportunity to critically reflect on their exchange. The blogs helped the researcher evaluate the development and demonstration of intercultural competence in the virtual exchange.

The blog assignment did not contain a length minimum or limit, or a specific topic. The students were told in the syllabus, that the entries should contribute significantly to the discussion and that they should discuss ideas, difficulties, and anything else they wanted to share from their e-mail exchange. The lengths of the students' entries and comments differed. The students were also able to choose the domain for their blog freely, while we did suggest they use blogspot.com. All but one student chose blogspot.com for their blogs. The blog assignments were not part of the German students' class.

The following chart summarizes how many blog entries were written by the students over the course of the exchange. It can be seen that the majority of students wrote five blogs.

Figure 3 *Number of Blogs Written by US Students*



3.4.1.4. Essays

As part of the regular US third-year course, students had to write three essays. In these essays students were encouraged to draw on what they had learned from their e-mail partners. The first project was about the individual. Students had to describe either their own identity or that of someone they know. This self-reflective project was intended to make students consider their own identity especially in light of what they may have learned from their e-mail partner about his or her identity and potential cultural differences. Students could choose between writing an essay of 350-500 words or making a video, power point or other multimedia presentation which had to contain about 200 words of written German as well.

The second project targeted German identity. In this project students had to write from the outsider perspective looking onto German identity. They were encouraged to think about factors such as history, character, or demographics, and were supposed to incorporate pertinent information from the e-mail exchange. They were also prompted to discuss stereotypical

thinking. The project had the same guidelines as the first one in terms of length and possible formats.

The third essay had an open topic, where each student could pick their own focus. The only assignment was that the essay had to target German culture and include opinions from and discussions with the German e-mail partner. The essay was supposed to be 300-600 words long and had to include 2-3 correctly cited sources. It was graded on comprehensibility, accuracy, content, organization, and word choice/range and was submitted in two drafts.

The students' essays were forwarded to the researcher who used these student generated texts to help understand the students' development of intercultural competence as well as their demonstration of specific aspects of this competence. They were analyzed in conjunction with the blogs and e-mails.

3.4.1.5. Surveys

The students were given a pre- and post-survey which were identical except for additional feedback questions on the post-survey and the exclusion of some demographic questions on the post-survey. The English pre-survey was given during the first week of the semester, and the post-survey during the last week of the semester to the US students. The German students were e-mailed the pre-survey (in German) and were asked to e-mail back the completed survey to the researcher. They were also e-mailed the post-surveys (in German) at the end of the exchange and asked to e-mail back the completed surveys. All 19 of the American students completed both the pre- and post-survey. 19 of the 31 German students completed both the pre- and post-survey. 6 of the German students completed only the pre-survey. 2 of the German students filled out only the post-survey. 4 of the German students did not fill out either one of the surveys.

The pre-survey (see appendix A for survey) consists of three parts: part A, part B, and part C. Part A includes demographic questions, and open-ended questions on students' language learning background, questions on students' understanding of culture, the learning of languages, cross-cultural communication, online communication tools, students' attitude towards the target culture, cultural differences, and students' knowledge of the target culture.

Part B is a set of 14 Likert-Scale questions developed by the researcher. Students rated their agreement to the 14 statements on a scale from 1 (strongly disagree) to 6 (strongly agree). A six-point scale was selected so that there was no completely neutral middle option for students and they would have to decide at least between somewhat agree or somewhat disagree. These items targeted: students' interest in cultural learning (2, 5, 10, 12), students' evaluation of the importance of cultural knowledge (1, 3, 4, 6), and students' evaluation of the effectiveness of online communication tools for language and cultural learning (7, 8, 9, 11, 13, 14). Each item had an optional comment box for students to explain their answer if they wanted. This was done to give students a chance to comment further on their answer and help the researcher understand a particular choice. The 15th item of part B of the survey asked students to rate from 1 (most important) to 5 (least important) five aspects of language learning (writing, speaking, reading, listening, culture).

Part C of the survey was an adapted form of the self-evaluative YOGA form for assessing intercultural competence developed by Alvino E. Fantini (2000), discussed in detail in chapter two 2.2.4.2. This form has student self-evaluate their competence in five areas: language proficiency, attitudes, skills, knowledge, and awareness. It was adapted to fit the context of the e-mail exchange and to exclude levels of intercultural competence not relevant for this study. While the original yoga form assesses these competencies on 4 levels (educational traveler,

sojourner, professional, and intercultural/multicultural specialist), the adapted version for the context of this study includes only the first two levels, because the other two are not relevant for the participants in the study. Additionally, instead of using the 0 (no competence) to 5 (very high competence) scale, the form was changed to rate students' agreement using a 1 (strongly disagree) to 6 (strongly agree) scale. This choice was made to avoid students from selecting the neutral option of neither agree nor disagree.

The language proficiency part of the form refers to the ACTFL standards and the statements were expanded from the very basic descriptions that were given on Fantini's (1997a) original survey to the longer ones given in the standard proficiency guidelines. The short descriptions used in his survey did not seem enough information for students to fully assess their language skills. Apart from the language proficiency section, all sections included an optional comment box underneath each statement. As in section B of the survey, this comment box was intended to give students the opportunity to elaborate on an answer if they wanted and to give the researcher the chance to better understand the choices made by the students.

The post-survey included the same components as the pre-survey with an additional part D, which consisted of 11 open-ended feedback questions about the students' enjoyment of the exchange, any problems, the impact of the exchange on their language skills and attitudes, and their opinion of the videoconference and the discussion topics.

A reliability analysis was conducted on part B and C of the surveys (the Likert-Scale items) to ensure the consistency of the instrument. Cronbach's α , most commonly used to measure reliability (Field, 2009), was calculated to assess the reliability of each variable of the surveys. For part B of the survey, reliability was analyzed for variable 1 (students' interest in cultural learning), 2 (students' evaluation of the importance of cultural knowledge), and 3

(students' evaluation of the effectiveness of online communication tools for language and cultural learning). For survey part C reliability was analyzed for the five factors of intercultural competence: language, attitude, awareness, skills, and knowledge.

The reliability analysis for variable 1 of survey part B, interest in cultural learning, yielded a Cronbach's α of .545. Generally, a value of at least .7 is regarded as an acceptable value for Cronbach's α (Field, 2009). With a Cronbach's α of .545 reliability of this item is relatively low. This may be due to the fact that there are only four items for this variable. As can be seen in the following chart, reliability of this variable would increase to .677 if item 12 were deleted.

Table 4 *Reliability Analysis for Survey Part B*

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Survey interest2	16.95	1.997	.507	.356	.331
Survey interest5	16.71	2.482	.288	.255	.509
Survey interest10	16.66	2.555	.547	.316	.422
Survey interest12	17.18	1.614	.241	.150	.677

In order to improve reliability for this variable item 12 of survey part B was therefore deleted and not included in any of the subsequent statistical analyses. Variable 1, with item 12 deleted, now yields a Cronbach's α of .677 and is therefore reliable enough.

Variable 2, the importance of cultural learning in foreign language courses, showed high reliability with a Cronbach's α of .75. Likewise, variable 3, the effectiveness of online communication for language and culture learning, showed high reliability with a Cronbach's α of .825.

All variables on part C of the survey (self-assessment of intercultural competence) had high reliabilities. The items for the variables language and attitude yielded a Cronbach's α of .964. The items for the variable awareness yielded a Cronbach's α of .869. The items for the variable skills revealed a Cronbach's α of .905, and the knowledge variable had a Cronbach's α of .915. Thus, all variables on the self-assessment survey for intercultural competence showed high reliability.

Furthermore, the survey answers for part B and C were checked for normality of distribution to determine whether parametric tests could be used for further analysis. The Shapiro-Wilk test was used to determine the normality of the distribution for each variable and was chosen because it is most suitable for small samples of less than 50 (Field, 2009). On this test, a p of more than .05 generally means that the data is normally distributed.

The Shapiro-Wilk test showed that the majority of the data from survey B was not normally distributed. Pre-survey answers for variable 1, interest in cultural learning, were significantly non-normal at $p = .00$ for both the German and the US class. The post-survey answers for variable 1 were likewise significantly non-normal at $p = .001$ for both classes. The scores for variable 2, importance of cultural learning, showed similarly significantly non-normal results on the pre-survey for both the German ($p = .043$) and the US class ($p = .000$). Post-survey results for variable 2 showed significantly non-normal scores for the US class, at $p = .037$, but significantly normal scores for the German class, at $p = .344$ ($p > .05$).

The same holds true for variable 3, effectiveness of online communication for language and culture learning. The pre-survey answers were significantly non-normally distributed for the German class at $p = .015$, as well as the US class at $p = .003$. The post-survey results for variable 3 yielded significantly non-normal results for the US class at $p = .018$, but significantly normal

results for the German class at $p = .088$. The following chart summarizes the Shapiro-Wilk test scores for all variables on part B of the survey, highlighting in cursive non-normal distribution.

Table 5 *Normality of Distribution Test Survey Part B*

Variable	Shapiro-Wilk Pre-Survey $p =$	Shapiro-Wilk Post-Survey $p =$
<i>Interest in Cultural Learning</i>		
German Class	.000	.001
US Class	.000	.001
<i>Importance of Cultural Learning</i>		
German Class	.043	.344
US Class	.000	.037
<i>Usefulness of Online Communication for Language and Culture Learning</i>		
German Class	.015	.088
US Class	.003	.018

Analysis of normality of distribution for part C of the survey revealed primarily significantly normal distributions for both the German and the US class. The only significantly non-normal distribution can be seen for the attitude variable of pre-survey and post-survey scores for both classes. The Shapiro-Wilk test yielded $p = .000$ for both classes on the pre-survey for variable attitude and on the post-survey $p = .000$ for the German class, and $p = .001$ for the US class. Thus the attitude scores were not normally distributed.

All other variables showed significantly normal distributions on the Shapiro-Wilk test. The language variable yielded a $p = .681$ for the German and $p = .589$ for the US class on the pre-survey, and a $p = .549$ for the German and $p = .780$ for the US class on the post-survey. The awareness variable yielded $p = .183$ for the German and $p = .095$ for the US class on the pre-survey, and $p = .056$ for the German and $p = .613$ for the US class on the post-survey. The skills variable yielded $p = .334$ (German class) and $p = .214$ (US class) on the pre-survey, and $p = .235$

(German class) and $p = .936$ (US class) on the post-survey. The knowledge variable showed a significantly normal distribution on the pre-survey with $p = .375$ (German class) and $p = .229$ (US class), as well as on the post-survey with $p = .500$ (German class) and $p = .114$ (US class).

Overall intercultural competence scores (combination of all five factors) were also normally distributed for both classes on pre-and post-survey with $p = .469$ (German class) and $p = .408$ (US class) on the pre-survey, and $p = .747$ (German class) and $p = .336$ (US class) on the post-survey. The following chart summarizes the Shapiro-Wilk test scores for all variables on part C of the survey, highlighting in cursive non-normal distribution.

Table 6 *Normality of Distribution Test Survey Part C*

Variable	Shapiro-Wilk Pre-Survey <i>p</i> =	Shapiro-Wilk Post-Survey <i>p</i> =
<i>Language</i>		
German Class	.681	.549
US Class	.589	.780
<i>Attitude</i>		
German Class	.000	.000
US Class	.000	.001
<i>Awareness</i>		
German Class	.183	.056
US Class	.095	.613
<i>Skills</i>		
German Class	.334	.235
US Class	.214	.936
<i>Knowledge</i>		
German Class	.375	.500
US Class	.229	.114
<i>Intercultural Competence</i>		
German Class	.469	.747
US Class	.408	.336

The variables which showed a non-normal distribution on the Shapiro-Wilk test were ranked to allow the use of parametric tests on them. To compare between-classes differences and changes over time, a repeated measures ANOVA was used.

3.5. Data Analysis

The following chart is an overview of the research questions for this study and the data that will be used to answer them. While the data analysis will focus primarily on the US group, research questions 2 and 3 will also be answered for the German group.

Table 7 *Research Questions and Instruments*

RESEARCH QUESTION	INSTRUMENT(S)
1. What effect does a semester-long tandem e-mail partnership with native speakers have on written language skills of language learners?	• E-mail transcripts • Blog entries • Essays
2. What interest do American college students studying German as a foreign language have in learning about German culture and what effect does a semester-long e-mail exchange with native speakers have on this interest in cultural learning?	• Pre- and Post-Survey Part B
3. What effect does a semester-long e-mail exchange with native speakers have on the way in which language learners self-assess their intercultural competence?	• Pre- and Post-Survey Part C
4. How is intercultural competence displayed and developed through a semester-long e-mail exchange with native speakers?	• E-mail transcripts • Blog entries • Essays • Pre- and Post-Survey Part A, D
5. Is there a relationship between the number of words written throughout the exchange and the progress in use of syntactic complexity as well as self-assessed intercultural competence?	• Pre- and Post-Survey Part C • E-mail transcripts

3.5.1. Research Question 1

The first research question for this research project was: What effect does a semester-long tandem e-mail partnership with native speakers have on written language skills of language learners? In order to analyze the effects of participation in the cross-cultural, cross-lingual e-mail exchange on the American students' German language development, syntactic complexity was selected as the focus of the investigation. As outlined by Norris and Ortega (2009), much second language research has explored the concepts of complexity, accuracy, and fluency. In the context of this research project, language complexity was selected as the variable to analyze, while accuracy and fluency were not investigated. I shall briefly explain the rationale behind this decision.

Language fluency refers to how comfortable a speaker is at producing the foreign language without hesitation and interruption (Skehan, 2009). Though usually measured for foreign language speaking (Housen & Kuiken, 2009), when applied to writing contexts it is usually measured by how much a language learner can produce in a certain amount of time (Wolfe-Quintero, et al., 1998). For the scope of the e-mail exchange, the students were able to write their e-mails at home. They could spend as much or as little time on composing their e-mails as they wished, as there was no time limit given to them. Had the e-mails been written as an in-class assignment with a specific time allotted to the composition of each e-mail, fluency may have been a measurable variable. As this was not the case, however, it is difficult to analyze fluency, because students had as much time as they desired for re-reading, correcting, or modifying their e-mails before sending them out to their partners. Consequently, measures of fluency were not included in the analysis of the students' e-mails, as this analysis did not seem reliable in the context of this particular e-mail exchange.

Language accuracy refers to how much the students' writing or speaking is in line with specific rules and thus error-free (Pallotti, 2009). One way to calculate accuracy in a second language writing sample is to count error-free structural units per structural unit, for example. When analyzing accuracy in the language development of a second language learner, decisions have to be made about what counts as an error and what does not. As Wolfe-Quintero et al. (1998) point out, this decision is based for example on the learners' language level. Accuracy measures were not included in the analysis of the students' e-mails in this project because of the difficulties surrounding the concept of errors. One problem, for example, is that the students are at a very different level of their language proficiency. This makes deciding on specific errors difficult because the same errors aren't applicable to all students, so that comparing and tracing a development is tricky. Secondly, and mentioned in Wolfe-Quintero et al. (1998), measures such as error-free clauses per clause may present a very unspecific picture of a language development, because one student may have only one error in the clauses containing errors, whereas another may have five errors, and still these would be counted as the same.

The concept of language complexity can refer to a range of aspects (Pallotti, 2009). In the context of this study, the analysis of language development will focus on syntactic complexity. According to Ortega (2003), measures of syntactic complexity are important because language development correlates to an increase in syntactic proficiency which can be investigated through syntactic complexity analyses. Syntactical complexity has been selected for the analysis of the students' e-mails in this research project, because of its importance, and because it offers a relatively reliable way to trace development throughout the e-mail exchange.

As outlined in chapter two, section 3 of this dissertation, there are multiple ways of measuring syntactic complexity and a multidimensional approach is important to ensure the

validity of the analysis (Norris & Ortega, 2009). As suggested by Norris and Ortega (2009), the analysis of language development in this e-mail project will be conducted multidimensionally for syntactic complexity. I will analyze (1) complexity via subordination, (2) global complexity, and (3) subclausal complexity. Complexity via subordination can be measured “by any metric with clause (or subordinate or dependent clause) in the numerator” (Norris & Ortega, 2009). To measure (1) complexity via subordination, I will calculate the average subordination amount per T-unit. To calculate this, the total number of finite verb clauses per writing sample will be divided by the total number of T-units per writing sample as explained and exemplified by Ortega (forthcoming 2012).

For the measurement of (2) global complexity, Norris and Ortega (2009) suggest “any length-based metric with a potentially multiple-clausal unit of production in the denominator” (p. 561). I will use the mean length of T-unit to calculate global complexity. As indicated by Ortega (forthcoming 2012), this can be calculated by dividing the total number of words in the writing sample by the total number of T-units.

Last but not least, subclausal complexity can be measured by the mean length of clause (Norris & Ortega, 2009). I will measure (3) subclausal complexity by calculating the mean length of finite verb clauses in the writing sample. As exemplified by Ortega (forthcoming 2012), this can be calculated by dividing the total number of words in the writing sample by the total number of finite verb clauses.

In order to determine possible developments in the writing samples of the American students, roughly the first 25% and the last 25% of each student’s e-mails written to the German partner were analyzed. The three measures as outlined above were calculated and the means

from the first and last e-mails written were compared to see if there were any statistically significant changes. A dependent t-test was conducted to compare the means statistically. To summarize, the analysis of language development in regards to syntactic complexity employed the following measures:

Table 8 *Syntactic Complexity Measurement Summary*

What is measured	How it is measured
(1) Global complexity	<u>Mean length of T-unit</u> # of words / # of T-units
(2) Complexity by subordination	<u>Average subordination Amount</u> # of finite verb clauses / # of T-units
(3) Subclausal complexity	<u>Mean length of finite verb clause</u> # of words / # of finite verb clauses

Although not uncontroversial, the T-unit has been chosen as the structural unit for the analysis because it has been said to be ideal for intermediate or advanced writing (Norris & Ortega, 2009). The American students enrolled in the third-year German class fall into the category of intermediate to advanced writing. The T-unit consists of a main clause and any subordinate clauses (Wolfe-Quintero, et al., 1998). As pointed out in Wolfe-Quintero et al. (1998), researchers have shown dissimilar understandings of T-units in regards to sentence fragments and punctuation. For the purpose of my analysis, a T-unit will be regarded as any clause that can stand on its own, and its subordinated clauses, regardless of the punctuation. In accordance with Ortega (forthcoming 2012), incomplete sentences, such as interjections (Wow! Cool!), are excluded from the analysis.

Additionally, coordinated clauses will be counted as two T-units when both clauses contain a subject and verb (i.e.: Er geht nach Hause und er schläft/ He goes home and he sleeps). Coordinated clauses where the subject is omitted in the second clause will be counted as only one T-unit (i.e.: Er geht nach Hause und schläft/ He goes home and sleeps). The rationale for counting the elliptical construction as only one T-unit is that this construction is more advanced and it has to be counted as only one, longer, T-unit in order to give the student credit for more complexity. When counting the finite verb constructions, each finite verb counts as one finite verb clause regardless of whether the subject is omitted or not. When counting words, all words in an e-mail were counted except the address (Hello Tom), the farewell (Bis bald, dein Andy) and any English words. Language correction given at the end of emails or within emails was not counted. Microsoft Word's word count function was used as the basis for the word count, but English words were hand-counted and subtracted from the result. A second rater also rated part of the e-mails.

After reporting the statistical results for the analysis of syntactic complexity, three case studies will be selected and the individual language development will be exemplified. I will select the students who showed the most development in syntactic complexity, the one who showed the least development and the one who showed the most average development. Through exemplifying three individual developments, the intent is to identify reasons for strong, average, or weak linguistic development.

3.5.2. Research Question 2

The second research question was: What interest do American college students studying German as a foreign language have in learning about German culture and what effect does a semester-long e-mail exchange with native speakers have on this interest in cultural learning? The

question will also investigate how important students find culture in their foreign language classes, and whether they thought online communication tools are a good way to learn about culture and language. To answer research question two, a mixed design (or repeated measures) ANOVA will be used. This test allows the comparison between classes (between-subjects effects) and time (within-subjects effects, pre- and post-survey differences). That means the test shows differences in answer patterns between the two classes (German and US class), as well as changes within the classes from pre- to post-survey. The repeated-measures ANOVA will have one between-subjects variable (group belonging) and one within-subjects variable (time; pre-test and post-test).

In order to use a repeated measures ANOVA, three assumptions have to be met: normality of distribution of data, homogeneity of variances for both data, and sphericity (Larson-Hall, 2010). The assumption of sphericity is not an issue in this data because there are fewer than three conditions present, which means, there is only a score from pre- and post-test, and a repeated-measures variable with only two levels always meets the assumption of sphericity (Field, 2009). Before running the ANOVA, the data will be tested to meet the assumptions of normality of distribution and homogeneity of variances.

Simple descriptive statistics will be reported when answering this research question along with the results of the statistical tests. If students commented in open-ended questions on their interest in learning about culture, these answers will also be incorporated in the analysis.

3.5.3. Research Question 3

Research question three investigates the effects of the virtual exchange on the way in which students' self-assess their intercultural competence. Part C of the surveys will be analyzed quantitatively to answer research question three. Again, simple descriptive statistics will be

reported. Additionally, to answer this research question, a mixed design (or repeated measures) ANOVA will be used. This test allows the comparison of the self-assessment between classes (between-subjects effects) and time (within-subjects effects, pre- and post-survey differences). The repeated-measures ANOVA will have one between-subjects variable (group belonging) and one within-subjects variable (time; pre-test and post-test). In order to use a repeated measures ANOVA, three assumptions have to be met: normality of distribution of data, homogeneity of variances for both data, and sphericity (Larson-Hall, 2010). The assumption of sphericity is not an issue in this data because there are fewer than three conditions present, which means, there is only a score from pre- and post-test, and a repeated-measures variable with only two levels always meets the assumption of sphericity (Field, 2009). As for research question two, the data will be analyzed to verify that these assumptions are met before the ANOVA will be run. Separate analyses will be run for the five categories of intercultural competence according to Fantini (2000): language skills, attitudes, awareness, skills, knowledge. All components will also be analyzed together as intercultural competence as a whole. The results will show whether students' assessed their own intercultural competence statistically differently after the exchange.

3.5.4. Research Question 4

Research question four investigated the demonstration and development of intercultural competence in the exchange. The answer to this research question will be separated into three parts. The first part will summarize students' individual self-assessments of their intercultural competence. The second part will present significant patterns from the qualitative analysis of students' data in regard to their development of intercultural competence and in reference to their self-assessments. The third part will present three case studies and trace their development of intercultural competence throughout the exchange. The case studies will be the three students

whose self-assessment (1) increased the most, (2) increased the least or did not increase at all, and (3) increased/decreased most averagely.

For part (1) the students' individual self-assessment of intercultural competence will be summarized both before and after the exchange. The summaries will be grouped into the separate partnerships that participated in the exchange. For part (2) the American students' e-mails, blogs, and essays will be analyzed on the basis of the self-assessment statements of intercultural competence adapted from Fantini's (1997a) survey. The e-mails will be hand-coded and types of awareness, attitude, skills, and knowledge will be identified. It will be analyzed what types of awareness is shown, what skills are exhibited, what knowledge is shown, and what attitudes are demonstrated. The findings that stand out for each category of intercultural competence (attitude, awareness, skills, knowledge) will be presented in this part of the research question in order to summarize the patterns of development that were seen or to point out unusual trends. Lastly, for part (3), three case studies will be selected and their development of intercultural competence or lack thereof will be traced throughout the virtual exchange. The case studies will be the students whose self-assessment increased the most, the least, and most averagely.

3.5.5. Research Question 5

Research Question five was: Is there a relationship between the number of words written throughout the exchange and the progress in use of syntactic complexity as well as self-assessed intercultural competence? Specifically, the question investigates whether there is a relationship (a) between the number of words written and the linguistic development, (b) between the number of words written and the students' self-assessment of intercultural competence.

In order to answer part (a) a bivariate, two-tailed correlation analysis will be conducted between the number of words written by each student and the developmental score of syntactic

complexity. The developmental score of syntactic complexity will be calculated by subtracting the score of syntactic complexity of the first 25% of students' e-mails from the score of syntactic complexity of the last 25% of their e-mails. Pearson's r and Kendall's τ will be calculated.

Pearson's r is most commonly used for correlation analysis with interval data such as the data in this study, but Kendall's τ is a good measure when a small data set is used.

In order to answer part (b), a bivariate, two-tailed correlation analysis will be conducted between the number of words written by each student and their developmental score of self-assessed intercultural competence. The intercultural competence developmental scores will be calculated by subtracting the pre-survey self-assessment intercultural competence scores from the corresponding post-survey scores. For research question five, the statistical results of the correlation analyses will be reported.

The previous chapter has summarized the methodology employed in this dissertation. The data collection and analysis procedures were explained and the individual instruments used in this study were described. It was specified, how each research question will be answered. In the next two chapters, the research findings will be presented. Chapter four will present the research findings to research question one, and chapter five will present the findings to the other research questions.

CHAPTER 4

RESEARCH FINDINGS 1

4. Research Findings 1

The previous chapters have introduced the topic of this study, summarized pertinent research on (inter)cultural competence and written language skills in foreign language contexts, with a special emphasis on online contexts, and presented the methodology for this research study. In this chapter I will present the answers to the first research question of this dissertation.

4.1. Research Question 1

What effect does a semester-long tandem e-mail partnership with native speakers have on written language skills of language learners?

Research question one was intended to investigate whether there was an effect of participation in the e-mail exchange on the American students' foreign language writing skills. Specifically, the analysis focused on syntactic complexity. Syntactic complexity "refers to the range of forms that surface in language production and the degree of sophistication of such forms" (Ortega, 2003, p. 493). In this study, I focused on three measures of syntactic complexity as suggested by Norris and Ortega (2009): global complexity, measured by the mean length of T-unit; complexity via subordination, measured by the average subordination amount per T-unit; and subclausal complexity, measured by the mean length of finite verb clauses in the sample.

The effects of the cross-cultural e-mail exchange were determined by comparing the level of syntactic complexity from the first 25% of each student's emails with the level of syntactic complexity from the last 25% of each student's emails. In order to compare the syntactic complexity, a dependent t-test was conducted for the three variables of syntactic complexity that were measured.

Because the students wrote varying numbers of e-mails, a different number of e-mails was analyzed for each student. The following chart summarizes which e-mails were analyzed for each student, which is roughly 25% of each student's first and last e-mails:

Table 9 *Summary of Number of Analyzed E-mails*

Student ID	First 25% of e-mails	Last 25% of e-mails
E001	1-7	21-26
E002	1-3	9-11
E003	1-5	17-21
E004	1-5	16-20
E005	1-6	19-24
E006	1-5	15-20
E007	1-3	12-14
E008	1-5	16-21
E009	1-5	15-19
E010	1-3	12-14
E011	1-5	14-19
E012	1-6	20-25
E013	1-5	16-21
E014	1-5	14-18
E015	1-6	15-23
E016	1-5	15-20
E017	1-5	12-16
E018	1-6	17-22
E019	1-5	15-20

Syntactic complexity was measured in three ways, targeting different aspects of this grammatical competence as outlined in chapter three and suggested by Norris and Ortega (2009). Firstly, global complexity was measured by calculating the mean length of T-unit. Secondly, complexity via subordination was measured by calculating the average subordination amount per T-unit. And thirdly, subclausal complexity was measured by calculating the mean length of finite verb clauses.

To calculate syntactic complexity, it was, thus, necessary to count words, T-units, and finite verb clauses for the first and last 25% of each student's emails. Words were counted by

using the word count function of Microsoft Word, and then counting any English words by hand and subtracting that number from the total word count. To ensure reliability of these results, a second rater independently rated 10% of all e-mails that were rated for this research question. The independent rater counted T-units and finite verb clauses. As explained in chapter three, English words were not counted, and the address line and closing lines were also omitted from the count. Language correction was also not counted. The second rater did not count the total number of words. Inter-rater reliability was calculated by determining Cronbach's α , as suggested by Larson-Hall (2010). Inter-rater reliability was very high. The reliability coefficient, Cronbach's α , was .998. Anything above .70 is generally regarded as an acceptable level of Cronbach's α (Larson-Hall, 2010). In this case, inter-reliability was highly acceptable.

The following excerpt from an e-mail exemplifies how global complexity, complexity via subordination and subclausal complexity were calculated. The excerpt is taken from e-mail 19 from American student E003.

*LRN: Heute bin ich zu einer Talent Show mit vielen ausländischen Leute gegangen.

*LRN: Ich war der einzige amerikanische Mann dort

*LRN: und ich habe vielen Stererotypen gefunden.

*LRN: Ich sagte, dass ich aus Detroit kommw

*LRN: und die Leute fragt, ob meine Familie fur die Automobilindustrie arbeitet.

*LRN: Ausserdem fragten sie, ob ich Eminem gut gefallen.

*LRN: Es war sehr seltsam.

*LRN: Es war sehr interessant zu sehen, Menschen aus verschidenen Kultturen interagieren.

As suggested by Ortega (forthcoming 2012), each tier in this excerpt represents one T-unit. Altogether, this excerpt contains 8 T-units, 11 finite verb constructions, and 66 words. According to the calculations outlined in chapter three, this reveals a global complexity of 8.25 (words divided by T-units), complexity via subordination of 1.375 (finite verb constructions divided by T-units) and subclausal complexity of 6 (words divided by finite verb constructions).

In order to determine changes in students' syntactic complexity, a dependent t-test was conducted between the complexity scores of students' first 25% of their e-mails and the last 25% of their e-mails. The dependent t-test allowed the comparison of the means for the three variables of syntactic complexity from the beginning and end of the e-mail exchange were compared. In the following I will discuss the findings of the dependent t-test.

4.1.1. Global Complexity

In order to assess the global complexity of students' emails, the mean length of T-unit was calculated. The total number of words for each sample was divided by the total number of T-units. Comparing the means for global complexity in students' e-mails from the beginning and the end of the e-mail exchange revealed statistically significant differences. On average, students' (n=19) global complexity was 7.8 (standard deviation: 1.13) in the first 25% of their e-mails. That means that the mean length of students' T-units was 7.8 words. In the last 25% of students' e-mails, the global complexity was an average of 8.7 (standard deviation: 1.78). That means that the mean length of students' T-units had increased to 8.7 words. The following table summarizes these results:

Table 10 *Descriptive Statistics Global Complexity*

	N	Minimum	Maximum	Mean	Std. Deviation
global complexity of language 1	19	5.86	10.10	7.8005	1.12856
global complexity of language 2	19	5.42	13.46	8.6714	1.77601
Valid N (listwise)	19				

Statistically, this difference was significant. On average, students showed significantly higher global complexity in e-mails written at the end of the exchange ($M = 8.7$, $SE = .41$) than in the e-mails written at the beginning ($M = 7.8$, $SE = .26$), $t(18) = -2.881$, $p = .01$, $r = .56$. At $r = .56$ this presents a large effect size. This can be seen in the increase of words per T-unit. Thus, on average, students' T-units were longer toward the end of the exchange, which suggests an improvement in students' global complexity.

4.1.2. Complexity by Subordination

To assess students' complexity by subordination, the average subordination amount was calculated. The number of finite verb clauses was divided by the number of T-units. Comparing the means for variable complexity by subordination also revealed statistically significant findings. The e-mails that were written at the beginning of the exchange had an average subordination amount of 1.2 clauses per T-unit (standard deviation: .12). In contrast, the e-mails that were written at the end of the exchange had an average subordination amount of 1.37 clauses per T-unit (standard deviation: .21). The following table summarizes these results.

Table 11 *Descriptive Statistics Complexity by Subordination*

	N	Minimum	Maximum	Mean	Std. Deviation
complexity by subordination 1	19	1.000	1.424	1.20021	.116088
complexity by subordination 2	19	1.000	1.723	1.36542	.209421
Valid N (listwise)	19				

Statistically, this difference was significant. To sum up, students' e-mails showed a higher amount of subordination in the e-mails that were written at the end of the exchange ($M = 1.37$, $SE = .048$) than in the e-mails that were written at the beginning of the exchange ($M = 1.2$, $SE = .027$), $t(18) = -4.197$, $p = .001$, $r = .7$. Again, the effect size is very large. The results indicate that students' use of subordination had increased significantly over the course of the exchange. These findings suggest that students developed their language proficiency during the duration of the semester, which may be due to the exchange and/or due to their participation in the class. It also may be that getting more comfortable with their partners resulted in an attempt to use more complex language and to experiment with different, perhaps more difficult, structures.

4.1.3. Subclausal Complexity

For the assessment of subclausal complexity, the mean length of the finite verb clause was calculated. This was done by dividing the total number of words of each sample by the total number of finite verb clauses. The average length of finite verb clause decreased slightly from 6.48 (standard deviation: .55) in the early e-mails to 6.39 (standard deviation: .75) in the later e-mails, as summarized in the following table.

Table 12 *Descriptive Statistics Subclausal Complexity*

	N	Minimum	Maximum	Mean	Std. Deviation
subclausal complexity 1	19	5.464	7.571	6.48489	.548397
subclausal complexity 2	19	5.416	8.271	6.38884	.747196
Valid N (listwise)	19				

Nonetheless, the dependent t-test revealed that the difference was not statistically significant. On average, the students' subclausal complexity was slightly higher in the first 25% of their e-mails ($M = 6.48$, $SE = .13$) than in the last 25% of their e-mails ($M = 6.39$, $SE = .17$), $t(18) = .549$, $p > .05$, $r = 0.13$. This difference is non-significant and presents a small effect size. It can be seen that students' subclausal complexity, as measured by mean length of finite verb clause, did not differ in statistically significant ways, even though there is a slight decrease in the averages from the earlier and later e-mail samples.

4.1.4. Summary of Effects of Virtual Exchange on Syntactic Complexity

The statistical analysis of syntactic complexity in the e-mails of the American students has shown that students presented significantly higher global complexity as well as complexity via subordination at the end of the e-mail exchange. Students' subclausal complexity did not change significantly. The statistical results suggest that the increased writing practice and communication with native speakers had overall positive effects on the American students' syntactic complexity. Students made more use of subordination in their later e-mails, and they wrote longer T-units. The non-significant change in subclausal complexity indicates that students did not increase their use of phrasal modification much. This non-significant finding could in part be explained by the fact that subclausal complexity is a good indicator of language

development at the advanced language level (Norris & Ortega, 2009), but the students in the third-year German class were not expected to be at an advanced language level yet.

Progress in the development of syntactic complexity can be inferred from these results. Considering that over the course of the 12-week e-mail exchange, the American students wrote an average of 276 sentences and 2994 words in German to a native speaker this progress seems to be justified. It can be concluded that the increased practice and feedback from native speakers was beneficial for students' development of syntactic complexity.

Although the students wrote in syntactically more complex ways in the e-mails at the end of the exchange, it cannot be concluded that this improvement took place solely because of the students' participation in the virtual exchange. Other factors such as their instruction in the classroom, other language classes taken simultaneously, and their independent work outside of educational contexts have likely contributed to the improvement in syntactic complexity as well.

4.1.5. Case Studies: Language Development

In the following section, I will elaborate on the language development of those students who showed the highest, lowest, and most average increase in syntactic complexity. In so doing, I hope to illuminate reasons for the developmental patterns exhibited in the e-mails. To identify the case study students, the developmental scores for global complexity, complexity via subordination, and subclausal complexity were calculated and then summed up. The following chart shows the developmental syntactic complexity scores for all students sorted from lowest to highest.

Table 13 *Syntactic Complexity Development*

Student	Syntactic Complexity Developmental Score
E002	-1.8
E010	-0.896
E007	-0.686
E004	-0.519
E018	-0.283
E008	-0.23
E013	-0.021
E009	0.054
E005	0.206
E003	0.463
E014	0.896
E017	1.138
E012	1.21
E011	2.051
E001	2.052
E006	2.322
E015	2.345
E016	2.626
E019	6.933

The developmental score was calculated by subtracting the scores for the first 25% of students' e-mails from the scores of the last 25% of their e-mails. The following calculation sums up this procedure: (global complexity score 2 – global complexity score 1) + (complexity via subordination score 2 – complexity via subordination score 1) + (subclausal complexity score 2 – subclausal complexity score 1). The average developmental score was 0.94 for the three types of syntactic complexity that were measured. Thus, student E014 showed the most average development with 0.896, student E002 showed no development, but a decrease in demonstration of syntactic complexity with a score of -1.8, and student E019 showed the largest increase in use of syntactic complexity with a score of 6.933.

In the following, I will analyze the e-mail exchanges of these three students with the intent of outlining the developmental pattern observed in the e-mail data. I will draw on pushed-

output theory by trying to show instances where the students are pushed to modify or increase their output by writing with more syntactic complexity in order to respond to feedback, such as questions or clarification requests, from their partners. Additionally, I will analyze the e-mail exchanges in light of the overall language patterns and developments that may be unrelated to syntactic complexity.

4.1.5.1. Highest Increase in Syntactic Complexity

Student E019 showed the highest improvement in the area of global complexity as well as subclausal complexity. Her overall syntactic complexity development score was 6.933, which is much higher than the average development of 0.94. In the first 25% of the e-mails written by student E019, she produced a mean length of T-unit of 8.39 words. Compared to the other students of the class, this was among the higher mean lengths of T-units. In the last 25% of her e-mails, student E019 produced T-units with an average length of 13.46 words. This shows that, on average, the student's T-units had 5.07 words more in the e-mails at the end of the e-mail exchange than in those from the beginning of the exchange. While the student wrote approximately the same number of words in the first and last 25% of her e-mails (755 and 794 respectively), the number of T-units decreased by 31 from the first 25% to the last 25% of her e-mails (90 versus 59). This decrease in T-units combined with relative stability in the word count indicates that the student produced longer T-units, thereby increasing global complexity.

Student E019 showed an increase of 0.394 in the area of complexity via subordination. In the first 25% of her e-mails, her complexity via subordination score was 1.233, because she had a total of 111 finite verb clauses in 90 T-units. In the last 25% of the student's e-mails, the number of finite verb clauses had decreased to 96 and was contained in 59 T-units yielding a

complexity via subordination score of 1.627. With a development of 0.394, the student shows an above average and second largest increase in this area.

In the area of subclausal complexity, student E019 also showed the highest improvement. Subclausal complexity was measured by the mean length of finite clause, which is calculated by dividing the total number of words in the sample by the total number of finite verb clauses in the sample. Student E019's finite verb clauses from the first 25% of her e-mails were, on average, 6.8 words long, with 111 finite verb clauses and 755 words in the writing sample. The last 25% of the student's e-mails showed a mean length of finite verb clause of 8.27 with 96 finite verb clauses and 794 words. The student, thus, showed an increase of finite verb clause length of about 1.47 words. This was the largest increase in subclausal complexity seen in the e-mails of the American students. In fact, the majority of students did not increase in this area at all. This is not too surprising, considering that the mean length of clause, the only measure that targets phrasal or sub-clausal complexity, is seen as most predictive of syntactic development at an advanced language level (Norris & Ortega, 2009), while the average language level in the American class can be described as intermediate. Student E019's increase in length of finite verb clauses correlates to the overall longer T-units, and the corresponding increase in global complexity.

Student E019, female, had two female partners in the German class. She wrote 20 e-mails over the course of the semester, and a total of 290 sentences. Of these, 27 sentences were in English. She wrote a total of 3486 words, of which 481 were English. That means that roughly 14% of her e-mails were in English. Her two partners wrote some e-mails together, and some separately. Combined, they wrote 12 e-mails to student E019. While the German partners wrote back very frequently and enthusiastically in the beginning of the exchange, their e-mails became

more infrequent at the end. This had a lot to do with their workload at school and their busy schedules. Both sides of the exchange gave each other a lot of language feedback. At times, the language correction was very extensive and sometimes comprised the larger part of the e-mails. The language correction was generally given at the end of the e-mail, after the weekly topic had been discussed.

This particular partnership was characterized by a high degree of interest and curiosity of all participants. Both the two German students as well as the American students expressed in many ways their wish to learn more about the target culture as well as their strong desire to improve their language through help from native speakers. Student E019, for example, states in e-mail 2: “Also, können sie auch mir mit meinem Deutsch helfen, wenn nötig? Ich möchte bessere Deutsch schreiben. Vielleicht mit Alltagssprache lernen¹.” Likewise, one of her German partners writes in her second e-mail: “I hope that you can understand my english and you can help me to make it better!” After both partners had expressed this specific wish for language assistance, the majority of the following e-mails then contained language feedback and suggestions for improvement. However, language feedback was not often targeted specifically at syntactic complexity, but contained corrections on word choice, spelling, grammar and many other aspects of the target language.

In the following section, I will present examples of the student’s writing to further show the changes in syntactic complexity. The first excerpt is an example sentence from the beginning of the exchange. The excerpts in this section reflect Ortega’s (forthcoming 2012) example and show each unit of production in a separate line and end each tier in a punctuation mark. Again, no corrections are made to the actual text, other than in punctuation and capitalization of words

¹ Examples from e-mails are given in their original form. No corrections or changes are made.

when punctuation was added. This should enhance readability of the excerpts. Ortega (forthcoming 2012) reminds readers to disregard “nontargetlike features of this learner’s interlanguage, since accuracy is a distinct construct that should be analyzed separately from linguistic complexity” (p. 7).

E019: Wir haben am letzten Mittwoch „Snow Day“ gehabt
E019: und die Universität war abgeschlossen, weil es schwerlich geschneit hat.
E019: Wir haben ungefähr 11 in. Schnee gehabt.
E019: Ich mag das Schnee und habe mit meinem Freundinnen mit dem Schnee gespielt.
E019: Wir haben auch einen Iglu machen versucht.
E019: Wir haben viel Spaß gehabt!

This excerpt from e-mail four contains 50 words spread over 6 T-units. The mean length of T-unit, as measure of global complexity, is 8.33, close to the student’s average length of T-unit in the first 25% of her e-mails. The next excerpt is taken from e-mail 19.

E019: Ich glaube, dass die größten Unterschiede zwischen deutscher und US
amerikanischer Kultur sind, dass die Deutsche nicht persönlich wie Amerikaner
sind.
E019: Zum Beispiel, in Amerika, manchmal geht man mit seinem Arbeitskollege nach
dem Arbeit aus.
E019: Amerikaner sind am bisschen gelassen, oder „laid-back.“
E019: wie zB hat man Pyjamahose oder Trainingshose nach Schule oder dem
Supermarkt, wie in East Lansing.
E019: Ich glaube auch, dass es Ähnlichkeiten geben.
E019: Zum Beispiel, wir haben Abendessen am gleicher Zeit.

In this excerpt, the 6 T-units contain 73 words combined, making the average T-unit 12.17 words long. The greater global complexity in the later e-mail can be attributed to an increase in subordination. The use of subordination in the later e-mails occurs in conjunction with the student’s expression of her opinion and feelings. She often uses constructions such as “Ich glaube, dass [...],” or “Ich mag [...], weil [...],” and gives reasons or elaborations for her opinions and emotions. The lack of such elaborations in the earlier e-mails is striking. Student E019 gives more straightforward declarative sentences and explanations in the earlier e-mails without explaining her views and attitudes.

One possible reason for the positive development in this e-mail exchange can be attributed to the negotiation that took place at the very beginning of the students' interaction. In the first e-mail, student E019 asked her partners K005 and K031 whether they should address each other formally, or informally: "möchten Sie mit 'Sie-form' oder 'du-form' schreiben lieber?" Her partners replied, that they would prefer to use informal 'du' and this establishes the relationship as one of equality and as informal. In line with this, the fact that both sides expected and appreciated language feedback also made the partnership one of mutual sharing and learning, where both sides knew they are simultaneously learners and experts. Student E019, for example asked in her second e-mail whether her partners would be able to give her language help so she can improve her German skills, and in their response, her partners also asked her to help them with their English. This also seems to have impacted the students' willingness to write more freely and go beyond the discussion of the assigned topics.

The analysis of the exchange as characterized by mutual openness and curiosity is underlined by student E019's blog entries. E019 writes in her first blog after two weeks of the exchange: "Am Anfang find ich es lustig ist, wenn sie immer mit Emoticons schreiben. Das finde ich natürlich gut, weil sie mich bequem zu fühlen. Ich fühle, dass ich nicht so Formal sein. Ich schreibe zurück mit Emoticons auch an." It can be seen, that student E019 is happy that her partners use emoticons and express their comfort with the exchange. This, in turn, makes student E019 more comfortable with her partners, which may impact her willingness to write, and thus practice, more.

The shift in use of syntactic complexity as outlined above can have several reasons. The positive relationship between the partners seems to have had a positive effect on the students' ability to write freely and openly. In fact, the students' increasing openness seems to push her to

try to explain her opinion in more detail than she had in the beginning of the exchange. Especially the curiosity of both sides about learning new things about each other made this exchange one of openness. The curiosity can be seen in the large number of questions asked that go beyond the assigned cultural topics and speak to a genuine interest in getting to know the partner. Student E019, for example, writes: “So I just wanted to know, if it is true, that people in Germany usually eat together as a family more often during lunch compared to dinner time? And what time do you usually eat lunch and dinner?” (e-mail 12). Similarly, the German students ask a lot of questions, which prompt student E019 to write more than about the assigned topics. These questions can be seen as fulfilling the noticing/triggering function of pushed-output theory (Swain, 2005). Although it cannot be seen from the e-mail transcripts that student E019 became aware of a gap in her linguistic knowledge which she tried to overcome through modified output, the questions asked by her partners appear to act as a catalyst which push student E019 to try to answer in more complex, detailed, and varied responses. Thus, the questions asked by her partners serve as a trigger for her to draw on her linguistic knowledge in order to successfully and effectively respond to her partners.

On excerpt of the student’s e-mails indicate that student E019 is not yet fully able to notice her own gaps in her linguistic knowledge, and that her output falls more in the category of hypothesis testing (Swain, 2005). That means, the question by her partners push student E019 to try how to express her opinion in writing and by waiting to see if her partners understood her message, she uses her own output as a sort of “trial run” (Swain, 2005, p. 476). In e-mail 6, student E019 thanks her partners for their language corrections and writes: “Danke für ihre Korrekturen! Ich finde, dass es noch schwer für mich ist, perfekte Sätze zu schreiben. Ich erkenne meine Fehler noch nicht.” In this excerpt, the student explains that noticing her own

mistakes, her gaps in her linguistic knowledge as pushed-output theory calls it, is still difficult for her. However, by receiving corrections from her partners, she can become aware of her own mistakes which may in the future lead to her modifying and improving her output.

Additionally, there are instances in the exchange, where her partners ask follow-up questions of student E019 which push her to explain something in more detail. By being forced to give more information about a topic, student E019 uses more complex structures than in her initial explanation of the topic. Thus, when discussing citizenship, student E019 at first only asks about the laws in her partners' country, but when they ask her to explain the same topic to them, she answers with much variation on her sentence structures:

Wenn man die amerikanische Staatsbürgerschaft bekommen möchte, muss er die Staatsbürgerschaftsprüfung nehmen. Er muss Arbeit haben und den Arbeitgeber muss ihn unterstützen. Es ist ganz kompliziert zu erklären. Man kann auch automatisch Amerikaner sein, wenn er in USA geboren ist. Ich bin auch Amerikanerin, weil ich in Amerika geboren bin. Ich glaube, dass die Gesetze und Migration gut sind. Migration ist gut, ob man seine neues Land beitragen kann. (e-mail 9)

Here, student E019 uses a lot of different subordinating clauses as well as coordinating clauses to explain the topic. By being asked about the laws of citizenship, student E019 has to draw on more complex linguistic structures in order to effectively describe what she wants to express.

The need to complete the task and convey her message successfully coupled with her partners' interest expressed in their question pushes student E019 to give output that is complex in nature.

The same can be found in a following e-mail, after student E019 is asked about her opinion of multiculturalism. Being asked her opinion pushes the student to explain in greater detail and with much complexity her opinion, which can be found in the following excerpt:

Ich denke, dass Multikulturalismus gut ist, weil wir andere Kulturen, Sprachen, Traditionen, Religionen usw lernen können. Für mich ist Multikulturalismus Würdigung und Verständnis von kulturellen, rassischen und ethnischen Unterschieden. Wegen Globalisierung glaube ich, dass es sehr wichtig ist, andere Leute mit verschiedenen Hintergründen zu wechselwirken. Deswegen können wir lernen, wie wir andere Leuten wechselwirken sollen so dass wir respektlos nicht sein. Es macht Spaß auch, wenn wir

andere Kulturelle lernen und andere Leute, die ganz anders von uns treffen, weil es am meisten ist die Erfahrung ganz herausfordernde Erfahrung. Nach dieser neuen Erfahrung bekommen wir neue Perspektive auch. Multikulturalismus ist manchmal nicht gut wegen diese Herausforderung. Mit Herausforderungen gibt es Konflikte, wie ihr früher geschrieben habt. In East Lansing ist die Gemeinde sehr sehr mannigfaltig, weil es die große Michigan State Universität gibt und Leute von vielen Ländern kommen. Ich fühle glücklich, dass ich in dieser unterstützenden Gemeinschaft lebe. Es gibt auch andere Orte in USA, die nicht so mannigfaltig wie East Lansing ist. (e-mail 10)

In this excerpt, the student uses much complexity, subordination and coordination, and her T-units are quite long due to the use of many adjectives, for example. In contrast to her previous e-mail, in which she had no questions from her partners to answer, it can be seen that her partners' interest in her opinion pushed her to give much more information and draw on her own linguistic knowledge enabling her to produce more complex output.

The difficulties of modifying output to respond to questions and clarification demands can be seen in another instance, where student E019 reverts to a mix of English and German in order to respond to her partners' question: "What do you mean with your question, because we already spoke about the topic of family culture. Do you want to know more general facts about the culture in Germany? May you could explain your question and if not then try it with easy english ;)" (e-mail 10). Initially, student E019 had asked: "Weißt du, welche amerikanischen Kulturen, dass anders als in Deutschland sind? Welche deutsche Kulturen (Familie, Lebensstil, Gesellschaft, usw), dass anders als in USA?" (e-mail 11). After her partners asked for clarification, student E019 modified her initial output and tries to explain in a mix of both languages:

Aber unsere Professor hat gesagt, dass das Mittagessen wichtiger in Deutschland ist und die Familie isst zusammen. Aber in Amerika isst die Familie zusammen öfter am Abendessen. Wir essen Abendessen um 18 oder 19 Uhr mit der Familie. Aber jetzt, als ich allein nahe der Universität lebe (nicht mit meiner Familie), verändert auch meine Essenszeit. So I just wanted to know, if it is true, that people in Germany usually eat together as a family more often during lunch compared to dinner time? And what time do you usually eat lunch and dinner? (e-mail 12)

While student E019 tries to explain her initial question with an example, she also adds a question in English to ensure that her partners understand her. In her exemplifying statements, she again uses complex sentence structures to convey her message. Again, this example shows that the request for clarification pushed the student to modify her output by including more information in complex structures.

Apart from the student's increased use of syntactic complexity as outlined above, the student also develops in other language areas. A reason for this appears to be the extensive language feedback she received from her partners. This language feedback seems to help her in various areas, not only syntactic complexity, as she also comments in her blog: "sie helfen mir mit meiner Deutsch. Ich mag diesen Email-Austausch weil ich Deutsch ganz informell lernen kann. [K031] hilft mir, um umgangssprachliche deutsche Sätze zu schreiben" (student E019, blog 1). In their feedback, the German students not only correct E019's language, but also praise her use of German, thereby giving E019 a feeling of accomplishment and making her more comfortable in writing in German. This may make student E019 more comfortable in modifying her output in order to test new hypotheses about how to convey a certain message.

In e-mail five, for example, the German students write "Sportaten I think you mean Sportarten?? It's correct when you mean this. [...] Your question sentence construction is good [...] I think good you know when you must use 'das' and 'dass.' Best wishes,[...]." In this example, it can be seen that her partners correct her spelling, but they also praise her for her correct use of das/dass, and her correct construction of questions. Her partners also explain corrections instead of just giving them, such as in the following example: "not Die berühmste Sports but Der berühmteste Sport(einzahl) or Die berühmtesten Sportarten. and we say not often 'berühmteste' to sport better is beliebteste" (student K031, e-mail 3). Here, the students explain

that their partner should use singular instead of plural, and they also suggest the use of a more frequently used word instead of the one employed by E019. In fact, her partners suggest new words several times throughout the exchange. The success of this precise language feedback can be seen, when student E019 in a later e-mail takes up this feedback and modifies her output by giving the correct form of sports in the German singular. She writes: “Früher hast du geschrieben, dass Deutschlands Lieblingssport den Fußball ist aber den berühmtesten **Sport** in deiner Stadt den Handball ist” (e-mail 4, emphasis added). This is a successful example of modified output as student E019 is able to achieve new grammatically correct constructions.

The language feedback seems to be an important help for student E019, her ease of writing in German, and her overall use of syntactic complexity. It can be said that the two main reasons for E019’s high increase in syntactic complexity as well as her improvement in other language areas appear to be

- Positive partnership characterized by: equality, openness, and curiosity
- Language feedback from both sides that transcends mere correction and includes explanations as well as praise.

To summarize, this student’s exchange contained a very personal connection as well as constructive language feedback. Through the many questions of her partners, the student was pushed to produce new structures and experiment with more complexity. Through the openness in the exchange and her partners’ praise of her target language use, the student felt comfortable to test new hypotheses and explain her opinion with more detail without worry of making mistakes. These reasons, along with the increased writing practice the student received through participating in the virtual exchange could be a contributing factor on the overall syntactic complexity development, especially when taking into consideration pushed-output theory and its

notion that students can improve through being pushed to modify their output. Even though we do not have access to the students' thought processes while she was composing her messages, the e-mail transcripts suggest that the push the student received through the various questions and requests for clarification acted as a trigger for her which made her try to produce more output.

In all, it can be summarized that curiosity expressed in the form of many questions, constructive feedback in combination with a positive partnership including openness and equality, are factors positively impacting the language development in an e-mail exchange.

4.1.5.2. Lowest Increase in Syntactic Complexity

Student E002 did not perform stronger in the area of syntactic complexity in the last 25% of e-mails, but in fact performed better in the first 25% of e-mails. The student's syntactic complexity development score of -1.8 shows that the student did not increase his syntactic complexity.

On average, students showed a 0.87 increase in average length of T-unit, which means that T-units were roughly an average of one word longer at the end of the exchange. In contrast, student E002's T-units were an average of 0.91 words shorter in the last 25% of his e-mails than in the first 25% of his e-mails. Additionally, the number of words per writing sample also decreased from 240 to 130, indicating that the student generally wrote less at the end of the exchange.

Student E002, male, wrote only 11 e-mails over the course of the semester. He wrote a total of 129 sentences, of which 24 were written in English. Of his 876 words, 221 were in English. Student E002 wrote the least number of e-mails and words in this exchange. On average, students wrote 2994.95 words over the course of the e-mail exchange. Student E002 had a female exchange partner in the German class who sent him 10 e-mails.

Although neither of the students in this partnership wrote the required number of e-mails and sometimes took a long time to respond to each other, the exchange was friendly and both students appeared very happy. The partners responded mostly to each other's questions although very briefly and did not express any dissatisfaction with the lack of responses. However, there was little discussion going on in this exchange. The partners only asked each other few questions and the exchange did not go beyond the exchange of question and short answer to a true negotiation of these cultural topics. For example, when the education system was the assigned cultural topic, student E002 merely wrote: "Hier haben wir 12 Klassen. Viele Leuten gehen zu einer Uni. Ich weiß nicht was ich sagen soll. Hast du Fragen über die Schule oder die Schüler/Studenten hier?" (e-mail 6). In his partner's next e-mail, she explains the German system in a bit more detail, but no discussion ensues. Student E002 only responds by writing: "Viele meiner Freunde sind Deutsche, also weiß ich viel über das deutsche Schulsystem" (e-mail 7). After that, the students don't discuss the educational systems of the two countries anymore.

The tendency to exchange personal preferences and facts without discussing the assigned cultural topics thoroughly may be a reason impacting the lack of increase in performance of syntactic complexity of student E002. Simpler topics and questions may not necessarily require complex sentence structures and may not push the student to experiment with and try these constructions. Additionally, the lack of improvement in syntactic complexity in this example can be attributed to the lack of e-mails written. Because student E002 only wrote 11 e-mails, he was unable to practice his writing skills as intensively as the other students who improved their syntactic complexity much more. He took advantage of fewer opportunities to modify his output and engage in an expert-novice interaction. The correlation between the number of writing and the development of syntactic complexity can further be seen when looking at the next three

students whose global complexity decreased similarly to student E002. All three of them had written less than the average student with 1017, 1367, and 1949 total words as compared to the average 2994 total words. This strongly suggests that students, who write more, have a better chance at improving their syntactic complexity.

Additionally, there was no language correction in the exchange of student E002 and his partner. Because there thus was no mediation, language development, from a socio-cultural perspective cannot take place. Although student E002 suggested the use of a different word to his German partner in one e-mail, his German partner did not offer any language feedback nor did student E002 ask for it. While this may impact the lack of increase in performance of syntactic complexity, another reason for the lack of improvement may lie in the absence of clarification requests or other incentives that might push student E002 to write more, test new structures, and answer in more complex ways.

Although his partner also asked him questions, student E002 was not pushed to modify his output and was not forced to utilize a “more syntactic processing mode” (Swain, 1995, p. 372). The reason for this could be the kinds and number of questions asked by his partner. In her first e-mail, his partner does not ask anything, but in her second e-mail she asks him: “What are your favorite books? [...] And which genres do you prefer?” (K018, e-mail 2). Both of these questions can be answered with fairly simple sentence structures, and this is exactly how student E002 answers them, when he writes: “Meine Lieblings-Bücher bei Kurt Vonnegut sind Slaughterhouse-Five und Mothernight. Meine anderen Lieblings-Bücher sind: 1984, The City and the Pillar, und The Watchers” (e-mail 3). In fact, the question about his favorite genre, which might be more difficult to answer, remains unanswered by the student. Thus, student E002 did not feel pushed or ignored the push to try to adapt his output to answer this part of the e-mail.

In e-mail 3, his partner K018 again does not ask any questions and thus does not give his partner an incentive to explain anything in complex ways. It thus appears that student E002 is not given the opportunity and not pushed to try to use complex structures or to draw on his linguistic abilities in this area. Neither is he pushed to try the function of hypothesis testing and experiment with new structures in his writing. The next question asked by his partner is whether he would like to practice a particular sport, if he had time (student K018, e-mail 4). Again, this question does not require a complex answer and indeed student E002 merely responds: “Ich spiele ein bisschen Racquetball” (e-mail 5).

Although in a later e-mail, the questions asked by his partner target more complex topics, student E002 does not show more complex linguistic patterns in his answers. In fact, he does not answer these kinds of questions. For example, student K018 asks him how he identifies himself, whether he loves his home country or whether he might want to emigrate somewhere else later in life, but these questions which could have pushed student E002 to answer with more syntactic variation, did not receive a response. Likewise, when asked about multiculturalism in his area the only response that is elicited from student E002 is: “Multikulti ist kein einfaches Thema” (e-mail 10). Again, although the topic could be answered with more complex structures and could have given student E002 the chance to try to produce more writing, student E002 does not use the opportunity to explain his opinion beyond this simple sentence. It is unclear whether student E002 possesses the ability to write with more syntactic complexity, or whether his inability to do so is a reason for his choice not to answer more complex questions. However, it seems that he does not feel pushed to go beyond simple answers and sentence structures.

In all, the e-mail exchange of student E002 did not contain many clarification requests or questions from his partner that could serve as a push for student E002 to pursue modified output.

In fact, when questions were asked that could be seen as a push to try new structures, student E002 did not answer them at all or only with one short sentence.

Thus, to summarize, this exchange suggests that even in a positive exchange characterized by friendliness on both sides, students may not receive opportunities for pushed output when their partners in the exchange do not ask enough or the kinds of questions that would force their partner to modify their output and use more complex structures and sentence patterns. This indicates that in order for students to benefit from pushed output, both partners should be advised to ask clarification questions, pose varying questions about different topics and both partners should be encouraged to try to answer even difficult questions to the best of their abilities.

4.1.5.3. Most Average Development in Syntactic Complexity

Lastly, an analysis of the e-mail exchange which had the most average development may further illuminate reasons for particular developmental trends. The student with the most average developmental trend in overall syntactic complexity was student E014. His overall syntactic complexity increased by 0.896. In total, he wrote 18 e-mails containing 4967 words, of which 652 were in English. His partners were two male students, K006 and K009 who together wrote 15 e-mails containing 4985 words. It can be seen that both partners wrote almost the same amount, although student E014 wrote three more e-mails than his partners.

This particular partnership was characterized by very long, at times in-depth discussions. These discussions did not always revolve around the assigned topics, because the students found many commonalities which they preferred to discuss instead of the assignments. Both sides of the exchange showed a strong ability to write in the target language. In fact, student E014

already showed high degrees of syntactic complexity in the first 25% of his e-mails with above average scores in all three areas of syntactic complexity.

His ability to use a lot of complexity can be seen in this excerpt:

Leider las ich nicht so viele Werke von Goethe; als ich in Highschool war, lasen wir meistens Werke (bezüglich der Zeit von Goethe) von britischen Autoren, z. B. Dickens, Keats, Blake, usw. Doch ist es ziemlich anders an der Uni; in ein paar Kurse, die ich belegte, lasen wir nur englische Literatur, aber es gibt eine Menge Kurse, in den Literatur lesen wird, die von überall auf der Welt kommt (in einem von meinen Kurse namens "Readings in Drama and Performance Theory" lesen wir Theaterstücke, die von Frankreich, China, Afrika, usw. kommen!) (student E014, e-mail 3).

Not only does the student use coordination and subordination accurately, he also uses different relative clauses, and varied sentence structures. The fact that student E014 is able to write with a high degree of syntactic complexity at the beginning of the exchange is one reason why his increase in syntactic complexity is not stronger but only average. From this early e-mail example it can be seen, that student E014 knows how to use complex structures in his writing, and this means that there may not be as much room for improvement or for showing more complexity as for students whose earlier e-mails are void of high levels of syntactic complexity. In fact, throughout the exchange, student E014 continues to use many syntactically complex structures, and he demonstrates his ability to use these structures accurately.

His slight increase in use of syntactic complexity may be impacted by the positive relationship, which as outline in the other examples above, led him to feel comfortable in writing about many topics, experimenting with many different structures, mostly successfully, and showing his full range of linguistic abilities. In addition, as was the case for student E019, his partners asked him several questions which pushed him to give elaborate answers and gave him the opportunity to use complex structures. His partner for example asked him for suggestions of artists or music to consult because he is trying to learn how to play Jazz piano, and student E014

also plays Jazz piano. This kind of question can push student E014 to write with complex structures, which he is able to do.

In comparison to student E019, the partners of student E014 do not ask as many questions, so that this curiosity alone cannot be regarded as a primary reason for the students' great use of syntactic complexity in his writing. However, his partners ask questions about a topic that is very important for student E014, namely jazz music. It seems that because the student gets the opportunity to write about a topic of high interest to him, he is excited to write his opinion and potentially writes more and with more complexity because of his familiarity and enjoyment with the topics. That student E014 greatly enjoys discussing this topic can also be seen in his blog entry, where he writes:

Neulich fand ich doch, dass [K006] gern Jazz hört, und dass er Klavier und zwar Jazz spielt! Das ist einfach großartig, da ich Jazz sehr gern höre und ich spiele Jazzpiano auch—zwar studierte ich Jazz an MSU für ein paar Jahre. Er fragte mich darüber und wollte einige Empfehlungen, die davon handelten, was er machen könnte, um das Spielen zu verbessern—so weit ist das zweifellos mein Lieblingsaugenblick unseres Austausches. (Student E014, blog 3).

And he again expresses his enjoyment of discussing this topic in blog 4: “Also [K006] und ich besprachen Jazz und Jazzklavier in der letzten Zeit eine Menge -- total großartig. Ich finde es so cool, dass sich er dafür so interessiert! Für mich liegt Jazzklavier wirklich am Herzen, wie ich zuvor sagte“ (blog 4). Having the opportunity to discuss a topic that is so dear to him may be another factor pushing student E014 to write with more complexity and may motivate him to use the function of hypothesis testing (experimenting with new structures in his writing).

Another example which shows student E014 is trying to improve his output can be found when he attempts to construct a complex subordinate clause, and then asks his partners whether he did so correctly. This is an example for student E014 testing a hypothesis in his output, namely whether his subordinate clause is constructed correctly. He wrote: “Sowieso danke ich

euch dafür, dass ihr mit mir teiltet, was ihr über Fußball und die WM habt! (Entschuldige, ich habe keine Ahnung, ob der letzte Nebensatz irgendwelche Sinn macht)” (e-mail 4). His partners respond to him by saying:

The subordinate clause you were not sure about (dass ihr mit mir teiltet, was ihr über Fußball und die WM habt!) would be more like “dass ihr mir mitgeteilt habt, wie ihr Fußball und die WM fandet). Germans do usually not “have” information (literally speaking) - they just “know”(=wissen) them or express feelings about things (using verbs of perception like “finden” or “Ich sehe etwas(sth) auf eine bestimmte Weise”, which would be “I think about something in a special manner”). “mitteilen” would be “to share information” instead of “teilen” (which would be the correct literal translation, but it’s just not said that way. Anyway everything was understandable very well :). (Students K006, K009, e-mail 4).

In their response, the students choose to give feedback on their partner’s lexical accuracy, rather than commenting on the sentence structure, which was correct. Although this is not an example of student E014 receiving feedback about his use of syntactically complex structures, it shows that the partners’ feedback can help student E014 in learning more about the target language.

The student also shows that he is able to implement the newly learned lexical item, for he writes in his next e-mail: “Danke dafür, dass ihr mir so viel mitteiltet” (e-mail 5). Here, he uses the verb to share some information or knowledge with someone (*mitteilen*), instead of the verb to share in general (*teilen*), which he had used in earlier e-mails. The fact that for the remainder of the e-mail exchange student E014 accurately uses the verb *mitteilen* instead of *teilen* in the context of sharing information with someone shows that he was able to learn from his partners’ feedback and modify his output. This attests to the usefulness of pushing students to modify their output, not only in the context of syntactic complexity, but in lexical accuracy as well.

When summing up the factors impacting development of syntactic complexity, it can be said that students’ performance in syntactic complexity appears to be impacted by

- the amount and types of questions asked by the partner(s): certain questions seem to push students more to try to write with more complexity and explain in more detail thus

modifying their output through the use of syntactically more complex structures, while other questions do not necessitate a complex answer

- the connection between the language partners: a sense of openness and friendliness of the exchange is necessary for students to feel comfortable in using the hypothesis testing function of pushed-output theory
- the type of language feedback received: feedback related to syntactic complexity can push students to modify their output in this area, while other language feedback can be useful in helping students develop in other language areas
- the number of e-mails written: in general, average developments correspond to average or slightly below average number of e-mails exchanged
- the type of discussion of the assigned cultural topics: students who avoided discussing more difficult tasks appeared to use less complex syntactic structures than those students who attempted to deal with the more demanding assignments

Additionally, the analysis has shown that the more students write, the better their chances are of exhibiting more syntactic complexity. That there is, in fact, a positive correlation between the number of words written throughout the exchange and the development of global and subordination complexity was confirmed by a statistical correlation analysis. The correlation analysis showed that there was a positive relationship between the number of words written and the development of global complexity, $r = .315$, $p = .188$. The effect size was medium. Similar results were revealed for the correlation between the number of words written and the development of complexity via subordination, $r = .366$, $p = .124$. Here, too, the effect size was medium.

One could conclude that the more students write and engage with the exchange the better they are able to practice their language and experiment with new structures through the hypothesis-testing function of pushed-output, which can lead to the use of more complexity. Secondly, those students who received constructive language feedback as well as clarification requests seemed to be at an advantage in terms of complexity development as well.

A personal connection to the exchange partner and openness and curiosity about learning new things also appeared to be a supporting factor for the development of syntactic complexity. This seems logical, because students need to feel comfortable in the exchange in order to try out new structures and push themselves beyond their current level of target language. Nonetheless, there were also students who had a good connection but did not show an increase in the use of syntactic complexity. In most of those cases, this was due to a lack of complex questions that required the use of complexity in the response.

The topics that were discussed and the extent of this discussion had an impact on the measurability of students' syntactic structures as well. Exchanges that focused mainly on every day conversations without discussing in-depth any of the assigned cultural topics, were either unable to develop or unable to exhibit features of improvement in syntactic complexity.

In addition to the analysis of students' syntactic complexity, they were also asked on the post-survey whether they believed that their language skills in general had improved as a result of their participation in the virtual exchange. 95% of the American students indicated that they believed they had gained language skills. The students also gave some examples of what they had learned in terms of target language skills:

- "I now know [...] not to forget to put the second verb at the end" (Student E001)
- "basic colloquial skills did improve" (Student E002)

- “in particular with grammar, and maybe some slang terms” (Student E006)
- “idiomatic things” (Student E007)
- “Writing, definitely!” (Student E009)
- “I believe my writing skills have improved. My spelling and grammar is definitely better in German” (Student E011)
- “I am slightly more aware of common mistakes, and more comfortable writing” (Student E012)
- “Certain more complex linguistic constructions have become more natural (such as passive voice constructions) and I know a better number of common expressions in German/ the phraseology of the language feels more natural” (Student E014)
- “They may have improved in writing friendly letters to people, instead of formal essay writing” (Student E017)

In general, the American students mentioned specific grammar rules (verb second position) and grammar in general as areas of improvement, along with writing skills, colloquialisms, idioms, and slang. One student explained that he did not see an increase in his target language skills because his partners wrote in English. In all, the students’ own perception of their language improvement shows that they perceived to have improved their language skills in many areas including syntactic complexity.

CHAPTER 5

RESEARCH FINDINGS 2

5. Research Findings 2

In the next chapter I will discuss the findings to the research questions pertaining to the students' interest in cultural learning, their development and self-assessment of intercultural competence, and the relationship between the number of words written by each student and their syntactic complexity as well as self-assessed intercultural competence.

5.1. Research Question 2

What interest do American college students studying German as a foreign language have in learning about German culture and what effect does a semester-long e-mail exchange with native speakers have on this interest in cultural learning? How important do they think cultural learning is in foreign language instruction? How do they evaluate the effectiveness of online communication for language and cultural learning?

Research question two aimed at revealing the interest in cultural learning of American students studying German and German students studying English. Survey part B (14 Likert-Scale items) was designed to answer this question, and also provided insights into the importance students assign cultural knowledge in foreign language classes, and the effectiveness they see in online communication for fostering cultural knowledge and language skills. When taken apart, there are three parts to research question two, which can be summarized as follows:

(A) What interest do American college students studying German as a foreign language and German high school students studying English as a foreign language have in learning about German and American culture respectively? What effect does a twelve-week e-mail exchange have on this?

(B) How important do American college students studying German as a foreign language and German high school students studying English as a foreign language find cultural

learning in the foreign language classroom? What effect does a twelve-week e-mail exchange have on this?

(C) How effective do American college students studying German as a foreign language and German high school students studying English as a foreign language find online communication for the improvement of language skills and cultural knowledge? What effect does a twelve-week e-mail exchange have on this?

It was hypothesized that students' interest in learning about culture increases along with the importance attributed to cultural learning due to the semester-long exchange with individuals from target culture backgrounds. It is also hypothesized that students will find online communication to be a more useful tool for cultural and language learning after participation in the twelve-week e-mail exchange. The idea that interest in cultural learning increases due to direct exchange with individuals from the target culture is based on the assumption that contact with the target culture makes students more curious about the target culture. Additionally, this finding would correlate with previous findings about the increase in learner motivation due to telecollaboration (Little, et al., 1999; Spodark, 2001; Ushioda, 2000). While results of a shorter study I conducted in the spring of 2009 revealed no significant changes in students' interest in cultural learning after a 6-week e-mail exchange, it is assumed that results from the semester-long exchange will show a more nuanced picture of changes in the level of students' cultural interest.

5.1.1. Interest in Cultural Learning

To answer this research question a mixed design (or repeated measures) ANOVA was used. This test allows the comparison between classes (between-subjects effects) and time (within-subjects effects, pre- and post-survey differences). That means the test shows differences in answer

patterns between the two classes (German and US class), as well as changes within the classes from pre- to post-survey. The repeated-measures ANOVA had one between-subjects variable (group belonging) and one within-subjects variable (time; pre-test and post-test).

In order to use a repeated measures ANOVA, three assumptions have to be met: normality of distribution of data, homogeneity of variances for both data, and sphericity (Larson-Hall, 2010). The assumption of sphericity is not an issue in this data because there are fewer than three conditions present, which means, there is only one score from pre- and one from post-test, and a repeated-measures variable with only two levels always meets the assumption of sphericity (Field, 2009).

As pointed out in the methodology chapter of this dissertation, the test of normality of distribution revealed significantly non-normal distributions for all variables and the scores were therefore ranked to allow the use of the mixed design ANOVA (Field, 2009). The second assumption for a mixed design ANOVA, homogeneity of variances, was tested using Levene's test of equality of error variances. Non-significant results of this test verify that the assumption is not violated. Levene's test showed a violation of the assumption of homogeneity of variances for the post-survey scores of variable interest in cultural learning, $p = .014$. However, this variable was already ranked due to the non-normal distribution. We will proceed with the analysis aware that this part of the data does not meet the requirement for homogeneity of variances.

Using a 1-6 scale (6 being the highest), students rated their interest in learning about culture in their foreign language classroom. The initial interest of students in cultural learning was very high in both classes. While the US students rated their interest in learning about German culture, the German students rated their interest in learning about US culture. The German class average for interest in cultural learning was very high at 5.6140 (standard

deviation: .48766). The US class average was even higher at 5.8421 (standard deviation: .32142). Both classes expressed extremely high interest in cultural learning. On the post-survey both classes had a slightly lower but still very high average for the variable interest in cultural learning. The US class average on the post-survey was 5.7544 (standard deviation: .29064) and the German class average was 5.3509 (standard deviation: .76557).

The repeated measures ANOVA showed no statistically significant within-subjects effects, $F(1) = .000, p > .05$, and also did not show statistically significant between-subjects effects, $F(1) = 3.339, p > 0.5$. This indicates that the two classes did not differ in statistically significant ways in their interest in cultural learning and that there was no statistically significant difference between pre-survey and post-survey answers. This would mean that statistically there was no significant effect of the e-mail exchange on students' interest in cultural learning. However, because the initial scores were very high, there may not have been any room for change.

Some of the open-ended questions on pre-and post-survey also aimed at getting a broader picture of students' interest in cultural learning, specifically the question about students' attitude toward learning about the target culture. In general, the majority of students in both classes reported to have a very positive attitude about learning about target culture. Many students said they were enthusiastic about learning about the target culture, were fascinated by it, interested in it, enjoyed learning about culture, and that they were very excited about the prospect of learning more about culture through the exchange. The German students expressed specific interest in learning about the following aspects:

- The target country and the lifestyle of people living there
- Differences between the two countries

- Whether what is taught in school about the target culture is true
- Peculiarities of the target culture
- How other people live and why

The American students gave more general answers about the positivity of their attitude toward learning about German culture without describing specifically what they are interested in learning. Several American students mentioned that they want to learn more about culture in order to be able to go abroad. Likewise, several German students mentioned that they wished to learn more about American culture so that they could live in the US one day.

On the post-survey students expressed a likewise positive attitude about and interest in learning about the target culture. Many students mentioned that learning about culture is exciting and useful. One German student said that she is particularly interested in getting to know the culture as it truly is, as opposed to only knowing the many prejudices that people generally have. The American students again used many upbeat expressions to voice their positive attitude toward culture learning and mentioned that cultural learning is “awesome” (student E001), that they’re very interested and enthusiastic, they love learning about culture, they are open to culture learning, and that they are very excited.

When asked whether their attitude toward learning about the target culture had changed after participating in the e-mail exchange, the majority of students explained that their attitude had not changed, and that they were still as excited about cultural learning as they had been before. This is in line with the statistical analysis of the survey answers which also showed that initial interest in learning about the target culture was very high for both classes, and that the interest was still as high after the exchange.

However, some students explained on the open-ended questions that their interest in learning about the target culture had increased, and this is not reflected in the statistical analysis. One American student specified that he enjoyed learning about modern German culture more at the end of the exchange. Several German students mentioned that because of the exchange they are now more excited about their English class and look forward to going to class more. Several students in both classes explained that they wished to learn even more about the target culture.

Only one American student mentioned a negative change in his attitude toward cultural learning. He explained: “I think unfortunately for a number of reasons I’m actually less interested in learning about German culture at the moment, but I think I just need to experience other perspectives in it” (E014). In a follow-up interview with the student, he explained that for a while during the semester he had regarded German culture with greater disinterest because of the similarities he had perceived between American and German culture. These were aspects of American culture that he was not proud of, such as subtle racist tendencies and perhaps an institutionalized strain of racism. Realizing that there were similarities in the two cultures concerning these issues, he became somewhat disillusioned. Thus his decreased interest in learning about German culture was rooted in dissatisfaction with certain aspects of his own culture. The student also explained in the follow-up interview that since having visited Germany over the summer following the exchange semester he had been able to learn many more specific aspects of German culture and is once again enthusiastic about learning about German culture. The answers to the open-ended questions support the general statistical results. Students showed a very high interest in learning about culture both before and after participating in the exchange. While some students expressed that they were even more interested in the target culture after the exchange, the majority of students reported that they were as excited as they had been before.

The hypothesis that students' interest in cultural learning would increase due to participation in the e-mail exchange cannot be verified. While this was the case for some students, most of the students did not experience a change in their level of interest in cultural learning.

5.1.2. Importance of Cultural Learning

When comparing the two classes on the variable *importance of cultural learning in foreign language classes* it can be noted that while both classes deemed cultural learning to be an important part of foreign language classes, the US class, on average, found cultural learning more important than the German class. The US class pre-survey average was 5.4211 (standard deviation: .79518), while the German class pre-survey average was 4.7763 (standard deviation: .79885). Optional comments on the German students' pre-surveys explained that culture had a very firm place in their English class, and that therefore, there did not need to be a stronger focus on culture. This attests to possible differences between the role of culture in foreign language classes between German and US educational institutions, or perhaps to differences between college and high school foreign language instruction. On the post-survey, both averages had increased, to 5.5526 for the US class (standard deviation: .40465) and to 4.8816 for the German class (standard deviation: .76996).

The repeated measures ANOVA showed no statistically significant within-subjects effects, $F(1) = .000$, $p > .05$, which means that the changes from pre- to post-survey were not statistically significant, although both classes showed increases from pre- to post-survey in the averages for this variable. The repeated measures ANOVA showed statistically significant between-subjects effects, $F(1) = 13.214$, $p = .001$. This means that the difference between the two classes was statistically significant and the US class valued culture as a part of foreign language instruction significantly more than the German class.

Some of the comments on the surveys help to better understand why there is such a significant difference in how German and US students assess the importance of learning about culture in the foreign language classroom. Many optional comments on survey part B by the US students underline the statistical results which show that US students find it highly important to learn about culture when learning a foreign language. Students' optional comments justifying the importance of cultural learning include, for example, explanations such as:

- Language is a main component of culture (E001)
- Culture shapes language (E001)
- Very important in learning the context of the language (E002)
- It helps progress the language (E003)
- Culture and language go together (E018)
- Culture influences the language + vice versa (E018)

Some students also gave more general optional comments, such as, "it is very important" (E003), and "knowing the culture is vital" (E006). On the open-ended question asking students' about their attitude towards learning about the target culture and language, students expressed a similar view and emphasized the necessity of learning about culture as part of language learning.

While the majority of American students agreed on the importance of learning about culture, only one student from the American class did not express a positive attitude toward learning about culture. The student commented that learning about the target culture "sometimes feels irrelevant and Vergangenheitsbewältigung got over done last semester" (E018). From the comment, it appears that the student may have had negative experience with culture learning in previous German classes. While this student acknowledges that "culture + language go together" and influence each other, she also commented that there "doesn't need to be a strong focus" on

culture in foreign language classes. It thus seems that the student's assessment of the importance of cultural learning is impacted by her previous experience of learning about culture. A negative experience with cultural learning seems to make the student believe less strongly in the importance of focusing on culture in foreign language instruction.

When looking at the German students' optional comments as well as their answers to the open-ended questions, there seem to be two opposing viewpoints. On the one hand, several German students rated the importance of cultural learning lower than other students and mentioned that culture already played a very big role in their English class and that they had learned or were learning enough about culture. Students, for example, explain:

- “wir lernen genug über Kultur” (K007)
- “Because till now we get much information about the US-American culture. This is a main topic of our English education” (K008)
- “Ich denke wir lernen schon viel über die Kultur des jeweiligen Landes” (K009)
- “Meist übertreiben die Lehrer dies auch, in mancher Hinsicht” (K014)
- “in Englisch reicht es” (K018)
- culture “ist meiner Meinung nach ausreichend gemacht wurden” (K020)

While these students mostly believe that learning culture is important, they also feel that it has been included enough in their foreign language courses. In contrast, two students did not believe that cultural knowledge was necessary to properly learn a language. One student explained:

“Wenn man nur wissen möchte, wie die Sprache des jeweiligen Landes funktioniert, muss man sich nicht unbedingt mit dessen Kultur befassen” (K005), and another one mentioned that culture is “auch interessant, aber nicht unbedingt nötig” (K016), while he believed that learning the English language is “unabdingbar.” Another student commented that “Amerikanische Kultur ist

sehr interessant, jedoch für mich nicht relevant zu lernen” (K017). It thus appears that a minority of German students feels that learning the language in itself is more important than learning about the culture and that language and culture do not have to be taught together.

On the other hand, many other German students have similar feelings about culture as the majority of the American students. In spite of some contrary opinions, the majority of the optional comments given by German students on part B of the survey show that the German students also believe that it is very important to include culture in foreign language instruction. Congruent with many comments by the US students, many German students remark that learning culture is important in order to better learn the language. Students explain:

- “um eine Sprache auch erfolgreich anzuwenden müsste man auch kulturelle Hintergründe kennen (das gehört zusammen)” (K003)
- "if you understand the attitude of the citizens and of the community, you will learn easily their language” (K008)
- “Ich denke, wenn man die Sprache verstehen will, ist es wichtig auch einiges über die Kultur zu wissen” (K009)
- Learning culture is important “da man durch die Kultur auch viele sprachliche Sachen versteht” (K014).
- “Zum Lernen einer Sprache eines Landes, gehört die Kultur einfach dazu. Vor allem ist es wichtig zu wissen, wie man sich ausdrücken darf, ohne jemanden zu beleidigen oder zu verletzen. Dafür muss man sich unter anderem auch mit der Kultur eines Landes auseinandersetzen” (K016)

Other optional comments and answers to the open-ended questions on the survey explain that learning about culture is important to German students:

- “Um Zusammenhänge besser zu verstehen und um seinen Horizont zu erweitern” (K020)
- Because it “gehört zum Gesamtbild des Landes hinzu und ist auch wichtig für eine gute Kommunikation” (K016)
- “Da man meist nur über das eigene Land informiert wird und andere Kulturen aber genauso wichtig sind” (K014)

Many students also believe that culture should be more explicitly taught in their foreign language classes and they explain:

- “in Englisch könnte es noch ein bisschen mehr über die Kultur unterrichtet werden” (K005)
- “Wir lernen schon viel über Kultur. Es könnte dennoch ein bisschen mehr sein” (K009)
- “Ich finde wir machen allgemein wenig Verknüpfungen zwischen einer Sprache und deren dazugehörigen Kultur. [...]Ich finde, das eine gehört zu dem anderen automatisch dazu” (K002)

Comparing individual students’ optional comments and answers on open-ended questions on pre- and post-survey (in both classes) showed no changes in their attitude towards culture and their assessment of its importance in the foreign language classroom. It, thus, seems that participation in the e-mail exchange did not have a significant impact on how students viewed the cultural component of foreign language learning. Those who assessed it positively before, did so after the exchange as well, and those who did not believe in the importance of culture as much before, also did not express that they believed any more in it after the exchange.

5.1.3. Effectiveness of Online Communication

In congruence to the other variables, students also rated the effectiveness of online communication for culture and language learning very highly. Again, the US class average was slightly higher at 5.4561 (standard deviation: .59536) on the pre-survey and 5.1333 (standard deviation: .81733) on the post-survey than the German class average with 5.3421 (standard deviation: .67466) on the pre-survey and 4.9298 (standard deviation: .83761) on the post-survey. The repeated measures ANOVA showed no statistically significant within-subjects effects, $F(1) = .000, p > .05$. This means that there were no statistically significant changes in how students evaluated the effectiveness of online communication before and after the e-mail exchange. The test also did not show statistically significant between-subjects effects, $F(1) = .596, p > 0.5$. This means that the two classes did not differ significantly in their evaluation of the effectiveness of online communication for culture and language learning.

Although there were no statistically significant effects of the e-mail exchange on this variable, it becomes apparent that for both classes the average decreased slightly on the post-survey. This leads to the question of why some students felt that online communication was not as effective of a tool as they did before the exchange. Open-ended questions on both pre- and post-survey help to illuminate students' evaluation of the effectiveness of online communication for foreign language and culture learning. When asked before the e-mail exchange whether they thought online communication tools are effective for improving language skills, the majority of students in both classes (97% of students) answered with yes. On the post-survey still 89% of the students answered the same question with yes, while 11% said that they were not sure. Looking specifically at those students who were not sure about the effectiveness of online communication tools can help to understand the slightly different averages from pre- and post-survey.

Students who were uncertain about the effectiveness of online communication tools mentioned that the communication had been less intensive than they had hoped, that they did not get as much feedback as they wanted, and that an exchange that involved speaking would be better. The last comment seems not as relevant in this context as the e-mail exchange was designed specifically to help improve writing skills. Other online communication tools, such as voice chat, would target speaking skills as well. Although we conducted two videoconferences, not every student used this opportunity to speak and many students would have enjoyed more opportunities for improving speaking skills.

The problem of not receiving feedback on language issues was mentioned by several students as general feedback to the exchange. Students felt that their language skills would have improved more if language feedback had been required and played a larger role in the exchange. Those students that did receive a lot of language feedback commented positively on this. In future exchanges language correction and feedback should be made a requirement and students should be taught how to correct the language of their partners and how to give adequate feedback. This suggestion is also supported by the results of research question one.

In all, the majority of students both before and after the e-mail exchange strongly believed that online communication tools are highly effective for improving their language skills. The students gave a variety of reasons for this opinion, but on the pre-survey the majority of them mentioned the increased opportunity for practicing the language and the communication with native speakers in natural/authentic contexts as the main reason for the improvement of language skills through online communication. Many students also thought that online communication helps them learn everyday language, phrases, colloquialisms, and language that is not normally taught in the language classroom. Several students considered the interaction

with native speakers of the target language to be especially useful and mentioned that it would help to get feedback and corrections. Many believed online communication to be especially useful for expanding vocabulary and improving grammar. One student said it is highly useful because it is like having a private teacher. Students also commented positively on the informality of e-mails; one student mentioned that “it’s very informal and similar to talking on facebook but in a different language” (E017). Students also appreciated the chance to use language in real contexts without focusing on theory and grammar rules.

On the post-survey students gave similar reasons for the effectiveness of online communication as on the pre-survey. Again, they felt that the increased practice of writing was especially beneficial and thought they could learn many phrases and colloquialisms that don’t normally get taught in the classroom. Many students felt that communicating with native speakers from whom they could get feedback and tips on language use was beneficial for the development of their writing skills. One student said online communication is a more creative way to learn a language, and is both more fun and more helpful than traditional classroom instruction. Again, students thought that they could learn most in the areas of vocabulary and grammar.

The few students who were not sure whether online communication tools can help their language skills mentioned that they did not receive enough feedback from their partner, and that the interaction wasn’t personal enough. Some students mentioned that they would prefer to get more practice in speaking so that more than just their writing skills would improve. In all, the survey answers revealed that the German students appeared to be more concerned with speaking skills than the American students. This can be understood well in light of the fact that German students may have a more immediate need for being able to use English in spoken

communication than American students. Seven of the German students, roughly 37%, mentioned on either the pre- or post-survey that online communication is not useful for improving speaking skills and it suggests a strong interest in working on oral skills. In contrast, only three American students, roughly 16%, mentioned that online communication was good for improving writing but not so much speaking skills. This assessment may have been different, had synchronous oral communication tools been a larger part of the exchange project. In all, the students on both classes strongly believe in the effectiveness of online communication for the improvement of their (written) foreign language skills.

5.2. Research Question 3

What effect does a semester-long e-mail exchange with native speakers have on the way in which language learners self-assess their intercultural competence?

Research question three examined whether students rated their intercultural competence differently before and after their participation in the e-mail exchange. Simply put: did students self-assess their intercultural competence after the e-mail exchange to be higher or lower than before the exchange? It was hypothesized that students would rate their intercultural competence higher due to their increased exposure to the target culture and the direct contact with representatives of the target culture. Moreover this research question aimed at exploring whether there were significant differences in answer patterns between the US class and the German class. The intention was to investigate whether one of the groups self-assessed their intercultural competence significantly higher or lower than the other group, or whether both groups reported similar levels of intercultural competence.

The self-assessment survey consisted of five factors of intercultural competence as adapted from Fantini's (2000) model. The factors are language, attitude, awareness, skills, and knowledge. The students assessed their competence in these five areas before and after

participating in the e-mail exchange. To answer this research question a mixed design (or repeated measures) ANOVA was used. This test allows the comparison of the self-assessment between classes (between-subjects effects) and time (within-subjects effects, pre- and post-survey differences). The repeated-measures ANOVA had one between-subjects variable (group belonging) and one within-subjects variable (time; pre-test and post-test). In order to use a repeated measures ANOVA, three assumptions have to be met: normality of distribution of data, homogeneity of variances for both data, and sphericity (Larson-Hall, 2010). The assumption of sphericity is not an issue in this data because there are fewer than three conditions present, which means, there is only a score from pre- and post-test, and a repeated-measures variable with only two levels always meets the assumption of sphericity (Field, 2009).

After running tests to check for normal distribution, all but the variable attitude showed significantly normal distributions. The variable attitude showed a significantly non-normal distribution at $p = .000$ for both classes on the pre-survey, and $p = .000$ (German class) and $p = .001$ (US class) on the post-survey. The scores for this variable were therefore transformed to allow the use of the parametric mixed design ANOVA test on them. The second assumption for a mixed design ANOVA, homogeneity of variances, was tested using Levene's test of equality of error variances. Non-significant results of this test verify that the assumption is not violated. Levene's test showed a violation of the assumption of homogeneity of variances for skills and knowledge scores on the post-survey. The scores for these two factors were therefore ranked to accommodate this violation and the subsequent Levene's test on the ranked scores showed non-significant results, so that the assumption of homogeneity of variances was then met. The results of the mixed design ANOVA on the self-assessment survey for intercultural competence revealed no statistically significant results for the variables language, awareness,

attitude, and skills. The test showed statistically significant results for the variable knowledge. In the following I will summarize the findings for each of the variables.

5.2.1. Language Skills

The language component used can-do statements from the Common European Framework of Reference. The US students were given statements from levels A1 – B2, and the German students were given statements from levels A2 – C2. This difference is explained by the varying amounts of foreign language background of both classes. With an average of nine years, or 18 semesters of English language experience, the German class was expected to be more proficient in English than the US class in German. The US class only had an average of 9 semesters of German in college and high school combined.

On the pre-survey, the German class (n=19) had an average of 4.357 (standard deviation .84) on the language items. As a reminder, the students rated the can-do statements on a scale from 1-6, where 1 = strongly disagree, and 6 = strongly agree. The average of 4.357 is fairly high and shows that on average the German students were very confident about their language skills in English. This is not surprising giving their extensive background in English language education. The US class (n=19) average of language skills was even higher at 4.8007 with a standard deviation of .77. While this indicates that US students who were enrolled in this third-year German class felt more confident about their German language skills than the German students felt about their English language skills, it has to be kept in mind that the German students' can-do statements of language skills corresponded to higher language proficiency levels.

On the post-survey, the German students (n=19) had rated their skills in language a bit higher with an average of 4.4039 (standard deviation: 1.02), compared to 4.357 (standard

deviation: .84) on the pre-survey. The US class (n=19) also reported slightly higher language skills with an average of 4.8579 (standard deviation: .73) compared to 4.8 (standard deviation: .77) on the pre-survey. Thus both classes increased their confidence about language skills minimally.

The repeated measures ANOVA revealed no statistically significant within-subject effects for the variable language, $F(1) = .361, p > .05$. Thus, there was no statistically significant change over time (from pre- to post-survey) for either class. This means that students did not assess their language skills significantly differently before or after the exchange but remained rather constant in their assessment of their foreign language abilities. Likewise, there was no statistically significant between-subject effect, $F(1) = 3.104, p > 0.5$, which means that the self-assessment of language skills of the German and the US class did not differ in statistically significant ways. In fact, students from both classes assessed their language skills fairly highly and thus show that they feel rather positive about their abilities to use the foreign language.

5.2.2. Awareness

Students rated their awareness as part of intercultural competence relatively high both before and after the e-mail exchange. The German class' (n=19) average before the exchange was 4.8526 (standard deviation: .86309) and the US class' (n=19) average was even higher at 5.1184 (standard deviation: .71864). On the post-survey, the German class had a slightly higher average for awareness with 4.9239 (standard deviation: 1.11091) while the US class had a slightly lower average than on the pre-survey with 4.9492 (standard deviation: .68274). Nonetheless, the US post-survey average was still slightly higher than the German class post-survey average.

The repeated measures ANOVA revealed no statistically significant changes over time, $F(1) = .234, p > .05$. There was also no statistically significant difference on awareness self-assessment

between the classes, $F(1) = .313, p > .05$. Thus, neither within-subjects nor between-subjects effects were statistically significant.

5.2.3. Attitude

The averages for the variable attitude were very high for both classes. On the pre-survey, the German class showed an average of 5.6190 (standard deviation: .50922) and the US class showed a slightly lower average of 5.4950 (standard deviation: .96788). On the post-survey, the averages of both classes were slightly lower than their respective pre-survey averages. The German class had an average of 5.4762 (standard deviation .73499) and the US class had an average of 5.2932 (standard deviation .85828). Thus both classes rated their attitude slightly lower after the exchange, but with averages above 5 still very high.

To run the repeated measures ANOVA the scores for this variable were ranked because the test for normality of distribution had shown a non-normal distribution. The repeated measures ANOVA showed that within-subject effects were not statistically significant, $F(1) = .603, p > .05$. Likewise, between-subject effects were not statistically significant either, $F(1) = .708, p > .05$. This means that there were no statistically significant changes between the classes or between the pre- and post-survey answers.

5.2.4. Skills

The average of students' self-assessment of their skills was lower in the German class than in the US class on both pre- and post-survey. That means, on average, the German students perceived their skills related to intercultural communication to be lower, than the US class, who was more confident about intercultural skills. The German class' average before the exchange was 4.4058 (standard deviation: .95968), while the US class' average was 4.8842 (standard: deviation

.81053). Both class averages increased slightly on the post-survey to 4.5947 (standard deviation: 1.07263) for the German class and 4.9421 (standard deviation: .67274) for the US class.

The repeated measures ANOVA showed no statistically significant within-subjects effects, $F(1) = 1.084, p > 0.5$. The between-subjects effects were also not statistically significant, $F(1) = 2.447, p > 0.5$. That means that the changes in the variable skills were not statistically significant for either class, and that the classes' averages were not statistically significantly different.

5.2.5. Knowledge

Similarly as the self-assessment of skills, in the knowledge variable the US class also reported higher scores than the German class both before and after participation in the e-mail exchange. The US class had an average of 4.9098 (standard deviation: .85874) on the pre-survey and 4.9699 (standard deviation: .61828) on the post survey. The German class had an average of 4.1880 (standard deviation: .98980) on the pre-survey and 4.3546 (standard deviation: .98990) on the post-survey. It can be seen that both classes had a high average, which increased minimally on the pre-survey.

The repeated measures ANOVA showed that the assumption of homogeneity of variances was violated. Levene's test was significant, $p = .038$ on the post-survey results. Therefore, the knowledge items were ranked to accommodate the violation of this assumption. The Levene's test on the ranked items was non-significant, hence the assumption of homogeneity of variances was met. The repeated measures ANOVA for the variable knowledge showed no statistically significant within-subjects effects, $F(1) = .397, p > .05$. The test revealed statistically significant between-subjects effects, $F(1) = 5.503, p = .025, r = \sqrt{.133}$.

This shows that the difference in self-assessment of the knowledge variable differed statistically significantly between the two groups, and the effect size was medium ($r = .36$). The US class rated their knowledge significantly higher on both pre- and post-survey than the German class did. This indicates that the US class perceived their knowledge about German culture to be much higher than the German class perceived their knowledge about US culture. This result is somewhat surprising considering that the German students had been learning about the target culture for much longer. This result is also interesting because many of the German students had mentioned that culture was a very big component of their English class.

5.2.6. Intercultural Competence

Taking all variables together reveals an average of intercultural competence of 4.5565 (standard deviation: .74752) for the German class and an average of 4.9736 (standard deviation: .53799) for the US class on the pre-survey. The post-survey average is slightly higher for the German class at 4.6141 (standard deviation: .91311), and slightly lower for the US class at 4.9612 (standard deviation: .56985).

The repeated measures ANOVA showed no statistically significant within-subjects effects, $F(1) = .108$, $p > .05$, and also did not show statistically significant between-subjects effects, $F(1) = 3.037$, $p > 0.5$. That means that neither the changes in self-assessment of intercultural competence as a whole from pre- to post-survey, nor the differences between the classes were statistically significant.

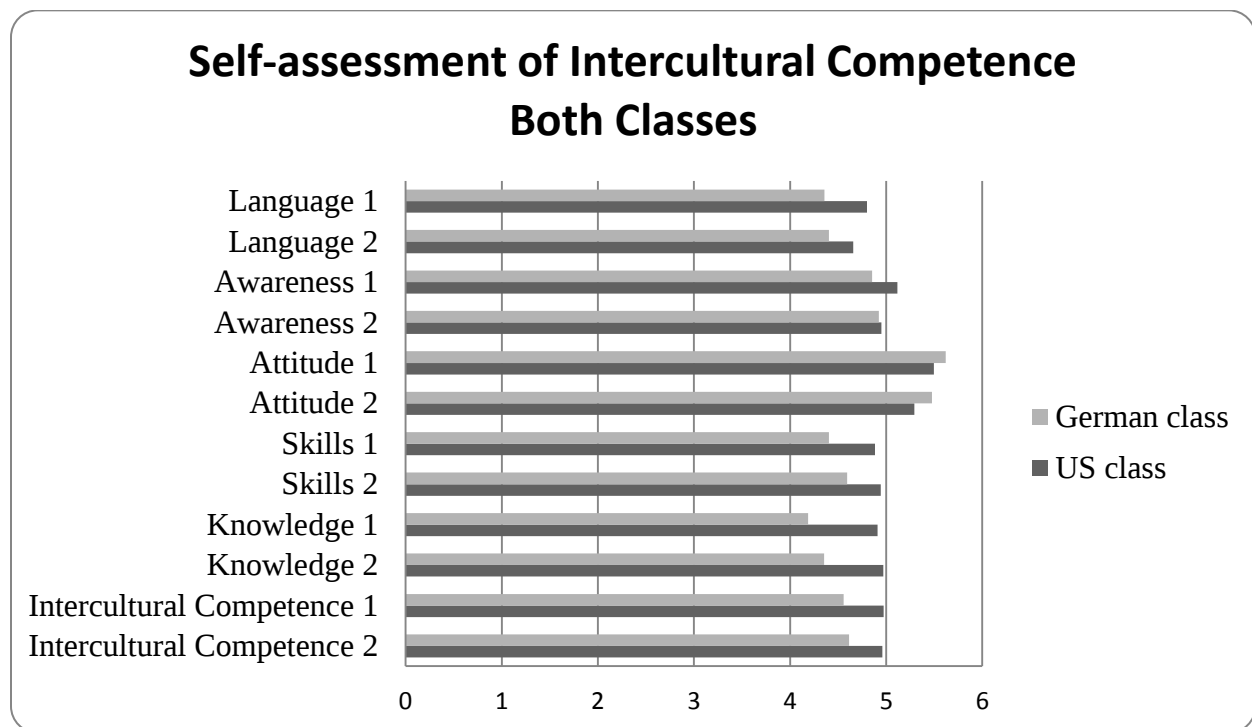
To summarize, the following chart shows the descriptive statistics for the self-assessment survey on intercultural competence.

Table 14 *Summary of Descriptive Statistics for Self-Assessment of IC*

Factor	US Class	German Class
Language Pre	4.8007	4.357
Language Post	4.8579	4.4039
Awareness Pre	5.1184	4.8526
Awareness Post	4.9492	4.9239
Attitude Pre	5.495	5.619
Attitude Post	5.2932	5.4762
Skills Pre	4.8842	4.4058
Skills Post	4.9421	4.5947
Knowledge Pre	4.9098	4.188
Knowledge Post	4.9699	4.3546
Intercultural Competence Pre	4.9736	4.5565
Intercultural Competence Post	4.9612	4.6141

The next figure is a graphic representation of these scores and helps to visualize the self-assessment of intercultural competence of both classes.

Figure 4 *Averages of Self-assessments of IC for Both Classes*



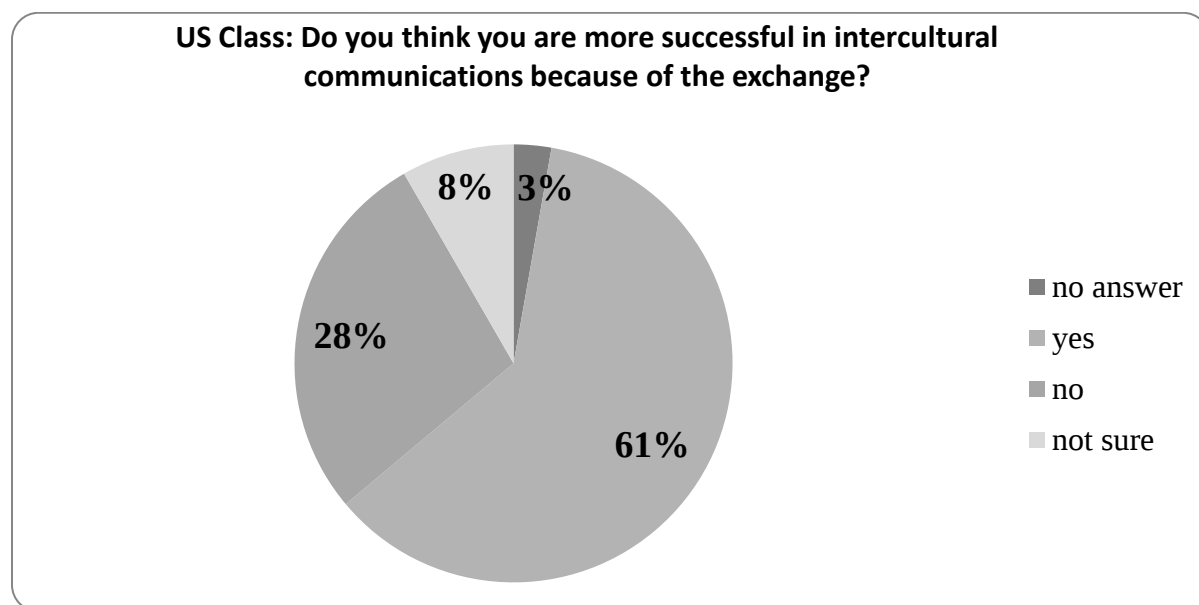
When answering the research question about the effect of participation in a twelve-week e-mail exchange on self-assessment of intercultural competence it can be summarized that there was no statistically significant effect of the exchange on students' self-assessment of their intercultural competence in the areas of language, awareness, attitude, skills, and knowledge. Moreover, there was no statistically significant difference between the self-assessment of the two classes on the variables language, awareness, attitude, and skills. There was a statistically significant difference on the variable knowledge. Here, the US class average was significantly higher than the German class average. Although both classes had different average scores for all variables, the knowledge variable was the only one where the difference was statistically significant.

Nonetheless, it can be summarized that the US class average was higher on all variables except the variable attitude. That shows, that the US students are, on average, more confident about their intercultural competence than the German students. The reasons for this cannot be deduced from the data at hand and any conclusions that may be drawn remain in the realm of speculation. Perhaps their lack of direct experience with Americans made the German students even more excited about the prospective of the exchange. Additionally, the German students had much less experience with online communication and therefore may also have been more curious about this project than the Americans in whose education online communication plays a stronger role.

Students' comments on the post-surveys shed further light on this research question and help to get a better understanding of students' self-assessment of their intercultural competence beyond what the statistical results reveal. From these survey-answers it becomes clear that the majority of students did experience a positive change in their intercultural communication skills, regardless of the insignificant statistical results. While the statistical results were non-significant

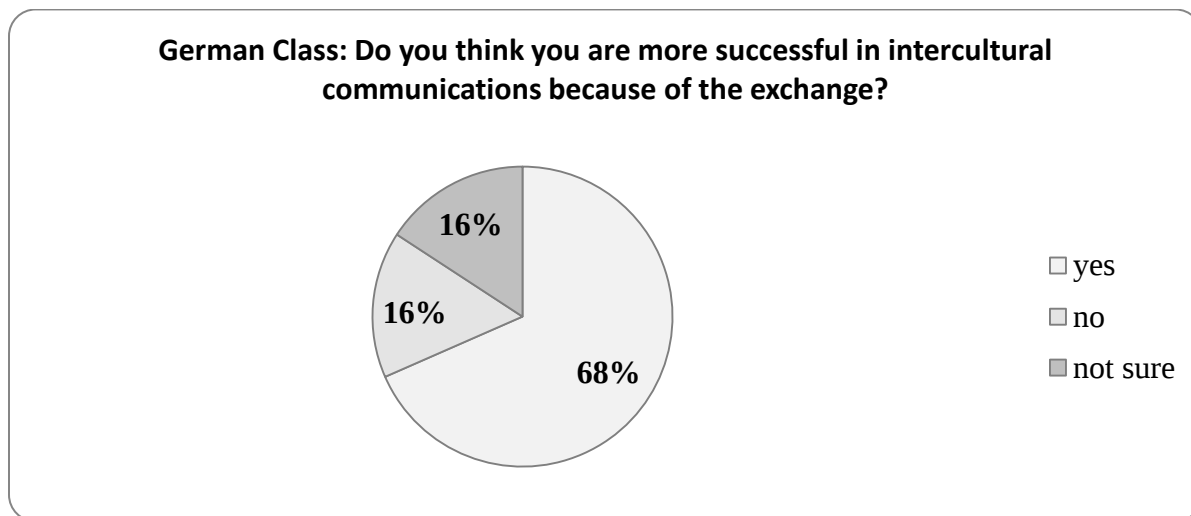
the high initial self-assessments may not have left any room for measurable improvements. This does not have to mean that no improvements took place but rather that they were not measurable with the self-assessment survey. Even though statistically, the effect of the exchange on students' self-assessment of their intercultural competence seems to be non-significant, the answers to the open-ended questions on surveys help to better understand the impact of the exchange on students' perception of their skills. One of the post-survey questions asked students whether they believed themselves to be more successful in intercultural communication because of what they learned in the e-mail exchange. In both classes combined, 22 students answered this question with yes. That means that 61% of the students did experience an effect of the e-mail exchange on their intercultural competence. 28% of the students did not believe that they were more successful at communicating interculturally because of the exchange and 8% were not sure. This shows that the majority of the students self-assessed their overall intercultural communication skills to be higher after the exchange, in spite of the non-significant statistical findings. The following chart summarizes this finding:

Figure 5 *Self-assessed Impact of Exchange on IC Skills US Class*



When regarded separately, it can be seen that more German students than American students reported to feel a positive effect of the exchange on their intercultural communication skills. In the German class, 68% of students reported to feel more successful as intercultural communicators, while only 16% of the students reported that they did not feel that the exchange had made them more successful in this area. This can be seen in the following chart:

Figure 6 *Self-assessed Impact of Exchange on IC Skills German Class*



In their answers to this question, students gave some reasons for why they thought they had or had not improved as intercultural communicators. The main arguments of those who said their intercultural communication skills had not improved pertained to the medium of the exchange, e-mails. Students felt that e-mails might not be a good way to truly communicate with another person, and that the exchange did not become as intensive and/or frequent as would be necessary to truly improve intercultural communication skills. Students' comments expressed disappointment because "partners never really gave [...] feedback" (E005), or "the level of communication was lower than I would have liked" (E007). One student suggested that more synchronous communication, such as individual videoconferences, would have helped, and

another one mentioned that the only way to become really interculturally competent is to visit the target country.

Students who reported that they felt more confident as intercultural communicators gave a variety of reasons for this change in self-assessment, the most frequent one being the benefit of extensive practice communicating cross-culturally. Because of this practice, students mentioned that they felt they could write more naturally, they could express their ideas better, they were more confident in their communication, they could react better to differences, they learned about the attitude and had a better grasp of the other culture now, and they became more sensitive to the peculiarities of the target culture which helped their communication skills. Students also mentioned that they “have a better understanding of another culture’s mindset” (E001) now, and that they “learned how to express [...] feelings about US politics” (E008).

Thus, in all, it can be summarized that while the statistical findings did not show a significant effect of the e-mail exchange on students’ self-assessment of their intercultural competence, both American and German students’ narrative answers to other questions on the survey revealed that for the majority of students the e-mail exchange did have a positive impact on the way they evaluate their intercultural competence.

5.3. Research Question 4

How is intercultural competence displayed and developed through a semester-long e-mail exchange with native speakers?

Research question four investigates the effects of the virtual exchange on students’ development of intercultural competence and focuses hereby only on the American students. The research question will be answered in three parts. In part one, a summary of students’ self-assessment of their intercultural competence will be presented and explained. In part two, typical patterns and trends in the development of students’ intercultural competence will be outlined. In part three,

three case study developments of intercultural competence will be presented focusing on an example of strong, average, and weak development of intercultural competence.

5.3.1. Self-assessment of Intercultural Competence

In research question three, the statistical analyses of the students' self-assessment of intercultural competence before and after the exchange were presented. In the next part, a chart will present each student's individual self-assessment on the pre-survey and on the post-survey. In the chart, I will present the American students' results and the results of their corresponding exchange partners together. Not all of the German students completed the surveys, and this is also indicated in the chart through cursive font. Apart from the individual scores on the pre-survey and post-survey self-assessments, the chart also includes the students' answers to the following two open-ended questions from the post-survey:

1. Are you more successful in intercultural communication because of your participation in this virtual exchange?
2. Have your language skills improved because of your participation in this virtual exchange?

For these two questions, the students' answers were categorized as either yes, no, or not sure. As a reminder, the scores on the self-assessment survey are from a 1-6 scale, one being the lowest, and 6 being the highest. The self-assessment is based on the self-assessment form by Fantini (2000) and was adapted to fit the electronic exchange of this study.

Table 15 *Summary of Individual Students' Self-Assessments*

Stu- dents	Pre-Survey Self-assessment of IC					Post-Survey Self-assessment of IC					Post- Survey: Are you more success- ful in IC?	Post- Survey: Have your language skills improved
	Language	Attitude	Awareness	Skills	Knowledge	Language	Attitude	Awareness	Skills	Knowledge		
E001	4.55	6	6	6	6	5.75	6	5.75	6	5.71	Yes	Yes
K020	4.21	5.71	5.5	4.7	4.86	3.92	5.71	4.75	5	4.57	Yes	Yes
(K021)	No surveys					No surveys					No surveys	
E002	5	5.71	5.75	5.9	6	5.1	5	5.5	5.2	5.29	Not sure	Yes
K018	4.88	6	5.13	5.5	5.14	4.88	6	4.63	5.5	5.14	No	No
E003	4.35	4.83	5.5	5	5.43	5.2	5.29	5.63	4.8	5	Yes	Yes
K014	5	6	5.63	5.9	5.29	4.88	6	6	5.9	5.71	Yes	Yes
E004	5.58	6	5.13	4.8	4.43	5.25	5.86	4.89	5.4	4.86	Yes	Yes
(K029)	No surveys					No surveys					No surveys	
E005	5.85	4.57	4.63	4.6	4.71	5	3.57	3.38	3.5	4.14	No	Yes
K007	4.2	6	6	3	2.29	4.6	6	6	6	4.86	Yes	Yes
K019	4.24	4.71	4.25	3.78	3.86	2.78	3.86	3.88	3.5	3.5	Not Sure	Not Sure
E006	5.68	6	5.75	5.8	5.86	6	6	6	5.9	6	Yes	Yes
K015	5.6	6	6	5.8	5.43	5.24	6	6	6	5.67	Yes	Yes
E007	4.45	6	6	5.4	6	5	5	5.5	5.1	5.43	No	Yes
K010	4.88	6	6	5.5	5.29	4.28	4.57	5.75	4.8	4.57	No	No
E008	4.95	6	5.63	5.8	5.14	4.45	6	5.38	5.8	5.57	Yes	Yes
K004	4.28	6	5.13	4.9	4.29	5	5.86	5.63	5.5	5.14	Yes	No

Table 15 (Cont'd)

E009	4.05	5.57	4.63	4.9	5	4.55	5	4	4.4	4.86	Yes	Yes
K001	3.2	5	3.88	3.8	3	4	5.43	3.25	3.6	3.43	Not Sure	No
K011	3.36	4.33	2.75	2.7	2.86	2.92	n/a	1.88	2.1	2.29	No	No
E010	3.65	5.86	5.38	4.7	4.86	4.2	4.43	4.71	4.7	4.86	No	Yes
K017	4.68	6	5.25	4.7	3.43	5	6	5.38	4.5	3.57	Yes	Yes
E011	5.9	5.71	6	4.9	5.14	5.85	5.71	5.13	5.2	5.23	n/a	Yes
(K027) (K028)	No surveys					No surveys					No surveys	
E012	3.15	6	4.25	3.3	2.71	3.45	6	4.38	4	3.86	Yes	Yes
K016	5.8	5.71	5.2	5.33	5.14	5.84	6	5.25	5	4.57	Yes	Yes
(K030)	No surveys					No surveys					No surveys	
E013	5.05	1.86	3.63	4.9	4.71	4.05	2.86	4.13	4.1	4	No	Yes
(K022)	No surveys					No surveys					No surveys	
E014	4.8	5.86	4.38	4.8	4.43	4.7	5.71	4.25	5.3	5.14	No	Yes
K006	5.24	6	4.88	4.7	5.57	6	6	6	5.8	5.86	Yes	Yes
K009	3.36	6	4.75	4.9	4.43	3.72	6	5.13	4.7	4.43	Yes	Yes
E015	5.15	5.71	6	6	5.71	4.75	5.57	5.25	5.6	5.43	No	Yes
K003	3.84	4.86	5.25	3.4	3.57	4.72	3.86	3.88	3.3	3.71	Yes	No
E016	5.7	5.71	4.63	3.8	3.71	5.4	5.86	4.75	5	4.86	Yes	Yes
K013	5.36	6	4.5	4	4.29	5.56	6	4.63	4	5	Yes	Yes

Table 15 (Cont'd)

E017	3.85	6	4.75	4.5	5	4	6	5.13	4.5	5.29	No	Yes
K002	3.08	4.71	4.13	3.5	3	3.08	5.14	5	4.1	2.86	Not Sure	No
(K026)	<i>No surveys</i>					<i>No surveys</i>					<i>No surveys</i>	
E018	4.95	5.71	4.75	3.5	4.14	5.75	5.14	4.88	4.9	5	Yes	Not sure
K008	3.8	5.14	4	3.9	4	3.8	5.14	5.75	4.3	4.29	Yes	Yes
(K023)	<i>No surveys</i>					<i>No surveys</i>					<i>No surveys</i>	
E019	4.55	5.29	4.5	4.2	4.29	3.85	5.57	5.38	4.5	3.86	Not sure	Yes
K005	3.56	5.28	4	3.7	3.86	3	5	4.13	3.7	3.57	Yes	Yes
(K031)	<i>No surveys</i>					<i>No surveys</i>					<i>No surveys</i>	

In response to question one outlined above, which was an open-ended question on the post-survey, the chart shows that the majority of students in both classes felt that their intercultural communication skills had improved. Specifically, 59% of all students explained on the post-survey that they estimated an increase in their intercultural communication skills due to their participation in the exchange. 27% of all students believed that their intercultural communication skills had not improved and 14% were not sure. When looking at the two classes separately, it can be seen that 50% of the American students saw an increase in their intercultural communication skills, while 68% of the German students felt their intercultural communication skills had improved.

The students gave different explanation for their increase in intercultural communication, and said for example:

- “I have a better understanding of another culture’s mindset and am aware of it”

(Student E001)

- “I got a lot of practice expressing ideas related to our cultures” (Student E004)
- “I learned how to express my feelings” (Student E008)
- “I think I am better because I have seen what others think of a new culture as well” (Student E012)
- “Auf jeden Fall denke ich das, es hat ein paar deutliche Unterschiede zwischen Amerika und uns aufgezeigt, auf die ich jetzt besser reagieren kann!“ (Student K006)
- “I learned more about the attitude of another culture. That’s why I have no a better grasp for other cultures” (Student K008)
- “Dabei bin ich besonders feinfühlicher gegenüber Besonderheiten anderer Kulturen geworden und versuche immer mehr mich anzupassen. Ich habe gelernt, was Amerikaner verletzen oder beleidigen könnte und versuche dementsprechende Interaktion zu vermeiden” (Student K013)
- “da man durch die Praxis mit jedem Mal besser wird und besser lernt auf andere einzugehen” (Student K015)
- “ich meine ich habe ja etwas dazu gelernt” (Student K020).

These answers are diverse and some general themes that emerge are learning more about the other culture and being able to understand it better, gaining cultural sensitivity, learning how to express ideas and feelings, and learning about cultural differences. In addition to these reasons for an increase in intercultural communication skills, some students also explained why they thought they had not become more successful intercultural communicators. Some of the comments given on the post-survey include:

- “my partners never really gave me feedback as to whether or not they understood my points” (Student E005)

- “There was not a lot of genuine communication after the first few emails” (E013)
- “I don’t feel as if I learned anything new in the way of methods to approach a culture other than my own b/c German culture, I feel (at least superficially) has so many similarities with American culture (both Western!). And I wasn’t really able to get past the superficial level in the exchange” (E014)
- “Es hätte vielleicht mit mehr und individuelleren Videokonferenzen geklappt” (Student K018, post-survey)
- “wir haben nicht so viele Mails ausgetauscht” (K002)
- “ich denke dazu war es zu selten und nicht tiefgründig genug” (K011)

Again, the students gave a variety of reasons for their lack of self-assessed increase in intercultural communication skills, and the main reasons were quantitatively or qualitatively not enough communication and lack of feedback on opinions.

In regard to language skills, 76% of all students indicated that they believed their language skills had improved due to the exchange, while 18% did not believe so and 5% were not sure if there had been an improvement in their language skills. Overall, 95% of the American students believed that their language skills had improved, while 58% of the German students indicated that their language skills had improved. Interestingly, while more American students saw an improvement of language skills, more German students saw an increase in their intercultural communication skills.

The chart above shows very diverse self-assessments of the German and American students. Few students assessed themselves higher (or the same) in all aspects of the post-survey (3 German and 3 US students), and few assessed themselves lower on all aspects of the post-survey (3 German and 2 US students). The majority of students varied in their self-assessments

on pre- and post-survey and rated themselves higher in some areas on the post-survey and lower on others.

When comparing the pre-assessments and post-assessments, it can be concluded that the majority of students in both the German and the American class increased their self-assessment of language skills. This is in line with the aforementioned result, that most students indicated an increase in language proficiency on their post-surveys. The self-assessment showed that 53% of all students rated their language skills higher on the post-survey than on the pre-survey, while 45% rated their language skills lower. In both the German and the US class, 53% of students reported an increase in language skills on the self-assessment part of the post-survey. Please refer also to research question three for some examples of what students believed they had learned through the exchange in regards to their linguistic abilities.

The students' self-assessment of attitude increased only for a small percentage of American (21%) and German (16%) students. While the majority of American students reported a decrease in this factor (47%), the majority of German students did not report any change in their attitude (53%). Together, only 18% of all students reported an increase in attitudes.

The factor of awareness was also rated differently by both classes. While 53% of the German students increased their self-assessment for awareness only 42% of American students did. 58% of American students and 37% of German students decreased their self-assessment of awareness. Altogether 47% of all students reported an increase in awareness on the post-survey.

In reference to the factor of skills, 39% of all students increased their assessment on the post-survey, while 42% neither increased nor decreased their self-assessment. The results were similar for both classes. 42% of the American and 37% of the German students reported an increase in the area of skills. Conversely, 42% of the German students and 37% of the American

students indicated a decrease in the area of skills on the intercultural competence self-assessment post-survey.

In both classes, the majority of students reported an increase in their self-assessment of knowledge. Altogether, 50% of all students (47% of American and 53% of German students) rated their knowledge higher on the post-survey, and 42% (47% of American and 37% of German students) rated it lower. On the open-ended post-survey questions, the students gave some explanations of what they thought they had learned from the exchange in terms of knowledge, and the American students' answers included that they gained knowledge about minorities, immigrants, multiculturalism in Germany, German sports, German family life, German history, the German educational system, and fashion in Germany. The German students also made some comments about their knowledge gain and reported to have learned about similar things including food in the US, student life, sports in the US, the US educational system, and family life in the US.

In general, students reported to have gained knowledge about similar topics, and many of the examples they gave correspond to the assigned cultural topics. It can thus be inferred that the assigned cultural topics contributed to the students' increase in knowledge about specific aspects of the target culture.

To summarize, the students' self-assessments of the different components of intercultural competence varied. In general, the assessments were high. Students differed in their increase or decrease of self-assessment, and only few students increased and decreased their self-assessment of all components. The majority of students reported increase in some and decrease in other areas of intercultural competence. The open-ended feedback question on the post-survey revealed that

most students did feel that their intercultural communication skill had improved due to the virtual exchange.

5.3.2. Developmental Patterns of Intercultural Competence

In this section I will investigate the development of intercultural competence in the virtual exchange. I will base my analysis on Fantini's (2000) model of intercultural competence, which was also the basis for the self-assessment survey adapted from Fantini's (1997a) survey of intercultural competence which the students filled out before and after the electronic exchange. Fantini's intercultural competence model (2000) consists of the factors awareness, attitudes, skills, knowledge, and target language skills. Fantini (2000) underlines the special role awareness plays in his model of intercultural competence, because it is awareness that "leads to deeper cognition, skills, and attitudes just as it is also enhanced by their development" (Fantini, 2000, p. 29). The purpose of the subsequent section is to present findings from the qualitative analysis of students' e-mails, essays, and blogs in regard to their development of intercultural competence and their own assessment thereof.

In the following section I will highlight some of the most typical patterns that emerged during the qualitative analysis of the e-mails and blogs. The qualitative analysis focused on the demonstration and development of intercultural competence. Through a careful coding process, students' attitude, awareness, skills, and knowledge were traced in the e-mails and blogs and the majority of the adapted statements from Fantini's (1997a) intercultural competence self-assessment survey could be traced in the data. The qualitative analysis of the American students' e-mails and blogs revealed several interesting findings and for each of the components of intercultural competence apart from language skills (attitude, awareness, skills, knowledge). I will present those findings that were indicative of the most common developmental patterns.

5.3.2.1. Attitude

The virtual exchange revealed three main findings in the area of attitude. The first finding was that the majority of students portray a very positive attitude throughout the exchange and that in general the exchange did not have negative effects on this component of intercultural competence. Secondly, several students showed an increase in willingness to communicate, even though this was not reflected in the self-assessments, which were at a very high level before and after the exchange. Thirdly, it stood out that in addition to showing an “interest in particular aspects of German culture” (statement 5), the majority of students showed great interest in getting to know their exchange partner on a personal level and learning more about the everyday life, likes and dislikes of their partners.

The students’ self-assessment of attitude was generally very high which corresponds to the students’ high interest in participating in this cultural exchange and learning about German culture. For the majority of students (53%) all self-assessments in this area either remained unchanged from pre- to post-survey or increased. This is in line with open-ended post-survey questions in which the students reported that they were either as open to learning about German language and culture or even more excited about it. Students’ positive attitude and willingness to learn can also be seen in their blog entries. Student E002, for example, writes in his first blog after two weeks of the exchange that he finds the exchange very interesting and is looking forward to learning more: “Der Austausch ist wirklich interessant. Ich habe viel über meine Schülerin gelernt. Ich freue mich, mehr über sie lernen” (Student E002, blog 1). This shows his enjoyment of learning and corresponds to the attitude of willingness to learn from and about his partner and culture. Similarly, another blog entry reads: “Ich lerne viel von sie und sie lernen von mir (ich hoffe). Es macht viel spaß, an sie zu schreiben. Sie sind sehr nett” (Student E008, blog

1). Here too, the student expresses that she enjoys communicating with her partners and that she is also learning a lot from them. These two and other blog entries attest to students' willingness to communicate and learn from and with their partners, all components of the factor of attitude in the intercultural competence model by Fantini (1997a).

A minority of students reported a decrease on the self-assessment of attitude. However, this decrease was small and in all but one case was no more than a one-point change on the scale of one through six. Interestingly, all but one of those students whose self-assessment of attitude decreased commented on the post-survey that their attitude about learning German language and culture had not changed and was as high as before the exchange. This suggests that a small decrease in the students' self-assessment (no more than one point) in this area may not be an indicator of a noticeable change in students' attitude. In fact, the majority of students show very positive attitudes throughout their e-mails and this supports the claim that the exchange did not negatively affect the factor of attitude.

It should be noted that students' high self-assessments and their claim that their attitudes had not changed or even increased due to the exchange do not mean that there were not instances of frustration in the exchange where students' attitudes toward communicating with their partners were low. In fact, several students reported dissatisfaction with the communication process at different points throughout the exchange, such as in the following blog entry: "Fuehlet ihr dass wir sind alle ein bisschen muede mit diesem Austausch geworden, beide uns und die Deutsche? Mit meiner Partnerin und ich, unsere E-mails sind kuerzer und kuerzer geworden" (Student E013, blog 4). This blog entry was written in the last month of the exchange and it expresses a sense of tiredness. The student explains that their e-mails had been getting shorter and that perhaps both sides were getting tired of the exchange. This indicates a certain lack of

interest and willingness for communication, which may be impacted by many external factors such as business in school and other things. Similarly, student E015 also expresses some frustration in the last month of the exchange and writes: “Aber jetzt, schreibt er nicht zurück. Ich habe viel mal wieder geschrieben aber ich bekomme keine Antwort. Er sagt dass er hat viel zu machen. Ich auch! Es macht kein spass wenn wir keinen Austausch haben. Wir können nicht lerhnen von ein andere. :(” (Student E015, blog four). In this example, the student’s frustration is caused by lack of responses from her partner; this is a common problem that many students comment on in their blogs and is one that seemed to impact their attitude and willingness for communication at that time. The impact of lack of responses on the American students’ general interest on writing to their partners is also underlined in this blog excerpt: “Es gibt ein Konflikt, wenn die Deutschen schreiben nicht so viel. Sie antworten meinen Fragen, und das ist fast alles. Wenn sie sprechen nicht so viel, es interessierte mich nicht, weil wir keine gute Beschprechung haben” (Student E017, blog four). This blog entry was also written at the end of the exchange, and here the student clearly indicates that she is losing interest when her partners don’t write much because they cannot have a good discussion. This suggests that students’ willingness and interest in communicating is affected by the contributions their partners make to the conversations.

In spite of the decrease of interest in communicating which can be detected in these and other blogs mainly caused by lack of responses, the overall attitude of students are positive and remain high. This suggests that the frustrations and problems that arose throughout the exchange overall did not have a negative effect on the factor of attitude. In fact, the frustrations shown in the blogs seem to underline one part of the factor attitude, namely the willingness to deal with frustrations caused by the exchange (statement 4). The students’ blogs appear to be a good venue

for students to deal with their frustrations and having this venue may be a reason for the students' ability to maintain a high level of positive attitude throughout the exchange.

The second interesting finding was that several students demonstrated an increase in their willingness to communicate with and learn from their partners, which can be seen in the amount they wrote, and the quantity and quality of questions and contributions to the tandem exchanges. Student E016, for example, steadily increased the number of words she wrote to her partner. In the first four e-mails, she wrote an average of 157.5 words, in the next four e-mails 225.5, then 290.25, 416, and in the last four e-mails she wrote averagely 585 words. This increase in the amount of communication indicates that the student's willingness to communicate was positively affected by the exchange. Similarly, her contributions to the discussions increase throughout the exchange, which further indicates her interest in communicating with and learning from her partner. To illustrate this point, the following example is the student's contribution to a discussion on laws which took place very early in the exchange. Here, and in other discussions at the beginning of the exchange, student E016 gave an answer that was not very detailed. She wrote:

Ich wuerde sagen, dass in Amerika hat man meiste Rechten, wenn man 18 ist. Die einzige Sache, die man zwischen 18 und 21 nicht machen kann, ist das man kein Alkohol trinken erlaubt. Meiste Leute finden diese 'Regel' ganz dumm. Das macht wirklich kein Sinn. Ich bin in meine dritte Jahr an der Uni und Trinken ist forbotten fuer mich. Das ist egal.
(Student E016, e-mail 3)

In this e-mail, the student responds to her partner asking her what the age for legal maturity is in the US and how old one has to be to "have all the rights and liberties as all the others" (Student K013, e-mail 2). Student E016's response focuses on the legal age of drinking and does not discuss any other matters of adulthood in the US. Although student E016 answers her partner's question, she does so in a somewhat narrow way. This is the pattern for the beginning of the exchange, where student E016 answers all of the questions asked by her partner but not as

extensively as in later e-mails. As the exchange progresses, the details and extent of student E016's contributions to the conversations increase. To illustrate this point, the following is taken from the students' exchange about cost of education, which took place in the later part of the exchange. The German student wrote:

I mean, I'm not a communist or something like that, but I'd appreciate if education was free for anyone. There are total idiots in high society as they are in the lower class. But there are also very intelligent people in the lower class. So why would a country ruin it's future , it's new generation by excluding lower class people from higher education? Do you agree? Or what is your point of view? (Student K013, e-mail ten)

In response, student E016 wrote a lengthy paragraph explaining her opinion about cost of education and the problems of this issue in the context of US politics. The following is an excerpt from her e-mail:

Also ich wuerde nicht sagen, dass man kommunistisch sein muss, um kostenlos Bildungswesen zu moechten ;) Obwohl es eine ganz liberal Idee ist (und damit stimme ich ueberein ;)), wuerde ich sagen, dass ein Bildungswesen an der Uni ganz normal und wichtig ist und wenn so viele Leute das moechten, sollen wir natuerlich Helfen damit bekommen, um darfuer zu bezahlen. Offensichtlich ist das meiner Meinung. Die Konservativen wuerden etwas anders darueber sagen ;) Also ich bin auch deiner Meinung. Moechtest du wissen, warum so viele reiche Leute reich bleiben und so viele arme Leute arm bleiben? Obwohl unsere Regierung versucht zu sagen, dass alle eine Chance an der Uni zu studieren, ist das total falsch. Viele Leute sagen (Die Konservativen), dass alle Leute sehr fleissig in der Schule sein sollen und dann haben sie eine Chance, an der Uni zu studieren. Viele andere Leute sagen (die Liberaldemokraten) sagen, dass diese Idee nur passiert, wenn alle der gleiche Zugang haben und wir alle wissen, dass alle nimmer der gleiche Zugang haben. Also wenn diese Leute, die arm sind und kein Bildungswesen haben, sind passive Verbraucher geworden. Total Scheisse. Tut mir leid, aber das finde ich fuer total Scheisse. Weissst du, was die Regierung der Staaten haben müssen, um Kapitalismus zu funktionieren? Sie brauchen passive Verbraucher. Schade. Macht das Sinn? :p Es klingt ganz zurueck, wuerde ich sagen. (Student E016, e-mail 10)

In this excerpt, the student not only expresses her own opinion about education by stating that all people should have the same access to it, but also explains the different positions held by different political parties in the US. She thus answers the question from different angles, giving multiple opinions and evaluating the different opinions as well. This exchange of the two

students about education access and costs confirms that student E016 increased her contributions to the discussion topics. Another example can verify that this is not an isolated case, but the pattern for the remainder of the exchange, in which student E016 continues to give more detailed and multidimensional answers than in the beginning of the exchange.

The following is an excerpt from Student E016 that is part of the students' discussion of family and friends. The German partner K013 had expressed some concern over leaving for college for although she was looking forward to the independence and being away from her family she was worried about her friendships. In response, student E016 wrote:

Du wirst wirklich finden, dass es ganz anders ist, allein zu leben. Du wirst wahrscheinlich mit ein andere Person leben, wenn du an der Uni studierst, oder? Es ist ganz teuer heir das zu machen. Es klingt das du kein Problem haben wird, nicht mit deine Eltern zu leben ;) Also es wird ganz leicht fuer dich sein, weg zu gehen, wenn du an der Uni studieren wird. Du sollst einfach dich erinnern daran, dass du nur die Freunde/innen von dir anrufen, wenn du sie vermisst :) Es ist nicht die Beste, weil du sie nicht mehr jeden Tag sehen kann, aber wenn du sie weiter als Freunde/innen haben moechtest, ruf sie an :) Es gibt Freunde/innen von mir, die ich kennengelernt waehrend der High School, und unsere Freundschaft wirklich besser jetzt als frueher ist. Macht dir keine Sorgen. Du musst zuerst darueber denken, wo/was du studieren moechtest. Alles danach wird gut mit Zeit passieren :) (Student E016, e-mail 14)

Here, it can be seen that student E016 tries to alleviate some of her partner's worries and explains to her what she can do to make sure her friendships won't have to suffer when she goes to university. She gives her different advice and later in the e-mail asks her more about her plans, where she would like to study, how far away from home it would be, and so on. This excerpt exemplifies that student E016 writes about the topics she is discussing with her partner with greater detail, making bigger contributions in the later part of the exchange.

This pattern can also be found in the exchange of other students, who increase both the amount they write and their contributions to the discussion of different topics. One reason for this could be the familiarity with the exchange partner, which increases as the exchange

progresses. The more an American student gets to know the German partner, the more comfortable the American student may become in discussing topics in more detail and in writing more in general. The barrier to writing to someone unknown and in a foreign language may impact the development outlined above. This indicates that a certain length of a virtual exchange would be necessary to allow students to get comfortable with their partners and give them the opportunity to write more and in greater detail about a variety of topics.

Thirdly, the data shows that in addition to showing high interest in particular aspects of German culture (statement five), the majority of students show an equally strong interest in getting to know the personal life of their exchange partner. Throughout the exchanges, in addition to discussing the assigned topics and asking myriad questions about cultural issues, the students add personal questions about the life of their partners, about their weekends, their plans for the future, their everyday life, hobbies and so on.

To illustrate this interest, the following examples are questions student E014 asks his partner only in the first four e-mails:

1. Warum spielen Sie gern Fußball? [...]Was für Programmiersprachen kennen Sie? [...]Was gefällt Ihnen über dein Dorf? Was machen Sie in Bad Klosterlausnitz, wenn Sie Fußball nicht spielen oder wenn Sie mit Ihrem Computer nicht spielen? Gehen Sie oft zu grösseren Städte, wenn Sie Freizeit haben, um andere Sachen zu tun, die Sie in Bad Klosterlausnitz nicht machen können? (e-mail 2)
2. “Bist du in einer Mannschaft? Und von welcher/welchen Mannschaft/Mannschaften bist du ein Fan? ” (e-mail 3)
3. Das ist toll, dass du in einer Mannschaft bist; wann schloss du dich an diese Mannschaft an? Und welche Stelle spielst du typisch, wenn du Fußball spielst (oder was ist deine Lieblingsstelle)? [...] Weißt du, wie diese Mannschaft genannt wurde? Zusätzlich, was gefällt dir an diese Fernsehendung? [...]Was für Musik spielst du gern mit dem Klaviern und der Gitarren? Und wann fängst du an, diese Instrumente zu spielen? Und ich kann nicht glauben, dass ich diese Frage noch nicht stellte: was für Musik hört ihr gern? Was ist/sind eure Lieblingsgruppe/n? (e-mail 4)

The questions demonstrate a deep interest in getting to know many things about his German partner, for example his taste in music and TV, his free-time activity, and his sports interests. Similarly, other students ask an array of personal questions as well, which helps the partners get to know each other better and contributes to them feeling more comfortable with the exchange and communicating in a foreign language.

The students' high interest in establishing a personal relationship to their partners and getting to know them on a personal level suggests that the cultural aspects the American students may be most interested in learning more about is how a person their age lives in Germany, what they do, what they like and dislike, and how that differs from their own American way of life.

5.3.2.2. Awareness

In the area of awareness, there were two interesting developments to be observed. Firstly, while it was expected that students would increase their awareness of cross-cultural differences, this was only reflected in the e-mails but not in the self-assessments. Secondly, the majority of students decreased their self-assessment of their awareness of how their German exchange partner sees them (statement 11).

The finding that stood out most is that while many students showed a development of awareness of “differences across languages and cultures” (statement 8), this was not reflected in their survey self-assessments. It was expected that students would increase their awareness in this particular area because the cultural discussions with their partners were intended to help students gain insights into aspect of the target culture they were not familiar with before. However, it was surprising that students did not realize that they had made progress in this area of awareness or did not report any progress on the post-surveys.

One reason for the lack of changes in self-assessment in this area may be the high initial self-assessments of the students. On the pre-survey, all but four students already rated this statement with strongly agree or agree. Therefore, their change in this area may not be measurable through the self-assessment, although it can be seen in the exchanges themselves. Student E013 was the only student who reported a large (4 point) increase in her assessment of awareness of cross-cultural differences, from a 1 on the pre-survey to 5 on the post-survey. Her exchange, however, is in contrast to this assessment.

There is no indication in her e-mails or blogs that the student has developed awareness of these cross-cultural differences, with the exception of differences of the educational system. In fact, in her essay, the student admits that she has discussed many differences in her e-mail exchange “und jetzt bin ich der Meinung dass außer den technischen Unterschieden den einigen von unseren Systemen (wie die Organisation des Schul- und Unisystems, zum Beispiel), wir sind fast ganze das gleiche” (Student E013, Essay 1). Later in the essay she again points out “Wir sind zu ähnlich, so weit wie ich sehen kann” (Student E013, Essay 1). These statements indicate that through the discussion with her e-mail partner, student E013 realized that their cultures and lives were more similar than she had perhaps expected. Even on the post-survey, she writes that she “can’t think of many beyond trivial differences that occur even within a culture” (Student E013, Post-survey). Gaining awareness of lack of differences between cultures is also a realization in itself and may attribute for her increase in self-assessment in this area. It appears that through the exchange student E013 became aware of just how similar the two cultures are. In fact, the discovery of similarities between the cultures is a common pattern throughout the exchange, as many students point out their realization of ways in which the two cultures are more alike than expected. Thus, student E003 realizes that their countries are similar because

they are both powerful nations, when he writes: “Ich glaube, dass es viele Ähnlichkeiten zwischen Deutschland und den USA gibt. Sie sind mächtige Länder und haben wirtschaftliche Kontrolle” (Student E003, e-mail 20).

A different example is student E010’s gain in awareness of the similarities of multiculturalism in both societies. After having learned from her partner about multiculturalism in Germany, student E010 realizes, that her country “mit Multi-Kulti ist ähnlich zu Deutschland” (e-mail 10). Student E017 also mentions some similarities that she is aware of when she writes: “Ich denke, dass es viele Ähnlichkeiten gibt. Unsere Essen ist nicht zu anders, und beide Länder haben vielen Migranten. Wir sprechen ein andere Sprache, aber wir sind alle Menschen” (e-mail 17). Thus, it can be seen that an awareness of cross-cultural similarities appears to be an effect of the virtual exchange on the majority of students.

In addition, many students also showed a development of awareness of cross-cultural differences in their e-mails, even though their self-assessments did not reflect this. One example occurs in the exchange of student E006. The student had discussed the education system with her partner and just learned about the different branches of high schools in the German school system. She realized that this is a big difference and responds: “Das ist wirklich sehr anders als in Amerika, aber vielleicht ist das besser. Hier ist man nicht so gerichtet” (e-mail 8). By explaining that students are not judged as much in the US, she shows awareness of a very complex phenomenon in the German school system which has to do with the separation of students into different kinds of high schools according to their performance. While many students show a new-found awareness of educational differences, the awareness shown by student E006 is different because the student does not only become aware of a difference but is

also able to realize its implications. One could argue that this shows a deeper reflective awareness than the mere awareness of cross-cultural differences.

Another cultural difference that many students became aware of is the way German students think about their past and the way the American students think about it. In many e-mails, German students explained that it is more difficult to feel national pride in Germany because there was still a lot of blame and feeling of guilt for Germany's past. Many American students were completely unaware of this. Student K013 explains the problem of German national pride to her partner in the following excerpt:

I would say that I am not proud to be a German. The rootes for that are mostly in our history, especially the 20th century. You see, I identify with Germany, it's my country and of course, I support German athletes in the Olympic Games or the German Soccer Team. But it's not that I think that Germans are any better than other peoples.[...] And of course, even worse, World War II. I am so ashamed of what Hitler did, and I never could imagine how one could think about being a better nation than any other. I just don't understand and I am really sorry for what the Germans did. But it's also like I've grown up in a new generation and that gives me the duty and hope, to create another idea of Germany. (Student K013, e-mail 11)

In this excerpt, the student indicates the problematic past of Germany and its impact on German national pride. Other German students also mention this problem. The reaction of the American partners shows that they were not aware of this issue. Student E016, for example, expresses her new awareness in her blog, when she writes that her partner told her “dass sie jetzt stolz auf ihre Heimat ist, aber sie ist nicht stolz auf was frueher waehrend WWII passieren ist. Sie hat wirklich ‘sorry‘ darfuer gesagt. Ich habe das nur komish gefunden. Wenn ich an Deutschland denke, denke ich nicht am erstens an WWII” (Student E016, blog 3). Her blog entry shows her surprise at her partner's feelings about the past as she indicates that this is not what comes to her mind first when thinking about Germany's past. A similar response is expressed by student E003, whose partner also felt guilty for Germany's past. Student E003's blog entry reads:

Wenn wir über die Geschichte sprechen, hat meine Partnerin etwas sehr interessant gesagt. Sie hat gesagt, dass die deutschen Jugend in der Verantwortung des Holocaust tragen muss. Ich glaube, dass es interessant war. Zuerst habe ich gedacht, dass es seltsam war, aber ich bezog es auf Sklaverei in den Vereinigten Staaten. Es hat mehr Sinn gemacht. (Student E003, blog 4)

Here the student shows that he has become aware that there may be a similarity between how Germans feel about their past and how Americans feel about theirs. While at first, the student had not understood his partner's perspective, comparing it to his own culture has helped him to develop a new kind of awareness.

Quite similarly, student E008 also gains awareness about the differences concerning national pride in the two cultures. Her partners had expressed a similar attitude as student K013 and explained to her that the problematic past was still an issue in Germany today, and also asked if all Americans thought of Germans as Nazis still, because he had seen an American comic depicting Germans as Nazis. The American partner called this part of the exchange an “eye-opener” (Student E008, Post-survey), because she herself had not been aware that these negative depictions of Germany still exist in the US until her German partners had pointed it out. She felt “floored and ashamed of the comic” because “fitting Germany to that image is disgraceful” (Student E008, post-survey). This episode illustrates again the awareness gained through the exchange of cross-cultural differences, in this case in the way Germans think about their past and the ways Americans think about the same events.

The second finding in the area of awareness was that the majority of students showed a decrease in their assessment of how their German exchange partner sees them (statement 11). This decrease was especially prominent for students E005, E011, whose self-assessment decreased by two points and students E013, and E015 whose self-assessment decreased by four points in this area. Seven other students reported smaller decreases in this awareness. It appears

that the decrease in these students' self-assessment may be impacted by the quantity and quality of their partners' responses. Student E005, for example, felt like her "partners never really gave me feedback as to whether or not they understood my points" and "often responded with only a few sentences despite the numerous questions" (Student E005, post-survey). Similarly, student E011 also mentioned that slow responses were a problem. Student E013, who reported a four-point decrease in the awareness of how her partner might see her, had the same problems. Her partner's responses were slow and infrequent and student E013 commented: "I had some trouble getting my partner to write back on time and talk more about the topics, there wasn't a lot of nice, detailed explanations of topics" and later expressed that she wished her "partner was more into [...]telling me more about himself" (Student E013, post-survey). In the same manner, student E015, whose assessment also decreased by four points, regretted the same problems. In her post-survey, she explained that "there was not a lot of genuine communication after the first few emails" (Student E015, post-survey), thus indicating that the discussions with her partner had not been as in-depth as she had wished. Here too, the fact that her partner did not write back well and did not make strong contributions to their discussions is an explanation for the student's inability to develop an idea of how her partner views her. It can be concluded that the amount of responding and the depth of the e-mail contributions to the ongoing conversations impacts the Americans' perceptions of how their partners view them.

This conclusion seems logical, because lack of responses from the German side made many Americans question whether they had done something wrong. In one blog, student E003, for example ponders the reasons for his partner's lack of response. He writes: "Ich wünschte, dass mein Partner gesprächiger war. Ich weiß nicht, ob sie durch peinlich ihr Englisch ist oder ob sie nur schüchtern ist. Vielleicht bin ich einfach nur langweilig" (Student E003, blog 3). Here, he

toys with the idea that his partner might find him boring and that this causes her to respond infrequently. This shows uncertainty about how his partner might see him and is an example that explains the decrease in self-assessment in this area, which was the general pattern observed in students' responses.

The students' self-assessed decrease in awareness of how their partner might see them could also be interpreted as an increase in awareness. Before the exchange, the majority of students rated their awareness of how their partner might see them higher than after the exchange. This initial assessment was not based on actual contact with German speakers yet. In the exchange, the students were able to communicate with their German partners and develop an idea of what image they might portray to their partner. The self-assessment in this area on the post-survey is then the result of the students' communication with their partner and shows a more reflective answer. The decrease may indicate a new level of awareness and deeper self-reflection than was present before the exchange. In other words, they may be more aware that they are not as aware as they thought, by realizing that their initial rating was overconfident.

5.3.2.3. Skills

The component of skills appeared to be the most affected by the exchange both in terms of students' self-assessment thereof as well as in the development of this component in the exchange. In all, twelve students reported an increase or remained high in their overall assessment of skills. This component according to Fantini (1997a) refers to the use of flexibility in interaction, the use of strategies that support and enhance learning, appropriate interaction behavior including the avoidance of offenses, as well as general knowledge of factors that have shaped both cultures. The effects of the virtual exchange were mainly seen in the use of flexibility and strategies to enhance learning.

There were two main findings in this area that stood out. Firstly, a large number of students were able to demonstrate and perhaps even develop flexibility in their interaction with their German exchange partners (statement 16). However, several students were not successful at developing flexibility and the claim can be made that a lack of flexibility occurred in partnerships that were characterized by infrequent response patterns. I will exemplify this later on.

Secondly, while some students were able to develop a variety of skills and strategies for enhancing their learning of German and improving their cross-cultural communication (statements 19 and 25), other students seemed less successful in the development of strategies to enhance their learning of German language and culture. Although the self-assessment of this skill showed almost no changes (two students reported a decrease and four students reported an increase in this skill), an increase in the use of strategies for learning could be traced in many exchanges. Additionally, the analysis suggests that those students who used the establishment of a personal relationship to their partners as a strategy to improve their learning were more successful at developing their overall intercultural competence than those who did not succeed at creating a more personal connection to their partners. From careful analysis of the students' e-mails it appeared that for most students the enhancement of cross-cultural communication was related to the establishment of a personal relationship to their exchange partners.

The first finding revealed that the majority of students developed a high degree of flexibility, which other students did not portray. Flexibility in the virtual exchange was mainly related to the way students dealt with problems that arose out of time management issues on both sides of the exchange. To illustrate a positive development of flexibility, student E012's e-mail exchange can serve as an example. Student E012 had two German partners and it was at times

difficult for her partners to find time to meet and write her together, so that she often had to wait for e-mails. The problems began in early February, when her partners did not respond to her in over a week. After sending her regular e-mail, student E012 sent a short note writing:

“Entschuldigung für veile Email ohne eurer Email, Ich muss zwei emails pro Woche schreiben für mein Note in Deutsch” (Student E012, e-mail 5). In this e-mail, the student merely reminds her partners that the assignment is a part of her grade and that she has to write two e-mails per week. In this, as well as the next e-mail, she adds that she hopes to hear from her partners soon, albeit still without response. Two weeks later, the student finally received a response and this time, she suggests writing each of her partners separately because they were having difficulties meeting to write their e-mails together. Student E012 writes: “Ich kann separat beide zu schreiben” (Student E012, e-mail 12) to make it easier for her partner. This shows a lot of flexibility on her side, especially because it means more work for her. In the same e-mail, she shows more flexibility when she asks her partners: “Wurde es leichter zu schreiben über Facebook oder Skype, oder etwa ander als Email?” (Student E012, e-mail 12). Now, student E012 proposes other means of communication, which might be easier for her partners. This, too, shows that the student is becoming very flexible in her communication and is open to choosing different communication tools to make the exchange convenient for her partners as well as herself.

During the remainder of the exchange, student E012 sends separate e-mails to her partners, and later on again emphasizes her understanding of the difficulties of writing e-mails together and her flexibility in writing her partners separately. She writes: “Ich weiß es ist schwer für euch zusammen schreiben. Ich kann schreiben mit beide euch. Wirklich wenn beide euch schreiben mich jede woche, dann ich leichter zwei email schreiben. Obwohl wenn nur du oder

[K016] schreibt, das ist ok” (Student E012, e-mail 9). In this e-mail, student E012 is again very accommodating because she even suggests that it is acceptable for her if only one partner can write each week and not both of them. The student’s demonstration of flexibility continues throughout the exchange as she is open to sending more than two e-mails, when her partner suggests that he some more time now and can catch up on e-mails. The flexibility developed by this student made her e-mail exchange run much more smoothly and successfully than it would have had she not been willing to write to her partners separately. Although this at times meant extra work and more writing for her (with 5642 total words student E012 wrote the second most of all students), student E012 found a way to work around the difficulties that may arise in an exchange and through her flexibility was able to solve the problems. This shows a very positive effect of the exchange on the student’s demonstration of this part of intercultural competence. A similar compromise was found by student E005, who also had two partners who had the problem of writing back together. Student E005 also suggested writing them separately, so that they would not have to meet to write her one e-mail together. She was able to develop the same flexibility as student E018, although her self-assessment showed a decrease in this statement.

This kind of flexibility is developed by many other students as well. Student E006, for example, shows an increase in flexibility when she agrees to communicate on Facebook instead of via e-mail. In the beginning of the exchange, her partner asks her “Do you have an account in Facebook, ICQ or something?” (Student K015, e-mail 1), and while her partner sends a link to her Facebook page right away, she is reluctant to communicate on Facebook at first. In fact, the American student writes that she has to write her via e-mail: “Ich muss dich hier schreiben” (Student E006, e-mail 3). However, her flexibility to communicate through other tools increases and she suggests in her next e-mail she tells her partner to “let me know what your preference is”

(Student E006, e-mail 4). Here, it can be seen that student E006 is open to using communication tools that her partner prefers, thereby exhibiting her flexibility. Toward the end of the exchange, the German student had problems with her e-mail account and asks her partner to write to her in Facebook instead. Again, student E006 is flexible in terms of where she communicates and sends the rest of her e-mails in a private Facebook message instead.

Flexibility is a very important part of intercultural communication, especially in the context of a virtual exchange where both parts have different schedules and obligations. Without flexibility, the exchanges are likely to run into problems and tensions. The fact that many students were able to increase their flexibility throughout the exchange shows a positive effect of the exchange on the students' development of intercultural competence.

However, not all students were able to develop this flexibility. Student E015, for example, found it very important to discuss the assigned cultural topics, while her partner did not show a large interest in the assigned topics. Student E015 did not show any flexibility in discussing other topics that were not assigned, and in her blog in the second month of the exchange she commented: "ich denke wir sprechen nicht genug über was wir müssen. Wenn ich ihm Fragen stellen über Themen der Wochen, er antwortet nicht so viel. Wir sprechen über was wir müssen aber meistens über anders. Ich denke, das ist ein Problem?!" (Student E015, blog 2). It was difficult for student E015 to get her partner to give her more information on the assigned topics, and he often replied in very short e-mails. In fact, her partner only wrote a total of 926 words and student E015 wrote 1377, which is less than half of the average amount written by the American students. This may be explained by the inflexibility on both sides of this exchange to answer the questions that were being asked in greater detail or to pose new questions. Both partners only asked a few questions and they were not always answered. Additionally, student

E015's partner often did not respond in a timely manner, and student E015 did not find a way to communicate through different mediums, such as student E006 for example. This prevented this student from developing more flexibility through the exchange.

Similar problems were encountered by student E013. Her partner also responded infrequently, especially in the later part of the exchange, and student E013 was unable to use her flexibility or other strategies for enhancing the communication to improve the response patterns. She did not suggest communicating through another medium, and she did not try to engage her partner in the discussion of more personal, informal topics.

In all, there was a pattern to be observed in the e-mails; those students who showed flexibility, offered alternative communication modes, discussed topics outside of the assigned cultural topics, and were able to overcome problems of infrequent responses, and those students who did not develop flexibility were, for example, unable to overcome communication gaps, and did not offer alternative communication forms or the discussion of other topics.

The second main finding related to the development of skills of intercultural competence showed that while many students developed a variety of strategies to aid their communication and to enhance their learning in the virtual exchange some students were unable to develop as rich and beneficial of an exchange as others. The latter seems to be caused by infrequent communication. The main strategy for improving the communication appeared to be the establishment of a personal bond to the exchange partner.

Students employed different strategies to communicate successfully and improve their overall learning of German language and culture. In order to communicate successfully, many students used the strategy of establishing a personal connection to their exchange partner. Some students chose to become Facebook Friends, and other students exchanged photos, links to

websites or YouTube Videos. One student sent his partner music notes in the mail, and another talked with his partner on Skype in addition to the e-mail exchange. Several students shared a lot of personal information outside of the assigned cultural topics to deepen their relationship with their partner. Through this personal connection and friendship to their exchange partner, students were enabled to not only write more, but also to feel more comfortable in asking more questions which helped them to learn more altogether.

A good relationship to the exchange partner appeared to be an important prerequisite for successful communication and cross-cultural learning for many students. And in fact, the observable pattern showed that those students who successfully established a personal connection to their partner had more discussions and wrote more altogether than those who did not have a personal connection. Those students who wrote 3000 words or more were also those students who had found strategies to get to know their exchange partners more personally and outside of the discussion of pre-assigned topics.

Student E014, for example, established a very good relationship to his partner and they exchanged a lot of personal information. They became very comfortable with each other which allowed student E014 to be open in the discussion of the assigned (and unassigned) topics. This can be seen in the increase of contributions student E014 makes to the assigned topics. To illustrate this, the following is an excerpt from an e-mail from student E014 in which he talks about the assigned topic violence:

Also bei MSU gibt's meistens Verbalgewalt, würde ich sagen, doch es gibt leider auch körperliche Gewalt. In Bezug auf Verbalgewalt, kann man's natürlich sehen, wenn man eine andere Person für irgendwelche Grund beschimpft. Doch "direkte" Beleidigungen sind nicht die einzige Art und Weise, durch die diese Art von Gewalt stattfinden kann; man könnte sagen, dass es sozusagen Kulture der mittelbaren Beleidigungen geben könnte, z.B. in typische "Mannkultur" ("guy culture") ist's üblich für Männer, jemand zu beleidigen, das sich wie ein Homosexueller benimmt bzw. Homosexuellen im Allgemeinen zu beleidigen

(wenn sie nicht da sind.) Die Ausdrücke od. Worte, die diese Kultur enthält, könnte sagen werden, gewalttätig zu sein, denn sie diese Art von Sexualität immer wenig normal machen. Was denkt ihr daran?
Bestimmt ist's nicht eine typische Art von Gewalt, wenn man an Gewalt denkt, doch ist's, man könnte sagen, noch eine Art davon. (Student E014, e-mail 16)

In this e-mail, the student discusses the issue of violence. He offers many different types of violence that occur in his environment. His partner also responds and explains the different kinds of violence he is used to, so both partners can learn from each other. The student offers a lot more information on the assigned topics than many other students and this is a positive effect of the connection the student was able to build to his partner.

Although violence was an assigned topic, many students did not discuss it very thoroughly or even at all. Student E013, for example, who was mentioned above, merely asked the question about violence without herself providing any opinion on the topic. She wrote: “Die Frage ist, gibt es in deinem Umfeld Beispiele von Gewalt (entweder wörtlich, körperlich, oder andere) und wie gehen Sie damit um?” (Student E013, e-mail 15). She did not have a very personal connection to her partner and in general exchanged much less information with the German student.

In many examples those students who had been unable to establish a personal relationship merely exchanged information about the assigned topics without discussing them together. As outlined earlier, a personal relationship was established through going beyond the discussion of the assigned topics and getting to know the partner on a personal level. Students achieved this, for example, through sending pictures, links to video-clips and songs, talking outside of the e-mail exchange and other things. In the exchange of student E002, for example, this is the case. Student E002 introduced an assigned topic, wrote only a few sentences, and then in the next e-mail introduced the next topic. There was no discussion of the topics but only an

exchange of information. He wrote, example, about the education system: “Das Thema diese Woche ist die Unterschied zwischen die Amerikanische und Deutsche Schul-System. Hier haben wir 12 Klassen. Viele Leute gehen zu einer Uni” (Student E002, e-mail 6). In the next e-mail, his partner gives some brief information about the German system, and then student E002 talks about what languages he speaks in his response. Thus, each side of the exchange presents information but the partners do not go beyond this exchange to discussing the differences or similarities.

Those students, however, who exchanged personal information and had established a more personal connection their partners, were in most cases able to exchange much more information on either the assigned or other topics of interest to them. They usually asked more questions and were able to obtain more information and learn more because of it.

A second important strategy developed by several students to enhance their learning was that of asking an abundance of questions both related to the assigned and other topics. Again, the pattern described above was true in this context as well; those students who had a personal connection to their partner also asked a lot more questions and were able to obtain a lot more information that way. Students E016 and E012, who wrote the most throughout the exchange, asked an abundance of questions to obtain more information, as the following charts can summarize:

Table 16 *Summary of Questions Asked by Student E016*

Questions Asked by Student E016	E-mail
1. Also, was sind deine Lieblingsklassen bei deine Gymnasium?	1
2. Also, warum hast du naechte Woche frei? Wintersferien? 3. Was wirst du auch anstadtt Ski Fahren in Oesterreich machen? 4. Was hast du gemacht, als du in England war? 5. Hast du einen Job? 6. Machst du je freiwillige Arbeit?	3
7. Wie lang muss deine Referat sein?	4
8. Was fuer Schnee gibt es da? 9. Wann musst du das alle machen/ wann ist das fuer dich faellig? 10. Was machst du in deiner Freizeit anstatt Ski fahren?	5
11. Laeuft und fahrt einen Rad, wenn er Biathlon macht? 12. Ich dachte, dass es ganz viel Biathlonen mit viel anders Entfernung gab. Gibt es beide in Deutschland? 13. Ich bin cross country und track waehrend der High School gelaufen. Weisst du, was sie sind/was der Unterschied ist? 14. Was fuer Musik magst du?	6
15. Haben manche den Schueler Angst, auf Englisch mit Amis zu sprechen? 16. Track ist ganz anders und man läuft um einer grosse Platz, die oval ist. Hast du das je gesehen? 17. Ist ihre Musik anders als ihre alte Musik? 18. Was ist Uh Huh Her?	7
19. Also, ich weiss, dass es Realschule, Hauptschule, und Gymnasium in Deutschland gibt und dann bekommt man Abitur? 20. Wie waehlt man fuer welcher Uni er gehen werden moechte? 21. Gibt es Musik, die ganz popular oder gut jetzt in Deutschland ist?	8
22. Macht das alle Sinn oder? 23. Also die Thema fuer diese Woche ist Identitaet. Was bedeutet es, Deutscher zu sein? Was wuerdest du sagen?	9
24. Moechtest du wissen, warum so viele reiche Leute reich bleiben und so viele arme Leute arm bleiben? 25. Weisst du, was die Regierung der Staaten haben müssen, um Kapitalismus zu funktionieren? 26. Weisst du, was ich meine? 27. Ich wuerde sagen, dass man ganz einfach Stolz darauf sein koennte oder?	10
28. Was denkst su darueber?	11
29. Was fuer eine Rolle spielt deine Familie in dein Leben? 30. Also ich bin der Meinung, dass Japan ja grosser Problem haben werden, als wir jetzt denken :p Was denkst du daran?	13

Table 16 (Cont'd)

31. Du wirst wahrscheinlich mit ein andere Person leben, wenn du an der Uni studierst, oder? 32. Wuerdest du deine Familie offer sehen, wenn du in der Naehe deine Eltern studieren wuerde? 33. Are Germans concerned with their safety at all? 34. It's a cool concept. Do you know what I mean? 35. Was wirst du am Sommer machen? 36. Machst du Kurse oder?	14
37. Das kann ich mir vorstellen, dass du vielleicht die gleiche Sachen ueber Englisch denkst? 38. Was wuerdest du sagen, wenn ich dir die gleiche Frage stellen wuerde? :) 39. Do you have kids like that in some of your classes? 40. Any idea what kind of research you'd like to do??? 41. Also was wirst du in Italia mit deiner Familie machen? 42. Kannst du Italisch? 43. Wo wuerdest du in Deutschland oder irgendwo in Europa gehen, wenn du Zeit haettest, das zu machen??? 44. Wann wirst du am Sommer in Deutschland sein???	15
45. Wohin wuerdest du in Deutschland gehen, wenn du mich waere? 46. Ich werde da sein und ich werde manche Freizeit haben. Was denkst du daran?	16
47. Wann wirst du manche Freizeit haben? 48. Wann werdet ihr Osterferein haben? 49. Also waehrend Oster aber welche Woche? 50. Oder gibt es zwei? 51. Bist du so aufgericht darvor? 52. Wie geht deine neue Semester?	17
53. Warum hattest du Angst, dass du vielleicht dieser Akzent gehabt haettest? ;) 54. Was hat deine Klasse gesagt ueber meins? 55. Waren wir okay oder? 56. Was denkt Deutschland (die Meiste) ueber die Sachen, die Bush und der Amerikanische Regierung darueber machten?	18
57. Na ja Kleinigkeiten :p Was dachst du daran?! 58. How about you, if you don't mind me asking?	19

The next chart summarizes the questions asked by student E012 throughout the twelve weeks of the virtual exchange.

Table 17 *Summary of Questions Asked by Student E012*

Questions Asked by Student E012	E-mail
1. Hast du in Berlin gehen? 2. wie lange spielst du die Klavier? 3. welche Redeweise interessierst du?	1
4. Habt ihr das amerikanischen essen gehabt? 5. Wie groß seid ihre Familie? 6. Habt ihr gerne für das Theater? 7. Was sind ihr lieblings das Buch?	2
8. Was hat ihr von McDonalds oder Burger King gegessen? 9. was ist dein Lieblings Essen? 10. Ist es schwer mit deiner familie im anderem Land? 11. Was macht ihr in der Freizeit?	3
12. Wie war die Ferien? 13. Ich weiß "kebab" aber ich weiß nicht "doner kebab". Was ist das? 14. Mein Lieblings Essen ist die Suppe, gleich "Vegetable Beef". Wisst ihr "Vegetable Beef"? 15. Was ist eure Lieblings Sport?	4
16. Wie war die Woche? 17. Was macht ihr in der Wochenende?	5
18. Die Konferenz war interessieren, und euer Englisch ist sehr gut! Was denkt ihr?	6
19. Was meinst du "Trouble at school"? 20. Ist alles OK? 21. Was sind die andere Schulesystem? 22. Welche Uni willst du zu gehen? 23. Was willst du studieren? 24. Wurde es leichter zu schreiben über Facebook oder Skype, oder etwa anders als Email?	7
25. Was ist wichtig für die deutsche Identität?	8
26. Was ist deine Lieblingsmusik?	9
27. Wie ist Multikulturalismus in Deutschland?	10
28. Hast du beliebige Musik, dass ich sollte hören?	12
29. What will you do during your holiday break?	14
30. Was hast du über die Ferien getan?	15
31. Warum war deine Familie in Amerika?	16

Table 17 (Cont'd)

32. Was ist Familie für dich? 33. Ist deine Familie groß? 34. Siehst du alle oft?	17
35. I may have asked this already but what do you want to study when you are done at the Gymnasium? 36. Your dad was an engineer student at Pennsylvania State?! 37. hat Deutschland etwas Interessantes über die Familie außer Anwohner einander und sehen einander oft?	18
38. Would you like me to write in English occasionally, so you can see what "native" English looks like? 39. Wie war das Woche/Wochenende?	19
40. Hast du "slack-lining" getan? 41. I feel so bad about that, maybe we could try and do something on our own? 42. Gibt es etwas, was Sie über Detroit wissen?	20
43. Ich will zu weiß, was neuen Informationen würden Sie gerne über Detroit kennen?	21
44. Was war etwas größeren, dass in euer Leben passiert ist? 45. Was the conference any easier/better for you this time?	22
46. Was denken Deutsche ueber Amerikaner?	24

It can be seen that student E016 asked a total of 58 questions. This does not include questions she asked related to language issues. Student E012 asked 46 questions. That means that approximately 11% of student E016 total of 502 sentences, and 10% of student E012's total of 505 sentences were questions. In contrast, student E007, for example, asked only a total of ten questions throughout the exchange. Most of the questions were rather short and only in one e-mail did the student pose more than one question. This means that student E007's partner did not receive a lot of requests for clarifications, explanations, or other answers. The following table summarizes all the questions asked by student E007.

Table 18 *Summary of Questions Asked by Student E007*

Questions Asked by Student E007	E-mail
1. Was noch machts du in deiner Freizeit oder im Gymnasium?	2
2. Wie ist Universitaet in Deutschland?	6
3. Was denkst du über Deutschland und Amerika?	7
4. Haben die Unis viele internationale Studenten?	8
5. Hast du Geschwister?	10
6. Hat viele Studenten/Schueleren Jobs?	12
7. Kennst du deinen Freunden auf Facebook??	
8. Hast du viele Freunden von Tennis?	
9. Hast du über das gelernt?	13
10. Was erinnerst du in der Geschichte?	

Student E007 had a much less personal connection to her partner, wrote much less, and thus did not develop many strategies for enhancing her learning of the target culture. There were also some exceptions to this pattern and some students who did not establish a personal connection still asked an abundance of questions (for example student E002). In most cases, however, students who had a more personal bond asked more questions than those who did not.

The second strategy developed by many students in the area of skill development was in the context of enhancing their foreign language skills. Many students developed strategies to receive language assistance from their partners either about vocabulary, phrases, or grammar structures. Some students asked specific language questions and others asked simply to receive general feedback on their language use. For example, when unsure about a German word, student E004 wrote: “mein anderes Hauptfach (außer Deutsch (Germanistic?)) ist Wirtschaftslehre” (e-mail 2). By putting *Germanistic?* in parenthesis with a question mark, he indicates that he is not sure if this is the right translation and that he wants his partner to give him

this information. By asking specific language questions, student E004 employs strategies to improve his learning of the target language. Many students employ this strategy, for example student E008, who, among other language question, asks: “Kann ich sagen ‘sie leben 2000KM weit weg‘? Ist es richtig?” (e-mail 11). Here, the student is not sure if she constructed the phrase correctly and would like know if the structure works. Student E014, for example, wants to know if he translated the phrase to *go out to lunch* correctly, when he asks: “In Bezug auf Mittagessen, ich erinnere mich, dass es sehr cool war, dass wir durften, essen zu gehen (‘to go out to lunch’ -- ist das richtig?)” (Student E014, e-mail 6). There are myriad examples through the e-mails that show that students employ the strategy of asking specific language questions in order to enhance their language skills. This is an important strategy demonstrated and in many cases developed by students, especially because giving language feedback was not a mandatory part of the exchange. In contrast, some students did not employ this strategy at all, did not ask any language-related questions and did not make use of the connection to a native speaker for the improvement of their own language skills.

5.3.2.4. Knowledge

The domain of knowledge was also affected by the virtual exchange. There were three interesting findings. Firstly, as was to be expected, many students reported an increase in statement 29 of knowledge which refers to the knowledge of techniques to maximize their learning. This knowledge corresponds to the aforementioned skill of using strategies for enhancing their learning and it has been pointed out that many students were able to develop these strategies through establishing a personal connection, and asking questions about language use. It was therefore to be expected that students’ knowledge about appropriate strategies for improving their learning would also increase through the exchange and this can be confirmed.

Secondly, students claimed to gain knowledge about German language, including new vocabulary, colloquialisms and slang, and grammatical structures. And thirdly, students expanded their knowledge of various areas of German life because of their interaction with representatives of the target culture. However, the expansion of knowledge observed in the e-mails was mainly outside of the areas which constitute the factor of knowledge in Fantini's (1997a) survey. This may explain why there was little change in the self-assessment of this factor. In fact, on average students only increased their knowledge by 0.06 points.

Although language is in its own category on Fantini's (1997a) survey, their gain in knowledge in the area of German language stood out in the analysis of knowledge. Many students show in their e-mails that they learned new language forms and thereby show a development in this area. One e-mail exchange which shows this knowledge gain is the exchange of Student E009 and her German partners. In e-mail 13, student E009 wrote: "Mein Freund kommt und...had a sleepover? bei meinen Haus fuer nur ein nacht. Haha." Her partners replied in their next e-mail: "had a sleepover ... in this context it could be that you mean: Mein Freund kam und hat für eine Nacht bei mir übernachtet" (Student K001, e-mail 12). Thus, her German partners suggest how she could say 'to have a sleepover' in German. In the next e-mail, student E009 implements this feedback and writes: "Ach, ok. Danke! Mein Freund kam und hat fuer eine nacht bei mir uebernachtet! haha ;)" (e-mail 14). This illustrates a knowledge gain about German language structures.

Another example can be found in the exchange of student E012. Her partners give her language feedback in almost every e-mail with a lot of explanations and examples. One of the first feedbacks they give her pertains to German word order. In her e-mail, student E012 had written: "Ich heiße [...], und bin ich 20. jahre alt" (e-mail 1). Her partners had then explained to

her: “The second problem is your word order. It's quite hard to explain. e.g. they say: ‘Die Stadt ist schön und ich will noch einmal (dahin) gehen.’ or: ‘Ich heiße [...] und (ich) bin 20 Jahre alt.’” (Students K016 and K030, e-mail 1). In E012’s next e-mail, her word order in sentences using the conjunction *und* is correct, such as in this example: “Meine Mutti hat zehn die Geschwister, und meinen Vati hat sechs die Geschwister” (e-mail 2). The student’s ability to implement her partners’ feedback becomes apparent in another instance. Her partners had informed her that the German word for *Hamburger* is indeed *Hamburger*, and not *Fleischpflanzerl* as suggested by student E012. When student E012 later wants to talk about *Cheeseburger* she writes: “Aber die andere sind die Zuckerwatte, und Käseburger (ich glaube oder ist das der Cheeseburger auch?)” (e-mail 4), thereby showing that she is aware of the possibility that here, too, the German word may be identical to the English word. In a later e-mail, student E012 again shows the implementation of her partners’ language feedback. In one e-mail she told her partner K016 that she had dyed her hair over break: “Ich habe auch meine Haar färben” (e-mail 13). Her partner gives her feedback on this and suggests: “you should use the participle ‘gefärbt’ instead of ‘Ich habe meine Haare färben.’ so that means ‘Ich habe meine Haare gefärbt.’ is correcter” (Student K016, e-mail 10). When her other partner K030 asks her what she did over spring break in his e-mail, student E012 is able to draw on the feedback she received from her other partner and writes: “Über die ferien habe ich meine Haar gefärbt” (e-mail 15). Again, this shows that student E012 gained knowledge about specific language forms through the exchange and was also able to implement or at least imitate this knowledge in her e-mails.

The third finding in the domain of knowledge was that students developed knowledge of different aspects of German life, depending on the individual discussions. On the post-surveys, several students indicated that they had gained knowledge about:

1. Stereotypes that exist about Americans
2. German attitudes toward minorities and foreigners, including Americans
3. Similarities between the cultures
4. The German educational system
5. Family life in Germany
6. The everyday life of German students

Most of these domains of reported knowledge gain were assigned cultural topics (with the exception of everyday life). This suggests that students were able to expand their knowledge on those topics that were assigned for discussion. The students' knowledge gain can be seen in their blogs and essays, in which they explain what they have learned through the exchange. Student E006, for example, explains in her blog: "Was meine Partnerin diese Woche gesagt hat finde ich sehr interessant. Die Stereotypen die Meisten Deutschen haben von Amerika sind weil sie denken nur an New York und Hollywood. Es gibt natürlich viel mehr zu Amerika als New York und Hollywood, und deswegen ist es gut dass die Studenten lernen mehr über Amerika" (Student E006, blog 5). The blog entry reveals that the student learned about a stereotype she was not aware of and indicates her knowledge gain in this area. There are many more examples of a similar nature that show the students' development of knowledge as a positive effect of the virtual exchange.

Fewer students mentioned that they learned more about German family life, sports, and other aspects of everyday life of German students. Student E012, for example, commented in her blog that she was surprised to learn some new things about German families: "Ich war überrascht mit wie viel die Familie ist zusammen. [K016] sagte das er sieht seine Familie fast jede

Wochenende. Und auch lebt mit sein Oma” (Student E012, blog 4). This statement shows that the student has gained knowledge about this aspect of German culture.

Unfortunately, not all students were able to demonstrate knowledge gain because of the exchange. Student E015, for example, mentioned that her partner did not give her much information on the assigned topics and they talked only a little bit about all topics (blog 5). She regretted on the post-survey, that “there wasn’t a lot of nice, detailed explanations of topics” (Student E015, post-survey). Because her partner did not provide a lot of information on the assigned topics, the student did not have the chance to develop her knowledge of German culture. In contrast to some students who could not develop their knowledge because of lack of input, student E013 did receive several e-mails containing a lot of information about Germany and German culture and still claimed on the post-survey that she had learned “nothing. basically” (Student E013, post-survey) about German culture. This student’s opinion about the learning outcomes of the exchange is not supported by her e-mail correspondence. Her partner, for example, gave her information on the typical free-time activities of German students, what literature is read in school and at home by students, sports in Germany, the educational system, national pride in Germany, citizenship laws in Germany, multiculturalism in Germany, family life and many more. Her German partner answered all of her questions and gave her much input for all the assigned topics. The student’s self-assessment of not having learned anything from the exchange is therefore surprising and not supported by the data. Perhaps the student felt that she already knew about the discussed topics. Nonetheless, student E013’s awareness of the similarities and only small differences between the educational systems of Germany and the USA indicate that there was a knowledge gain in this area.

Student E013 also received a lot of specific language feedback, about specific vocabulary and grammar structures. The claim that she gained nothing from the exchange is an unexpected evaluation of her experience and may be impacted by the lack of responses at the end of the exchange and her frustration with that. During the last three weeks of the exchange, her German partner did not respond frequently, and this may have caused the American student to feel disappointed and may have impacted her general attitude toward the exchange. This in turn may have led to her negative evaluation of the learning outcomes of the exchange.

Apart from this exception, all students reported to have gained knowledge because of the exchange, and their e-mails and blogs can verify this. In all, the area of knowledge was highly impacted by the virtual exchange. Students received a lot of new information on a variety of topics and were able to expand and add to their existing knowledge of both German language and culture.

5.3.3. Case Studies: Development of Intercultural Competence

After having summarized students' self-assessed development of intercultural competence as well as important patterns that were exhibited in the development of intercultural competence in the electronic exchange, the next section will look at the development of intercultural competence of individual students over time throughout the electronic exchange. Three students were selected as case studies for this section; specifically, the three students whose self-assessment of intercultural competence showed the highest, the most average and the lowest development.

To identify these three students, students' self-assessment averages from the pre-survey were subtracted from their respective post-survey scores for all five factors (language, attitude, awareness, skills, knowledge). The resulting developmental scores were combined to present the

student with the highest, most average, and lowest development. The average developmental score for intercultural competence (all factors combined) was -0.2. The student with the highest developmental score was student E018. Her developmental score was 2.6. Student E005, who had a developmental score of -4.8, presented the lowest developmental score. The most average development was shown by student E008 whose developmental score was -.3.

In the following section, the electronic exchanges of these three students will be analyzed to trace development (or lack thereof) through their e-mails, blogs, essays, and surveys.

5.3.3.1. Case Study 1

Student E018 rated her language skills at an average of 4.55 (out of 6) on the pre-survey and at an average of 5.75 on the post-survey. Her self-assessed language development score was thus 0.8. Her self-assessment of her attitude decreased from 5.7 on the pre-survey to 5.1 on the post-survey. Her attitude development score was -.6. Her self-assessment of awareness increased from 4.75 on the pre-survey to 4.875 on the post-survey. Her awareness development score was 0.125. The factor skills saw the largest development as it increased from 3.5 on the pre-survey to 4.9 on the post-survey and thus presented a development score of 1.4. There was also an increase in the student's self-assessment of knowledge. On her pre-survey her knowledge average was 4.1 and on the post-survey it was 5, thus there was a development of 0.8. All factors combined, the student showed a development of 2.6.

Student E018 sent a total of 4443 words to her partners in 22 e-mails. 535 of those words were written in English. That means, on average, the student wrote 202 words per e-mail. The student had spent considerable time abroad, including German-speaking countries, before participation in the electronic exchange. She had spent one month in Austria and three months in Germany for study abroad programs and had also spent time in Nicaragua, Mexico, and England.

She was minoring in German and had taken German classes in High School and at college. In the exchange, student E018 was paired with two German students K008 and K023 (no surveys completed). German student K006 also helped the team with ideas, but was partnered with another American student. All German students were male. They wrote their e-mails together. All e-mails combined, her partners wrote 4215 words to student E018, which shows that the partners wrote almost the same amount to each other.

The pattern of e-mail correspondence in this partnership shows that there were some gaps in responding on the German side at the beginning of the exchange, particularly in February. This may be impacted by the winter break the German students had at that time. The following chart summarizes the correspondence pattern.

Table 19 *E-mails Sent between E018 and K006, K023*

German Student E018	American Students K006, K023
Email 1: Jan 14	Response 1: Jan 20
Email 2: Jan 21	
Email 3: Jan 27	Response 2: Jan 28
Email 4: Feb 4	Response 3: Feb 10 Response 4: Feb 10
Email 4 and 5: Feb 10 Email 6: Feb 15 Email 7: Feb 19 Email 8 and 9: Feb 20	Response 5: Feb 21
Email 10: Feb 23 Email 11: Feb 27	Response 6: Mar 1
Email 12: Mar 3	Response 7: Mar 6
Email 13: Mar 13	Response 8: Mar 18
Email 14: Mar 18	Response 9: Mar 20
Email 15: Mar 20	Response 10: Mar 24
Email 16: Mar 24	Response 11: Mar 25
Email 17: Mar 30	Response 12: Mar 31
Email 18: Apr 1 Email 19: Apr 7	Response 13: Apr 9
Email 20: Apr 11	Response 14: Apr 14
Email 21: Apr 14	Response 15: Apr 17
Email 22: Apr 17	

It becomes clear from the overview that the German side did not respond quickly during the first part of the exchange. In February, for example, student E018 sent five e-mails before receiving a response. During this time, however, a development in the student's intercultural competence can be detected. Particularly, it is a development in the intercultural competence factor of skills and awareness. The student learns how to use strategies that aid her communication in order to interact successfully with her partners and she also increases her knowledge and application of techniques that help her maximize her learning. Additionally, she increases her strategies of how to avoid conflicts. I will elaborate on this development in the following paragraphs.

The student did not get a response to her second e-mail. Almost a week later she sent the same e-mail to both her partners separately asking whether they had received her last e-mail and indicating that she hadn't heard from them. She wrote: "wie geht es bei dir? Ist alles ok? Ich habe nichts von dir seit einer Woche gelesen! Ich hoffe dass alles in Ordnung ist. Hast du meine Email von letztem Freitag bekommen? Ich wünsche dir ein schönes Wochenende!" (Student E018, e-mail 3). Her partners replied to her on January 28, a week after the original e-mail was received by them. Student E008 then replied on February 4 and received two e-mails in response to that six days later. After her reply to that e-mail on the same day, she did not hear from her partners for 11 days. During that time, student E018 sent four additional e-mails. In the first e-mail she commented on the videoconference, expressing her enjoyment thereof, and asking her partners some additional questions. In her second e-mail, she pointed out that she hadn't heard from her partners in a while and she explains that she has to write two e-mails to receive her points for her class. She wrote:

lebt ihr noch? Ich habe nichts von euch seit letztem Donnerstag gehört! Ich muss zwei Emails an euch pro Woche schreiben, und es ist ganz einfacher, wenn ihr mich zurück schreibt. Habt ihr viel zu tun? Gibt die Schule viele Hausaufgaben?
MfG. (Student E018, e-mail 7)

As in her earlier e-mail, she points out the lack of response from her partners. She also asks if they have a lot to do, trying to find a reason for their untimely answer. She also explains the rules of the exchange to them again, reminding them that she gets credits for writing two e-mails per week and that this is only possible when they write her back. When the student still does not hear back from her partners, she sends another e-mail again reminding them of the necessity to send two e-mails per week for her grade. In e-mail eight she says that she will talk more about the education system, so that “um ich meine Punkte für Emails schreiben zu bekommen. Diese Austausch ist für mich Pflicht und ich bekomme Punkte für Emails schreiben” (Student E018, e-mail 8). At the end of the e-mail she writes: “Höflich lese ich bald eine Email von euch!” (Student E018, e-mail 8).

The student sent a second e-mail on the same day so that she can ensure she sent her partners two e-mails per week. She explains to her partners that she is writing another e-mail now because she has a lot to do during the week and might not have time to write the required second e-mail later. Again, in this e-mail she reminds her partners that she is required to write two e-mails per week for credit for her class. The day after the student sent two e-mails, her partners finally responded to her. They apologized for the late response by writing: “Sorry for us not writing last week. It was a hard week in school and we had not that much time Left” (Students K008, K023, K006, e-mail 5). They then continued answering all the questions from the previous e-mails in order to get caught up on the exchange.

Student E018’s response to her partner’s long e-mail shows her development in the area of intercultural competence skills and awareness. She writes to them:

wow, ihr habt ganz viel geschrieben! Ich weiß wie es geht, wenn man viel für die Schule und Uni zu tun hat. Nächstes Mal, könntet ihr mir eine kurze Email (kann auch auf

Deutsch sein) schreiben, wenn ihr nicht viel Zeit habt? Dann weiß ich, dass ich eine zweite Email schreiben soll, und nicht auf euch warten soll. (Student E018, e-mail10)

In the areas of skills, the student shows that she is able to find a solution to the problem of irregular responses from her partners. This indicates that she is developing appropriate strategies to assist in her communication with her exchange partners, one of the skills on Fantini's (1997a) intercultural competence self-assessment survey. In her previous e-mails, she merely asked her partners whether they got her e-mails and reminded them that she didn't hear back from them. In this e-mail, however, she suggests that her partners let her know when they won't have time to reply, so that she is aware of their time issues and can continue to send her required e-mails without waiting for her partners' response first. By coming up with this solution, the student shows that she has developed her skills of successful intercultural communication. Now, instead of repeatedly asking whether her partners got her e-mails or taking the lack of response personally, she can write her e-mails and receive the credit for her class and does not have to wait for responses all the time. She is thereby also using strategies to maximize her own learning.

Additionally, the student's e-mail shows that she has developed and is developing strategies of how to avoid and solve potential conflicts which could impede the success of the intercultural partnership. This is also part of the factor skills on Fantini's (1997a) survey, with statements including the ability to use effective strategies to communicate appropriately, to reduce misunderstandings, and to be flexible. She shows that she is capable of reducing tension and misunderstanding, by expressing understanding for the late response of her partners due to school work. In so doing, the student ensures that the lack of response from her partners does not cause a conflict between them. Even though the student's blogs had clearly expressed her frustration about her partners' lack of e-mails, she does not express this dissatisfaction in her e-mails to her partners. This shows that she knows how to avoid conflicts from arising and she is

able to prevent the infrequent e-mails from her partners from causing their partnership to suffer. This solution may also have had a positive impact on the commitment of the German students.

Her blogs clearly illustrate her frustration in comments such as the following:

Am Freitagabend(Samstagfrüh) habe ich an ihnen ein Email geschrieben, aber ich habe nichts von ihnen gehört☹. Ich glaube, ich werde heute Abend ein zweites Email schreiben, als ich nicht bis dann von ihnen gehört habe. (Student E018, blog 1, Feb 9)

Ich habe nichts seit letztem Donnerstag von ihnen gehört und es frustriert mich. Warum schreibt ihnen mich nicht zurück? Ich habe drei Partner und ich habe gedacht, dass es einfacher würde, mir Emails zu schreiben. [...] es ist sehr schwer wenn die Deutsche nicht zurück schreiben. Ich habe ganz viel zu tun und möchte mich nicht Sorgen, ob die Deutsche mich zurück schreiben werden. (Student E018, blog 2, Feb 21)

The student uses the blogs as a venue for dealing with her frustration, and does not give voice to her disappointment in her e-mails to her partners. This shows, that she is developing awareness of how to ensure the smooth flow of the exchange and that she does not wish to cause any conflicts to arise between her and her partners. By expressing her understanding to her partners, she shows her willingness to forgive and deal with time issues, and by suggesting her partners let her know when they don't have time to respond on time, she shows her skills at finding solutions to problems and at ensuring successful intercultural communication can take place. In the following e-mails from student E018, she does not continue to always ask her partners whether they got her e-mails, but instead she writes about different topics knowing that her partners will respond eventually and answer all her questions.

Throughout the e-mail exchange, student E018 also shows that she develops her intercultural competence in another area of awareness. Through her partners' input, the student becomes aware of similarities and differences between the two cultures and languages. For example, she becomes aware of the influence of the two languages on each other. For the student, this revelation was of special importance which is reflected in her choice to write her

last class essay about the topic. In her essay, student E018 draws on what she learned from her partners, namely that certain words, including Lebensraum and Sitzfleisch are English words as well as German words.

Because her partners shared this impact of the German language on the English language with her, the student did more research in this area and came to realize: “dass wir deutsche Wörter in der englischen Sprache haben” (Student E018, essay 3), which is particularly astonishing to her, “weil wir normalerweise nur an den englischen Einfluss an der deutsche Sprachen denken” (Student E018, essay 3). Other similarities and differences she becomes aware of, include the similarity in music choice in Germany and the US, the difference in class sizes between Germany and the US, similarities in free-time activities (they have LAN-parties in both countries), and others.

In the area of awareness of cultural differences, student E018 exhibits another development. One of the assigned discussion topics deals with the novel *Der Mond isst die Sterne auf*, which the US class was reading that semester. The student asked her partners whether they know the book and also asks whether they have seen the movie *Die Legende von Paul und Paula* about which she has to prepare a presentation. Her partners reply: “We don’t know the book ‘Der Mond isst die Sterne auf’ and so we don’t read it. We don’t watch the film ‘Die Legende von Paul und Paula’ - so unfortunately we can’t discuss about these topics with you” (e-mail 10).

In her next e-mail, student E018 says that it does not matter they do not know the book or movie and writes:

es ist mir egal, ob ihr ‘Der Mond isst die Sterne auf’ gelesen habt, oder ‘Die Legende von Paul und Paula’ gesehen habt. Ich möchte nur wissen, ob ich etwas in meinen Kursen lerne, dass Schüler in Deutschland auch lernt. Oh ja, ich möchte auch wissen, lernt ihr viel über Paul Celans Totesfuge? Ich habe schon drei Kursen gehabt, wo wir über diese

Gedicht gesprochen haben. Also, ich möchte wissen, ob die deutschen diese Gedichte sehr wichtig finden oder ist es nur die Amerikaner, die diese Gedichte sehr ganz beliebt haben. (Student E018, e-mail 16)

She also wonders if they know poems by Paul Celan, whose poem *Die Todesfuge* she was introduced to in three different classes. The reason why she is wondering whether her partners know these cultural pieces is also explained in the e-mail. She is wondering whether she is learning things in German classes in the US that is also deemed important in Germany. In her partners' response, she finds out that they also do not know about Paul Celan.

The student reflects on the awareness that what is read in German classes in the US is not the same that is read by Germans in Germany in her blogs and she writes:

Also, ich habe etwas neu herausgefunden! Weiß alle das Gedicht „Todesfuge“ von Paul Celan? Natürlich! Du hast über es in fast alle deine Deutschkurse gesprochen. ABER was haben meinen Partner über es gesagt? “We don’t know something about the poem ‘Todesfuge’ from Paul Celan and up to now we didn’t deal with this literary work in the German lessons.” Moment Mal... sie wissen nichts? Also, ich muss etwas zuerst erklären, ich habe drei Partner, die alle das Abitur machen wollen. Sie sind in der 11. Klasse und haben nur ein Jahr mehr bis sie das Abitur machen werden. Und sie wissen nichts über „Todesfuge“.... Also, warum lernen wir so ganz viel über „Todesfuge“, wenn die DEUTSCHEN wissen nichts darüber! Ich habe früher über „Der Mond isst die Sterne auf“ und „Die Legende von Paul und Paula“ gefragt. Glaubt ihr, dass sie etwas über diese gehört? Dreimal darfst du raten, aber du brauchst nur eine... Sie haben NICHTS über „Der Mond isst die Sterne auf“ gelernt und gehört. Also, sie wissen nicht was es war. Und „Die Legende von Paul und Paula“, die ich zweimal in meine Deutschkurse gesehen habe? Sie müssen es nicht in der Schule schauen und deswegen haben die drei es nicht gesehen. [...] Also, ich möchte wissen, warum lernen wir Dinge und diskutieren Dinge, die die Deutschen nicht lernen müssen? Es macht uns für eine Reise oder Studium überhaupt nicht vorbereitet, weil wir so ganz viel über Vergangenheitsbewältigung sprechen, aber wir lernen auch, dass die Deutsch nicht über diese Thema sprechen wollen. Also, die Themen, die wir ganz gut darüber sprechen können, werden wir nicht darüber sprechen. Das ist zu mir völlig sinnlos. (Student E018, blog 4, March 26)

In this blog entry, the student expresses her frustration about the fact that her partners do not know the literature or films that she is learning about in her German classes in the US. She explains that learning about cultural pieces which are perhaps only regarded as important by Americans does not prepare US students well for intercultural encounters with Germans. This is

a very interesting realization. Her blog also expresses the wish to be better prepared for intercultural communication with Germans, by learning how to discuss and speak about topics which Germans like to discuss. This blog entry reveals that the student has gained awareness about the necessity of acquiring specific cultural knowledge in order to communicate successfully with members of the target culture. The blog entry also criticizes the preparation for intercultural encounters received by the student in her German classes.

However, the blog entry shows the student's frustration but she does not attempt to find out why there are differences between what is read in German classes in the US and in Germany. Thus, the student's awareness is only about the cultural difference, but not about possible explanations for the differences she has found out. To further develop her intercultural competence, in a next step, the student should attempt to understand the differences she became aware of in reference to potentially different cultural ideas about what constitutes important literature to read in school.

In the area of skill development, the student also learns to draw comparisons and relate what her partners tell her about German culture to US culture. Specifically, this shows a development in the area of knowing how to contrast German culture with US culture (statement 18 on the self-assessment survey). For example, toward the end of the exchange her partners tell her about *Abwrackprämie*, a policy - intended to help the German economy - that mandated that people get money for getting rid of an old car. When replying to this e-mail, the student made a connection between *Abwrackprämie*, and an American attempt to help the American economic situation, where US citizens get a certain tax deduction the first time they buy a house. A similar connection between the cultures is made when her partners tell her about the problem with German pensions, which the student relates to similar issues in the US about social security

payments. The skill to draw comparisons between cultures is developed by the student throughout the exchange.

Last but not least, student E018 also shows that she is developing her intercultural competence in the area of knowledge, as she is learning more and more about German culture through the exchange. The student, for example, learned about German political problems when her partners told her about the book *Deutschland schafft sich ab* and the implications for German economy it discusses. She also learns about the elimination of the German military and civil service, about the German education system, about issues of national pride in Germany, about immigrants in Germany, about violence in Germany, about other economic issues in Germany, and several other topics. In one of her blog entries, student E018 mentions that she has gained a lot of cultural knowledge through the exchange when she writes: “Sie haben sehr viel geschrieben! Sie haben alle meine Fragen beantwortet und ich habe viel gelernt” (Student E018, blog 2, February 21).

In all, the student exhibits the development of intercultural competence in her electronic exchange. Particularly, she demonstrates that she is developing her intercultural competence in the areas of awareness, skills, and knowledge. Student E018 develops awareness of how to avoid conflicts with her partners, and awareness of similarities and differences between German and US culture. She develops skills of compromising and solving logistical problems. And she develops cultural knowledge in a variety of fields. Through looking at the student’s e-mails, blogs, and essays, the development of her intercultural competence can be seen and it becomes clear that she has gained new skills, awareness, and knowledge because of the exchange.

5.3.3.2. Case Study 2

Student E005 showed the lowest development in her self-assessment of intercultural competence. She self-assessed her language skills fairly high on the pre-survey (5.85) but decreased her self-assessment to 5 on the post-survey. Her self-assessment of attitude saw an even larger decrease from 4.57 on the pre-survey to 3.57 on the post-survey. The largest decrease in self-assessment can be seen for the factor awareness, which dropped from 4.63 on the pre-survey to 3.38 on the post-survey. The student also decreased her self-assessment of the factor skills from 4.6 on the pre-survey to 3.5 on the post-survey and the factor knowledge from 4.71 on the pre-survey to 4.14 on the post-survey. All factors combined, the student self-assessed a negative development of -4.8.

Student E005 had taken German for four years in High School and for one semester at college. She had spent one month in Germany for a study abroad trip. In the exchange, she was partnered with two German students, student K007 and student K019. Both of her partners were male students and they wrote some of their e-mails together, but they also wrote some e-mails separately. Student E005 sent a total of 24 e-mails to both of her partners. She wrote a total of 4279 words of which 582 were in English. On average, she wrote 178 words per e-mail. Student K007 wrote 9 e-mails throughout the exchange, and student K019 wrote 13. They mainly tried to take turns writing e-mails to their American partner. Combined, they wrote 1637 words to their German partner which is less than half of what student E005 wrote to them.

The following chart summarizes when the e-mails were sent by the participants in this e-mail partnership, American student E005 and German students K007 and K019.

Table 20 *E-mails Sent between E005 and K007, K019*

American student E005	German students K007 and K019
Email 1: Jan 14	Response 1: Jan 15
Email 2: Jan 25	Response 2: Jan 25 Response 3: Jan 26
Email 3: Jan 27	Response 4: Feb 5
Email 4: Feb 8 Email 5: Feb 8	Response 5: Feb 8
Email 6: Feb 11	Response 6: Feb 15
Email 7: Feb 20 Email 8: Feb 24	Response 7: Feb 24
Email 9: Feb 25	Response 8: Feb 27
Email 10: Mar 1	Response 9: Mar 1
Email 11: Mar 3	Response 10: Mar 3
Email 12: Mar 4	Response 11: Mar 5
Email 13: Mar 7	Response 12: Mar 7
Email 14: Mar 8	Response 13: Mar 10
Email 15: Mar 17	Response 14: Mar 17
Email 16: Mar 18	Response 15: Mar 20
Email 17: Mar 22	Response 16: Mar 25
Email 18: Mar 30	Response 17: Apr 4
Email 19: Apr 4	Response 18: Apr 6
Email 20: Apr 8 Email 21: Apr 14	Response 19: Apr 16
Email 22: Apr 17	Response 20: Apr 18
Email 23: Apr 19	Response 21: Apr 19
Email 24: Apr 20	Response 22: Apr 20

Although student E005 was frustrated with the lack of response from her partners, they responded fairly regularly. However, their answers were relatively short and appeared to decrease in length toward the end of the exchange when they would sometimes only ask one or two questions, unrelated to the assigned topics. They also often neglected to answer the questions asked by student E005, especially related to the assigned topics. In general, it seemed that the German students were not as interested in discussing the assigned topics but were more interested in talking about other issues. This may have to do with the different requirements for both classes. The German students participated voluntarily and did not receive a grade, and were

therefore perhaps less motivated to stick to the assigned topics, which in turn frustrated the American students whose assignment was to write about the pre-given topics.

Student E005 expresses her frustration in her blog and writes: “Dieses mal habe ich kaum ein Wort von den Deutschen gehört. Ich wollte warten, bis ich mehr als ein Satz als Antwort bekommen habe, aber das scheint unmöglich” (Student E005, blog 4, April 4). This entry expresses her frustration with the lack of response. She also expresses this frustration in her e-mails when she writes to one of her partners:

I am pretty much just writing to you now, [K019], since I never seem to hear from [K007]. Has he dropped off the face of the Earth or something? I guess it's ok, it's just a bit difficult since we must do a lot of work with this exchange. Maybe you don't know, but we have to write blogs about what we learn from you and other things. (Student E005, e-mail 19)

This frustration may impact the student's overall attitude toward participating in the exchange. In fact, student E005's partners only wrote a total of 1637 words to her (student K007 wrote 626 words and student K019 wrote 1111 words). That means that they wrote less than half the amount that she did. This, however, does not mean that they were not enjoying the exchange. In fact, both partners expressed an interest in this exchange and also in its continuation past the semester. Their enjoyment of the exchange can for example be seen in the following sentence: “ich find es spaßig so e-mails auszutauschen” (K 019, response 18).

Nonetheless, the German students often did not answer the questions posed by student E005. Although both her partners expressed a very positive attitude about the exchange, and asked many questions attesting to their curiosity and interest, they often failed to react to questions raised by their American partner. This made it especially difficult for student E005 to develop her intercultural competence in the area of knowledge, because her partners only gave her a limited amount of new information.

The fact that her students did not present her with many opportunities to increase her knowledge about German culture is also reflected in her choice of essay topic three. While most students in her class chose a topic they discussed with their e-mail partners, and consequently drew in their essays on what they learned in the exchange, student E005 chose a topic she had not discussed with her partners (food) but that she had observed while studying abroad. Because her partners only wrote short e-mails with little information about German culture, student E005's e-mails do not present a strong intercultural competence development in terms of knowledge. The fact that the student couldn't learn much in terms of cultural knowledge is well summed up in one of the student's blog entries, where she writes: "Ich habe dreimal versucht mein Partner auf der Theme zu halten, aber er hat nie meine Frage über Stereotypen geantwortet. Schade. Obwohl ich nichts Neues gelernt habe, ich bin neugierig auf was er gelernt oder bemerkt hat" (Student E005, blog 5, April 17). In this entry, the student clearly states that she did not learn anything new from her partners' e-mails, but she still remains positive hoping that her partners have learned something. She thereby acknowledges the value of this cultural exchange in general.

This is also reflected in student E005's answers to open-ended questions on the post-survey. When asked what problems she encountered she wrote: "My partners didn't really give me a measure of German culture as a whole and often responded with only a few sentences despite the numerous questions" (Student E005, post-survey). In addition to replying with only a few sentences and not offering their partner much information, another problem of this partnership appeared to be the three-person nature of the exchange. It seemed to be especially difficult for the two German students to find a way to write together, which caused some confusion in the beginning of the exchange. Once student E005 suggested "Ihr must nicht eine

Email zusammen schreiben. Ich kann zurückschreiben an ihre beide mit der gleichen Email” (e-mail 8), one of her partners answered that they will write separately from now on. Although this step increased the frequency of the responses she received from her partners, it did not increase the amount of information presented in the e-mails. Additionally, it made it difficult for student E005 to establish a strong partnership with either one of her partners because neither one of them wrote back regularly and the order in which they answered her e-mails did not follow the assigned discussion topics. This is another reason that prevented student E005 from demonstrating a development of her intercultural competence. Due to the lack of information she was given, she was unable to develop her awareness of German culture or intercultural communication to the degree that other students were able to develop this awareness whose partners gave them much more cultural information to work with. Because her partners generally wrote very short e-mails and did not answer her questions, she was unable to greatly develop her intercultural competence and communication skills further.

Nonetheless, the offer from student E005 to send separate e-mails to her partners shows that she is developing flexibility, which is also a skill outlined in the intercultural competence survey by Fantini (1997a). She tries to find ways to improve her communication with her partners, but unfortunately the result is not as positive as for student E018 who encountered the same problem. It is doubtful that this is caused by less efficient communication strategies of student E005. Rather, it appears that her partners exhibited different motivations in the exchange and were not as eager to write as much and discuss the assigned topics.

In spite of the challenges of this exchange, student E005 shows instances of a positive attitude toward the exchange all throughout the semester. Even in the last e-mails, she expresses her enjoyment of the exchange and her wish to continue the communication: “Wenn du facebook

hast, kannst du mir dabei finden, oder wenn nicht, hätte ich es gern, wenn du noch schreiben willst.[...] hoffentlich willst du noch in Verbindung bleiben ” (e-mail 22). Her partners also show a very positive attitude and wish to continue to exchange as they write: “I would like to hold the email exchange. it’s nice to write with you and you could talk about your tests if they are good The exchange was nice. it is cool to talk about other languages, cultures and so” (Student E005, e-mail 9), and: “and i also hope that we will wirte some time on and on” (Student K019, e-mail 13). Thus, the lack of traceable development of intercultural competence in this particular exchange has less to do with the partners’ disinterest in the exchange as it has to do with the German students’ lack of information provided to their American partner. Both sides enjoyed the exchange and were interested in learning more, but the German side did not offer the American student much cultural information and did not answer many of her questions which made it difficult for her to advance her intercultural competence skills. Thus, even though the American student asked questions repeatedly, her partners often did not answer them and made it impossible for student E005 to gain cultural knowledge, come to deeper awareness, or practice her intercultural communication skills. The student sums up the main problem quite well in one of the answers on the post-survey when she says the following about the assigned discussion topics: “they were good topics, but it was hard to keep my partner talking about them. He would write one or two sentences and move on” (Student E005, post-survey).

This does not mean that the student does not possess intercultural competence or that she did not develop in certain areas thereof. However, the lack of information provided by her partners did not allow her to exhibit a development of intercultural competence in the e-mail exchange. The one-sidedness of the exchange is the main factor of the lack of traceable development of intercultural competence in this student’s exchange.

5.3.3.3. Case Study 3

Student E008, female, had a self-assessed developmental score of -.3, which most closely resembled the average development of -.2. The student's self-assessment of language decreased from 4.95 on the pre-survey to 4.45 on the post-survey. She also self-assessed her awareness slightly lower on the post-survey (5.38) than on the pre-survey (5.63). However, in the category knowledge, the student increased her self-assessment from 5.14 on the pre-survey to 5.57 on the post-survey. In the categories skills (5.8) and attitude (6) her self-assessment remained unchanged on pre- and post-survey.

The student had studied German for five semesters at college. She had never been to Germany, but had spent three months in Costa Rica before. In the e-mail exchange, student E008 was partnered with two male German students, student K004 and student K012. Survey answers are only available from student K004. Student E008 sent 21 e-mails to her partners. In total, she wrote 3224 words, 309 of which were in English. Thus she wrote a little bit more than the class average of 2995 words. On average, student E008 wrote 153 words per e-mail.

Table 21 *E-mails Sent between E008 and K004, K012*

American Student E008	German Student K004 and K012
Email 1: Jan 15	Response 1: Jan 19
Email 2: Jan 19	Response 2: Jan 25
Email 3: Jan 25 Email 4: Feb 8	Response 3: Feb 10
Email 5: Feb 10 Email 6: Feb 14	Response 4: Feb 17
Email 7: Feb 17	Response 5: Feb 22
Email 8: Feb 22 Email 9: Feb 27	Response 6: Mar 7
Email 10: Mar 7 Email 11: Mar 14 Email 12: Mar 20	Response 7: Mar 21
Email 13: Mar 21 Email 14: Mar 24	Response 8: Mar 29

Table 21 (Cont'd)

Email 15: Mar 29 Email 16: Mar 31 Email 17: Apr 7 Email 18: Apr 9	Response 9: Apr 11
Email 19: Apr 12	Response 10: Apr 12
Email 20: Apr 12 Email 21: Apr 17	

In all, her partners sent only ten e-mails to her. The e-mails contained 1484 words combined, which means that each e-mail was on average 148 words long, a similar length as the average e-mail by student E008. However, the number of e-mails written was much less and it means that in many weeks, the student received no e-mail from her partners. This was especially problematic at the end of the exchange, when student E008 sent four e-mails before receiving a reply. Due to the lack of response from her partners' side, student E008 could often only state her opinion on the assigned cultural topics, without having the opportunity to learn about the opinion of her partners let alone discuss their viewpoints.

The students' e-mails do not show a large development of intercultural competence, mainly because her partners responded infrequently and did not give student E008 a chance to practice and improve her intercultural communication skills. While the student had a very positive attitude about the exchange in the beginning of the semester, this attitude did not see a positive development mainly due to her partners' slow responses. In the early blog entries, student E008 expresses her enjoyment of the exchange and writes, for example: "Ich lerne viel von sie und sie lernen von mir (ich hoffe). Es macht viel spaß, an sie zu schreiben. Sie sind sehr nett. Der Email Austausch gefällt mir :)" (Studen E008, blog 1, February 6). Similarly, she writes in her next blog entry: "Der Austausch geht sehr gut. [K004] und [K012] schrieben mir eines

lange Email, und es handelt sich um das Schulesystem in Deutschland” (Student E008, blog 2, February 24). In both of these blogs her interest and enjoyment in the exchange can be seen.

However, in the later blog entries, student E008 more and more expresses her dissatisfaction with her partners’ slow responses. She writes, for example: “Ich habe diese Woche nichts von meinen Partnern bekommen. D-: Myn Grammateek mooss sur shlecht sine. WEIN!” (Student E008, blog 3, March 20). Here, though in a humorous way, student E008 thinks that her partners’ lack of response may be caused by her own linguistic problems. Later, she writes: “Ich hoffe, dass ich nichts schlecht gesagt habe. Sie schreiben an mir nicht mehr. :(” (Student E008, blog 5, April 3), and “Ummm ich habe nichts bekommen. Vielleicht sagte ich etwas schlecht? Ich weiß nicht, was ich hätte sagen können. Scheiße” (Student E008, blog 6, April 9). In these two entries, the student wonders if the lack of response could be caused by a cultural misunderstanding.

The blog entries from the later part of the semester show the student’s frustration about the lack of responses, but they also show her uncertainty. Student E008 is not sure why her partners do not respond to her, and she worries that she may have said something wrong, and even doubts her German skills. This explains her decrease in self-assessment of her language skills from pre- to post-survey. The uncertainty and frustration about her partners’ response pattern impact the student’s development of intercultural competence.

Student E008’s electronic exchange exhibits a development in the student’s attitude and awareness. While her first blog entries show a very positive attitude toward the exchange, her later e-mails attest to her dissatisfaction of certain aspects of the exchange. However, in her last blog entry the student explains that while she was very unhappy with the exchange for a while, she realizes that it may not always be easy to reply on time, and her disappointment ebbs away as

she exhibits a deeper understanding of the sometimes inevitable problems that may arise in intercultural (electronic) communication. Thus, her attitude has matured as she has gained awareness of potential problems of a cross-cultural exchange. In her blog, she writes: “Ich weiß, dass ich ein bisschen bissig über die Emails (oder die Mängel an)war. Aber ich dachte daran, und ich sagte, dass vielleicht sie eine Weile dauern, um die Emails zu schreiben. Und vielleicht hatten sie keine Weile zu dauern. :)” (Student E008, blog 8, April 17). In this entry, she admits that it may take a while to write e-mails, and that her partners perhaps did not have the time it can take for composing their answers. The understanding the student expresses in this blog, indicates that she has developed awareness of potential problems in intercultural communication. The fact that she continued to write to her partners and did not complain to them about their lack of response also attest to her flexibility, and attempt to use strategies to aid her communication.

The exchange of student E008 also shows that she develops knowledge of techniques to use to maximize her learning and her ability to use strategies to interact successfully with her German partners. For example, she writes: “Ich hatte eine Idee. Ich habe Skype, und wenn ihr euer Englischsprache verbessern möchten, könnt wir sprechen! Es würde Spaß machen. Möchtet ihr sprechen?” (Student E008, e-mail 10). By asking her partners whether they would like to communicate on Skype, the student shows her awareness of the necessity of practicing foreign language speaking skills, her willingness to practice these skills, and her knowledge of electronic tools to use to facilitate this practice.

Another way in which student E008’s electronic exchange exhibits her development of intercultural competence in the category of awareness can be seen in her discussion of Germany’s past. Her partners asked her what the US thinks of Germany, because they had seen a cartoon which depicted Germans as Nazis. Student E008’s answer demonstrates that she has

developed awareness of the difficulties of Germans of dealing with their past. Before she talked to her partners about the topic, she was unaware that Germans still felt at fault for the Holocaust. Through the exchange, however, she came to realize that many Germans worry how other nations see them because of their past. In her e-mail, she tries to explain that the German students should not try to find blame in themselves:

Ich hoffe, dass du (und alle Deutschen) keine Schuld von dem Zweiten Weltkrieg hast. Hier zeigen wir mit dem Finger auf keine Deutscher. Was in Zweitem Weltkrieg passiert ist, kann überall (irgendwo?) passieren. Es ist hier passiert! Wir hatten japanische Internierungslager während dem Krieg. Meine Großmutter wurde 1947 hier sterilisiert (Kastration für Frauen?), weil sie Schizophrenie hatte. Es heißt die Eugenik. Bin ich böse darüber? Ja. Aber ich zeige mit dem Finger auf niemand. Keine Schuld. [...]Wir denken an ihr als keine Nationalsozialisten. (e-mail 15)

In her blog entry, the student also reflects on this discussion with her partners, again expressing her astonishment at her partners' question. She writes: "Ich sagte, dass er keine Schuld darüber haben sollte, es ist in der Vergangenheit, niemand denkt an die Deutsche als Nazis, und vor allem was in Deutschland passiert hatte, konnte irgendwo passiert" (Student E008, blog 5, April 3). The fact that the student reflected on this topic in her blog as well, attests to the effect it had on her. Her statements show that she has developed awareness of the way Germans might feel about their own past, especially their difficulties of not blaming themselves.

The student's electronic exchange shows that her intercultural competence has developed in the area of knowledge. For example, student E008 chooses to write her third essay about soccer culture in Germany, and in this essay, she draws on what she learned from her partners. In her essay, she explains: "Ich habe ein bisschen über die deutsche Kultur im Austausch gelernt. Meine Partner haben gesagt, dass sie immer gern im Fernseher Fußball sehen, und während des Spieles, trinken sie Bier und essen Rostbratwurst. Sie spielen auch Fußball in kleinen Gruppen. Es zeigt mir, dass Fußball sehr wichtig ist, also ist Fußball einer Teil der deutscher Kultur"

(Studen E008, essay 3). In her essay, the student connects the history of German professional soccer with what she learned from her partners about contemporary soccer culture in Germany. She also answers the question of why soccer enjoys such popularity in Germany with the help of her partners' input. Her essay on soccer in Germany demonstrates her knowledge gain about this part of German culture.

In all, student E008 shows some development of intercultural competence in her e-mails, particularly in the areas of attitude/awareness, and knowledge. She exhibits knowledge gain in reference to German soccer culture, which can be seen in her class essay about the topic. She also exhibits development in awareness of how to conduct successful intercultural exchanges, and of potential problems especially in time management that may arise in cross-cultural communication.

5.3.3.4. Case Studies Compared

To summarize, the three case studies that were presented in this chapter show very different patterns of development of intercultural competence. Example one showed a very successful student who was able to develop her intercultural competence in a variety of areas. The virtual exchange had very positive effects on the student's development of skills to use specific strategies that aid her communication and avoid conflicts and misunderstandings, on her knowledge of techniques that she can employ to maximize her learning, on her awareness of cross-cultural and cross-lingual differences and her ability to draw comparisons between the two cultures, as well as on her general knowledge of specific target culture aspects. The student was able to develop in all these areas mainly because she was able to solve initial communication problems between her and the German partners by finding a way to make the correspondence easier for both sides. Due to her ability to find this solution, her partners were able to write her

more frequently and in fact both sides wrote over 4000 words altogether. The amount of information that was exchanged through these words enabled student E005 to develop her intercultural competence and to be positively affected by the exchange.

The other two case studies showed different developmental patterns. The main difference between the first and the other two case studies was the amount of information that was exchanged. Both student E008 and student E005 wrote more than the average American student at 3224 and 4279 words, respectively, but their German partners wrote much less to them. Student E008's partners wrote a total of 1484, and student E005's partner wrote 1637 words. Because students E008 and E005 received much less input than the first case study presented, it is understandable that they were not able to develop as much knowledge of German culture as student E018. Additionally, they did not have the same opportunities to become aware of differences across the two cultures and languages or to develop the skill to draw specific comparisons, because they were not given as much information about the target culture.

Nonetheless, both students did develop intercultural competence, albeit in fewer areas. Student E005, for example, was able to develop a degree of flexibility when offering to send separate e-mails to both partners, and she was also able to maintain a positive attitude throughout the exchange. This is no small feat when considering the lack of responses to her questions and the brevity of her partners' e-mails. The same is true for student E008 who also remained positive about the exchange and showed her willingness to communicate in spite of her partners' short responses. She was also able to come up with ways to improve the cross-cultural communication, even though in both cases the results were less effective than in the case of student E018. Additionally, student E008 was able to develop some awareness of cross-cultural

differences, and she was also able to improve her strategies for communicating successfully by attempting to engage her partners in other forms of communication.

From these three case studies it can be concluded that, in general, successful intercultural competence development could take place in instances where both sides of the exchange were equally invested in the intercultural communication. As could be seen in case study one, there were many positive effects of the virtual exchange on the student's development of intercultural competence. However, when one side of the exchange did not respond frequently, or did not give much input, the other side was unable to develop intercultural competence to the extent that they could have if they had been given more information and more opportunities for developing their strategies of intercultural communication. Nonetheless, in most cases the American students still employed a variety of strategies to try to maximize their learning, and they upheld a positive attitude about the exchange. This shows a positive effect of the virtual exchange on students' overall perception of the benefits of such exchanges.

5.4. Research Question 5

Research question 5 investigated the relationship between the number of words written and the linguistic development and self-assessed development of intercultural competence.

5.4.1. Relationship between Words Written and Linguistic Development

The first part of this research question investigated whether there was a relationship between the number of words written throughout the exchange and the development of syntactic complexity. The hypothesis was that there is a relationship between the development of syntactic complexity and the number of words written. It was assumed that students who write more might have more opportunities for pushed and modified output thereby showing a larger range of syntactic

complexity than those students who wrote less. In order to answer this research question, a bivariate, two-tailed correlation analysis was conducted.

In order to run the correlation analysis, a syntactic complexity development score was calculated. For research question one students' syntactic complexity (C) was measured at the beginning (C1) and at the end of the e-mail exchange (C2). Three kinds of syntactic complexity were analyzed: global complexity (GC = mean length of T-unit), complexity via subordination (CS = average subordination amount per T-unit), and subclausal complexity (SC = mean length of finite verb clauses). To obtain a development score, the syntactic complexity scores from each of these three types of syntactic complexity from the beginning of the exchange were subtracted from the respective syntactic complexity scores from the end of the e-mail exchange (GC2-GC1, CS2-CS1, SC2-SC1). The results were used as the three syntactic development scores for each student.

The following chart summarizes the development scores for the three types of syntactic complexity that were measured.

Table 22 *Summary of Developmental Scores for Syntactic Complexity*

Student	Development Scores Syntactic Complexity		
	Global Complexity	Complexity Via Subordination	Subclausal Complexity
E001	1.67	.27	.11
E002	-.90	.00	-.90
E003	.91	.32	-.77
E004	-.18	.29	-.63
E005	.79	.34	-.93
E006	1.75	.19	.38
E007	-.41	-.02	-.26
E008	-.16	-.02	-.05
E009	-.20	-.09	.35
E010	-.52	-.01	-.37
E011	1.09	.00	.96

Table 22 (Cont'd)

E012	1.15	.20	-.14
E013	1.05	.52	-1.59
E014	.66	.06	.18
E015	1.49	.09	.76
E016	2.06	.25	.31
E017	.76	.06	.31
E018	.47	.29	-1.04
E019	5.07	.39	1.47

On average, students' global complexity was higher by 0.87 on the post-survey as compared to the pre-survey (standard deviation: 1.32). The average progress of complexity via subordination was 0.17 (standard deviation: 0.17). In the area of subclausal complexity, students' showed an average difference of -0.1 (standard deviation 0.76). This means that there was no observable progress in this area.

The table below shows the development scores for the three types of syntactic complexity sorted from lowest to highest development. The chart illustrates the range of development scores that were present, especially in the area of global complexity. While some students did not show any progress, in fact showed more global complexity in their earlier writing, student E019's global complexity was higher by 5.07 at the end of the exchange, meaning that her T-units consisted of averagely 5 words more in her later e-mails.

Table 23 *Summary of Developmental Scores for Syntactic Complexity Sorted*

DEVELOPMENT SCORES SYNTACTIC COMPLEXITY					
Student	Global Complexity	Student	Subordination Complexity	Student	Subclausal Complexity
E002	-0.9	E009	-0.09	E013	-1.59
E010	-0.52	E007	-0.02	E018	-1.04
E007	-0.41	E008	-0.02	E005	-0.93
E009	-0.2	E010	-0.01	E002	-0.9
E004	-0.18	E002	0	E003	-0.77
E008	-0.16	E011	0	E004	-0.63
E018	0.47	E014	0.06	E010	-0.37
E014	0.66	E017	0.06	E007	-0.26
E017	0.76	E015	0.09	E012	-0.14
E005	0.79	E006	0.19	E008	-0.05
E003	0.91	E012	0.2	E001	0.11
E013	1.05	E016	0.25	E014	0.18
E011	1.09	E001	0.27	E016	0.31
E012	1.15	E004	0.29	E017	0.31
E015	1.49	E018	0.29	E009	0.35
E001	1.67	E003	0.32	E006	0.38
E006	1.75	E005	0.34	E015	0.76
E016	2.06	E019	0.39	E011	0.96
E019	5.07	E013	0.52	E019	1.47

The correlation analysis showed that there was a positive, non-significant relationship between the number of words written throughout the e-mail exchange and the development of global complexity, $r = .315$, $p = .188$. The effect size was medium. Similar results were revealed for the correlation between the number of words written and the development of complexity via subordination, $r = .366$, $p = .124$. Here, too, the effect size was medium. This indicates that as the number of words written increases, so do global complexity and complexity via subordination. However, only a very small effect size and thus a very small, non-significant relationship was revealed between the number of words written and the development of subclausal complexity, $r = .013$, $p = .959$. This indicates that there is no linear relationship between the number of words written and the development of subclausal complexity.

5.4.2. Relationship between Words Written and Intercultural Competence

The second part of the question investigated whether there was a relationship between the number of words that were written in the exchange and the self-assessed development of intercultural competence. It was assumed that students who write more and thus engage in more cross-cultural communication would be able to stronger develop their intercultural competence which might lead them to self-assess their intercultural competence more highly.

In order to answer this research question, an intercultural competence development score was also calculated. The self-assessed averages of intercultural competence from the pre-survey (IC1) were subtracted from the respective averages of the post-survey (IC2). A development score for intercultural competence was calculated for all factors together.

The development scores from the self-assessed intercultural competence and the number of words written throughout the exchange were correlated statistically to investigate whether there was a relationship between number of words written and self-assessed development of intercultural competence.

The following chart summarizes the development scores of the students' self-assessment of their intercultural competence. A negative development score indicates that a student assessed the components of intercultural competence (language, attitude, awareness, skills, knowledge) lower on the post-survey than on the pre-survey. A positive development score indicates that students' self-assessment of their intercultural competence was higher on the post-survey than on the pre-survey.

Table 24 *Summary of Developmental Scores for Intercultural Competence*

Student	Development IC
E001	.66
E002	-2.28
E003	.80
E004	.31
E005	-4.77
E006	.81
E007	-1.82
E008	-.32
E009	-1.34
E010	-1.54
E011	-.48
E012	2.27
E013	-1.01
E014	.85
E015	-1.98
E016	2.31
E017	.81
E018	2.61
E019	.33

The correlation analysis revealed a significant, positive relationship between the number of words written throughout the exchange and the overall self-assessed development of intercultural competence, $r = .529$, $p = .020$. This shows a large effect size, which indicates a strong relationship between the number written to the exchange partner and the self-assessed development of intercultural competence. This indicates that the more students wrote throughout the exchange the higher they assessed their overall intercultural competence. One can conclude that those students who used the virtual exchange to write a lot to their partners also felt more confident about their own intercultural competence.

5.5. Summary of Research Findings

The previous chapter has presented the results to the research questions which guided this dissertation. The results have demonstrated that students wrote with significantly more syntactic

complexity in the e-mails toward the end of the exchange than in those at the beginning. It remained unclear if this can be regarded as a development of syntactic complexity, or whether other factors impacted the higher use of syntactic complexity in the later e-mails, such as the stronger familiarity with the exchange, or the specific discussion topics.

It has further been shown that students were highly interested in learning about the target culture both before and after the exchange. That there was no statistical change in this interest in cultural learning is most likely to be explained by the high initial student interest. Additionally, the findings showed that students self-assessed their intercultural competence highly before and after the exchange. The qualitative analysis of the different data sources revealed several interesting patterns in the development of intercultural competence. For example, students appeared to be more successful in developing intercultural competence if they were able to establish a personal connection to their exchange partner. This also impacted the overall number of words that were exchanged between the partners, which in turn impacted the students' use of syntactic complexity.

Additionally, many students showed a development in the area of awareness of cross-cultural differences, as well as knowledge of the target culture. Many students showed a great interest in getting to know the everyday life of their partner. Interestingly, the majority of students maintained a positive attitude toward the exchange throughout the project even when communication patterns were infrequent.

The reflective blogs appeared to play a major role in this and were seen to contribute to the students' development of intercultural competence as a venue of dealing with frustrations and concerns. Another factor impacting the students' development of intercultural competence appeared to be the quality (sometimes related to the quantity) of the discussions. While some

students had limited discussions of the assigned topics, others discussed them in great detail. The general pattern revealed that more positive developments of intercultural competence could be observed when students engaged in more thorough discussions.

Last but not least, the findings showed a positive, significant relationship between the number of words students wrote and their self-assessment of intercultural competence, and also a positive relationship between the number of words written and the progress in global and subordination complexity.

CHAPTER 6

CONCLUSION

6. Conclusion

In the previous chapter I have presented the results to the research questions that have guided this dissertation. I have shown the effects of the virtual exchange on students' interest in cultural learning, their use of syntactic complexity, their self-assessment of intercultural competence and their development of intercultural competence. I have drawn on a variety of data sources and combined both quantitative and qualitative analyses to answer the research questions. In the following section I will summarize the study, indicate the major limitations, outline the importance of the study and offer suggestions for further research. Additionally, I will present a brief curricular model which incorporates virtual exchanges at all level of the undergraduate foreign language curriculum. The following chart is a brief summary of the research questions that were investigated in this study, the data sources that were used for their analysis, the analysis methods and the results.

Table 25 *Summary of Results*

Research Question	Data Sources	Analysis & Participants Used for Analysis	Results
What effect does a semester-long tandem e-mail partnership with native speakers have on written language skills of language learners?	<i>E-mails Blogs Essays</i>	Dependent t-test of syntactic complexity scores American Ss	<i>- statistically significant increase in use of global and subordination complexity in last 25% of students' e-mails</i>

Table 25 (Cont'd)

What interest do American college students studying German as a foreign language have in learning about German culture and what effect does a semester-long e-mail exchange with native speakers have on this interest in cultural learning?	<i>Pre- and Post-Survey Part B</i>	Repeated measures ANOVA American Ss German Ss	- high interest in cultural learning both before and after the exchange - no statistically significant changes
What effect does a semester-long e-mail exchange with native speakers have on the way in which language learners self-assess their intercultural competence?	<i>Pre- and Post-Survey Part C</i>	Repeated measures ANOVA American Ss German Ss	- high self-assessment of IC before and after exchange - slight increase in average self-assessments of skills and knowledge (US class), and skills, knowledge, awareness, language (German class) - no statistically significant effects
How is intercultural competence displayed and developed through a semester-long e-mail exchange with native speakers?	<i>Pre- and Post-Survey Part A, D E-mails Blogs Essays</i>	Case study analysis, qualitative analysis of developmental patterns American Ss	- developmental patterns of IC were traceable through the different data sources - students were able to develop their IC in various aspects in domains awareness, attitude, skills, and knowledge
Is there a relationship between the # of words written throughout the exchange and the progress in use of syntactic complexity and self-assessed intercultural competence?	<i>Pre- and Post-Survey Part C E-mails</i>	Bi-variate correlation analysis American Ss	- there was a significant, positive relationship between the number of words written and the self-assessment of IC and a positive, non-significant relationship between the number of words written and the development in global and subordination complexity

6.1. Summary of Results

This dissertation explored the multifarious effects of a combination of computer-mediated communication tools in a virtual exchange between American college students in a third-year German course and German high school students in an advanced eleventh-grade English class. The American students were the focal group of the investigation. The cross-cultural, cross-lingual virtual exchange took place over the course of twelve weeks. The exchange consisted of diverse components allowing students to utilize synchronous (videoconferences), asynchronous (e-mails), as well as reflective asynchronous (blogs) electronic tools, while simultaneously giving students the opportunity to benefit from one-on-one (e-mails) and group-to-group (videoconferences) communication. While the e-mail exchange itself was the core part of the cross-cultural partnership, the other electronic communication tools were integral to the study as they allowed not only for the collection of different data sets which in turn supported triangulation of the data but they also provided opportunities for cultural and linguistic reflection and practice. Giving students the opportunity to reflect on their experience in cross-cultural exchanges has been shown to be beneficial for intercultural competence development in this as well as previous studies (Elola & Oskoz, 2008; Hourigan & Murray, 2010; Yang, 2009).

To allow for triangulation, different kinds of data were employed for the analysis of the results of this study. This data included: (1) pre- and post-surveys; (2) students' electronic records of the exchange: e-mail transcripts (between eleven and twenty-six per student), blog entries (between three and six per American student); (3) students' essays (three per American student, written throughout the semester). Indeed, previous studies have suggested that a combination of computer-mediated communication tools may be best suited for developing intercultural competence and language skills (O'Dowd, 2006a).

The pre- and post-surveys consisted of three and four parts respectively: Part A contained open-ended background questions; Part B contained Likert-Scale items for the self-assessment of interest in cultural learning, importance of culture in the FL classroom, and suitability of online communication for foreign language learning; Part C consisted of the self-assessment of intercultural competence which was split up in the five categories *language*, *attitude*, *awareness*, *skills*, and *knowledge*. The survey was adapted from Fantini's (1997a) YOGA model, designed as a self-evaluation guide for intercultural competence; Part D consisted of open-ended questions on the post-survey evaluating the exchange and its effects. Part B and C of the surveys consisted of Likert-Scale items ranging from 1-6 (1 = strongly disagree, 6 = strongly agree) and they were statistically analyzed to verify their reliability. The data was analyzed both qualitatively (content analysis) as well as quantitatively (dependent *t*-tests, repeated measures ANOVA, bivariate correlation analysis).

The analysis of part B of the survey investigated: (a) students' interest in cultural learning, (b) the importance students find in learning about culture, (c) students' evaluation of the suitability of online communication for foreign language and cultural learning, as well as the effects of the virtual exchange on these three factors. The results revealed that both groups of students (the American class as well as the German class) were highly interested in learning about culture in the foreign language classroom, both before and after participation in the electronic cross-cultural exchange. There were no statistically significant differences between pre-and post-survey answers, indicating that students' interest did not change significantly over time. This may, in part, be explained by the students' high initial interest (ceiling effect). Because both classes were equally interested in learning about the target cultures, problems

arising due to different levels of interest as discussed by O'Rourke (2007) did not appear to be a central issue in this exchange.

Furthermore, the analysis also revealed that the students believed in the importance of learning about the target culture in foreign language instruction. While there were no significant differences between pre- and post-survey answers, the American students deemed cultural learning to be significantly more important than the German students. This may be explained by the different role of foreign language instruction in the two countries. In Germany, foreign languages and cultures play a much larger role and students become acquainted with other languages and cultures at an earlier age and throughout their education. As could be seen in some of the open-ended answers, some of the German students believed that culture had been over-emphasized in their education.

Lastly, the analysis also showed that both groups of students found online communication tools to be highly effective for language and culture learning. Again, statistically there were no significant changes over time. Students believed online communication is especially useful for learning everyday language, phrases, colloquialisms, and language that is not normally taught in the language classroom.

Part C of the survey (the self-assessment of intercultural competence) was used to investigate students' self-assessment of intercultural competence. The statistical analysis revealed no statistically significant effects of the virtual exchange on students' self-assessment of the variables language, awareness, attitude, knowledge and skills. The test showed statistically significant differences between the classes for the variable knowledge. This indicates that the American students perceived their knowledge of the target culture to be significantly higher than

the German students. This finding is surprising considering that the German students had been studying about the target culture for much longer than most of the American students.

While the statistical differences in the self-assessment before and after the exchange were non-significant, the US class self-assessed the factors language, skills, and knowledge slightly higher on the post-survey than on the pre-survey, and the German students' self-assessment increased in the areas language, awareness, skills, and knowledge. Furthermore, the analysis of open-ended feedback questions of part D of the survey showed that 50% of the American students and 68% of the German students believed that their intercultural competence had increased because of the exchange. This indicates that the majority of the students perceived the virtual exchange to have positively impacted their intercultural competence.

The American students' e-mails were analyzed to investigate the use of syntactic complexity at the beginning and end of the virtual exchange. The analysis of syntactic complexity was subdivided into the analysis of global complexity, complexity via subordination and subclausal complexity as suggested by Norris and Ortega (2009). The results revealed that there was a statistically significant increase in use of global and subordination complexity when comparing the first 25% of students' e-mails to the last 25% of students' e-mails. That means, students wrote with more global and subordination complexity at the end of the exchange. There was no statistically significant change in the use of subclausal complexity. The latter finding may be explained by the general notion that subclausal complexity is a better indicator of development at the advanced not the intermediate language level (Norris & Ortega, 2009).

The e-mails of the American students were further analyzed to investigate patterns of development of intercultural competence in line with students' self-assessments. In the area of attitude, the analysis revealed that students showed a very positive attitude toward and

throughout the exchange. Even when problems arose or communication was slow, the majority of students had a positive attitude and remained interested and willing to participate in the exchange. Additionally, many students portrayed an increasing willingness to communicate as the exchange progressed, which was not reflected in their self-assessments. This may be explained by the original high self-assessment in this domain. Furthermore, many students not only showed specific interest in various aspects of German culture, but were equally interested in getting to know their exchange partner on a personal level.

In the area of awareness, the analysis showed that the majority of students were able to increase their awareness of cross-cultural and/or cross-lingual differences, which was not reflected in their own self-assessments. There was also a pattern of decreased awareness of how their exchange partner might view them, which may reflect a more realistic assessment of the difficulties of getting to know one another within the context of a one-semester exchange. There were two main findings in the area of skills. Firstly, many students developed flexibility in their interaction with their German partners, while the exchanges of those students who did not were characterized by infrequent response patterns and a lack of solutions for that problem. Secondly, the majority of students developed a variety of skills for improving their learning of German language and culture. The most successful skill employed appeared to be that of establishing a personal connection to their partner.

In the area of knowledge, students demonstrated an increase in knowledge of German culture and language, and in line with the aforementioned finding an increase in knowledge of applicable strategies for the enhancement of learning. The extent of the cultural knowledge gain different in each partnership and depended largely on the amount and depth of the e-mails that were exchanged.

The development of intercultural competence was also traced in the e-mails, blogs and essays of three case study students. The case studies were the three students whose self-assessed intercultural competence development showed the highest increase, the most average increase, and the lowest or no increase at all. This analysis revealed that students were able to develop certain aspects of intercultural competence, such as the skill to avoid offending their partner and the strategies to improve the communication by resolving conflicts. The blogs appeared to be a good venue for students to reflect on the exchange and learn from this reflection which enhanced the communication.

A correlation analysis revealed that there was a positive (non-significant) relationship between the number of words that were written throughout the exchange and the development of global complexity and complexity via subordination. This shows that the more students wrote throughout the exchange the higher was the development of their syntactic complexity. Progress in the use of syntactic complexity can be inferred from these results. This supports findings suggesting that increased writing practice increases students' syntactic complexity skills (Ortega, forthcoming 2012).

Last but not least, the analysis also revealed a significant, highly positive relationship between the number of words written throughout the exchange and the self-assessed development of intercultural competence. This indicates that students who wrote more appeared to rate their intercultural competence higher, which could be impacted by the fact that students who wrote more seemed to be more motivated and have higher degrees of positive attitude toward the exchange and thus the overall learning experience.

Additional findings of the study revealed that the two classes enjoyed the assigned discussion topics to varying degrees. The American students enjoyed discussing the topic of

German culture in general the most, followed by friends, free time, family, multiculturalism, identity, recent history, sports, violence, and education. In all, the American students were very satisfied with the assigned topics. For additional discussion topics students suggested the following: media/films, entertainment, music, art, politics, travel, and other languages or language in general. Sports and free time were there highest ranked discussion topics for the German students, while identity and recent history were their least favorite discussion topics. Friends, family, and free time were topics highly ranked by both classes. Violence, recent history, and education were topics that were ranked lower in both classes. Post-survey comments of the German students revealed a high degree of satisfaction with the chosen discussion topics. Students commented that the topics were well chosen and represented a good range of topics and that they enjoyed the topics because there was still room to incorporate other topics of interest.

6.2. Discussion and Conclusion

6.2.1. Syntactic Complexity

This study confirmed the hypothesis that students can increase their use of syntactic complexity through participation in online communication tasks. To be more exact, students showed that they were able to write with more global complexity and subordination complexity at the end of the virtual exchange. This finding supports results of other studies about the general increase of language skills as a result of computer-mediated communication (Blake, 2008; Kötter, 2002) and the higher use of subordination in electronic discussion (Warschauer, 1996a).

Other studies have investigated the effects of CMC on different language skills. While these studies have, among other things, revealed the suitability of computer-mediated communication for the development of pragmatic competence (Appel, 1999; Belz & Kinginger, 2003; Chun, 2011), textual competence (Appel, 1999), and vocabulary enrichment (Perez, 2003),

this study has shown that computer-mediated communication, specifically tandem e-mail exchanges, may be a tool to improve students' syntactic complexity or to allow students to demonstrate their abilities in this area. The results supported Ortega's (forthcoming 2012) suggestion that increased writing practice may lead to the improvement of syntactic complexity. Additionally, the fact that students' subclausal complexity did not improve also underlines the notion that this feature of written foreign language production may be more indicative of development at the advanced level (Norris & Ortega, 2009).

The increase in use of syntactic complexity can be understood in the context of pushed-output theory (Swain, 1995), which suggests that if students become or are made aware of a gap in their linguistic knowledge (for example through clarification requests from their exchange partner) it may push them to modify their output, which in turn may trigger new cognitive processing modes that can lead to second language acquisition. In this exchange, it was revealed that partnerships that are characterized by openness and a level of comfort are more supportive of students using more syntactic complexity. This may be the case because students in these partnerships may feel more comfortable to use the hypothesis testing function of pushed-output theory, and try to use new structures to modify their output. This suggests that students need to be given the opportunity to develop a level of comfort with their exchange partner so that they may be enabled to experiment with different linguistic structures, thereby modifying their own output and furthering their language acquisition. A certain length of the exchange may be required to give students enough time to establish a level of familiarity with their exchange partner. Carefully selecting the length of a CMC project is also important in order to give students the opportunity to make noticeable developments (Green & Youngs, 2001; O'Dowd, 2006b; Woodin, 1997). While it has been suggested that short CMC projects might not allow

students to develop critical cultural awareness (O'Dowd, 2006b), the findings of this dissertation suggest that this may be the case also for language skills, because students need time to get comfortable with their exchange partner.

It was a consideration that the improvement in syntactic complexity could be impacted by the topics discussed in the first and last 25% of the e-mails, which were the basis of the analysis. Perhaps the later e-mail topics lent themselves more to the use of subordination than the early e-mail topics. Ortega (forthcoming 2012) suggests that this reason should be given attention, especially when the samples that are compared have been written in short time frames. Nonetheless, the consideration that task complexity may have impacted the higher use of syntactic complexity in later e-mails is not confirmed by previous studies (Kuiken, Mos, & Vedder, 2005; Rahimpour & Hosseini, 2010) which suggested that task complexity did not impact the complexity in writing produced by foreign language learners. However, not task complexity, but familiarity with the exchange partner, appeared to be a factor impacting the use of syntactic complexity and the willingness to push one's own output in this virtual exchange. It is possible that the syntactic complexity was higher at the end of the exchange because the students were able to establish a familiarity to their exchange partner by that time. Through the establishment of an open relationship, partners were more likely to ask questions and request clarifications, both of which is supportive of pushing students to modify their output and use more syntactic complexity (Swain, 1995).

In order to truly evaluate whether students improved their syntactic complexity or merely exhibited more syntactic complexity at the end of the exchange, it would be useful to include a longer initial and final writing sample in which students would be prompted to discuss specific topics that would require or encourage the use of complex syntactic structures. That way it would

be possible to ascertain whether students had or had not improved their skills in syntactic complexity, even if these skills were not exhibited in the actual e-mail exchange. Additionally, a longer duration of the exchange would also be useful and support the analysis of development of syntactic complexity.

Additionally, while students showed an increase in use of syntactic complexity throughout the exchange it cannot be concluded that this potential development was an effect of the virtual exchange alone. While their partners' feedback may have contributed to students pushed output, other factors, including other classes taken, and independent practice outside of the exchange, need to be taken into consideration as they most likely impacted the students' overall linguistic development. These extraneous variables need to be controlled better in future studies to allow for conclusions on the suitability of virtual exchanges to foster the development of syntactic complexity in students' writing.

Interestingly, the dissertation revealed a relationship between the use of syntactic complexity and the number of words written by the students in the exchange. This suggests that the more writing practice students receive, the better they are able to experiment with and improve their linguistic abilities. This may indicate that increased writing practice is not only useful for enhancing fluency, as suggested by Swain (1995), but also for enhancing complexity in students' writing. The e-mail exchange in this study gave students ample opportunity for communicating in the target language and practicing its use which positively correlated to their use of syntactic complexity.

6.2.2. Interest in Cultural Learning

While other studies have reported an increase in students' learning interests and motivation through different computer-mediated communication (Donaldson & Kötter, 1999; Sun, 2009),

this could not be confirmed by this study. Students' interest in cultural learning did not change significantly. While this result of the analysis is in contrast to previous findings suggesting that computer-mediated communication increases students' interest in (cultural) learning (Dooley, 2008), the possibility of a ceiling effect must be considered; students' initial interest in cultural learning was very high which makes the measurability of change difficult. The hypothesis that interest in learning about German culture increases due to the semester-long virtual exchange could not be confirmed.

In future studies, a more nuanced assessment of students' interest both before and after the exchange should be considered in order to make possible changes measurable. More open-ended questions specifically targeted at students' interests in addition to a finer assessment scale could help to better evaluate the effects of the virtual exchange on students' interest in cultural learning. Nonetheless, the study showed that both groups of students were highly interested in learning about the target culture. Additionally, a positive effect of the exchange was that students' interest in learning about the target culture did not decrease, but that students remained highly interested and motivated to learn more about the target culture and language. This confirms Cohen's (2005) suggestion that an e-mail partnership may be a successful tool for motivating students to learn more about the target language and culture.

The fact that student interest in learning more about German culture and language remained high as an effect of the virtual exchange suggests that the incorporation of a virtual exchange into foreign language classes is a good tool for maintaining students' learning interests. After conducting a study on students' motivations for learning a foreign language (Spanish), Ely (1986) suggested that in order to increase students' interest in learning about the target culture "various aspects of that culture can be presented in an appropriately sensitive, sophisticated,

informative, and attractive manner” (p. 32). Similarly, two of the ten recommendations made by Dörnyei and Csizér (1998) about how to best motivate learners are making the language class interesting and promoting learner autonomy. The virtual exchange conducted in this study presents an example of how language classes can be made more interesting while at the same fostering student autonomy through the tandem e-mail partnerships. Additionally, the information students received through the virtual exchange about German culture may be a good example of how culture can be presented in an attractive way to maintain high levels of interest in learning more about target culture.

In the students’ assessment of which cultural topics they enjoyed discussing most with their tandem partner, personal topics were given the highest ranking. This finding was already outlined in an earlier study on students’ cultural interests in German classes (Dechert & Kastner, 1989), where ordinary daily life issues such as family and student life were rated highest. This suggests that there has been little change in aspects of German culture students are especially interested in learning. In order to maintain or increase students’ interest in learning about target culture, those aspects of the target culture that students are most excited to learn about should be emphasized in the foreign language classroom. The virtual exchange conducted for this dissertation is one possible way of giving students the opportunity to enhance their learning of everyday aspects of German culture and thus enable them to learn more about those aspects of the target culture that interests many of them most.

6.2.3. Intercultural Competence

The hypothesis that students’ self-assessment of intercultural competence would increase due to the semester-long exchange with members of the target culture could in part be confirmed. The statistical analysis did not reveal any significant effects of the exchange on students’ self-

assessment of their intercultural competence. However, the students' self-assessment did increase in the areas of language, skills, and knowledge (US class) and language, awareness, skills, and knowledge (German class). Additionally, the open-ended feedback questions revealed that the majority of students perceived themselves to have improved their intercultural competence. This indicates that in spite of the non-significant statistical results, most of the students perceived a positive impact of the cross-cultural communication project on their intercultural competence. Thus the hypothesis can be confirmed, although not statistically. One of the reasons for the lack of statistical significance again may be the high initial self-assessment which leaves little room for improvement.

Additionally, the demonstration of intercultural competence in the e-mails, blogs and essays confirmed that many students were able to develop in several areas of intercultural competence. Hence, the notion that computer-mediated communication can aid in students' development of intercultural competence is supported by this study and corresponds to other studies which have outlined positive effects of virtual exchanges on intercultural competence (Appel & Mullen, 2002; Basharina, 2009; Belz, 2003, 2007a; Belz & Müller-Hartmann, 2002, 2003; Chun, 2011; Dodd, 2001; Gonglewski, et al., 2001; Kern, 2006; Liaw, 2006; Müller-Hartmann, 2006; O'Dowd, 2003, 2006b; Spodark, 2001; Thorne, 2003; Ware & Kramsch, 2005; Woodin, 2001).

The hypothesis of finding developmental patterns of intercultural competence in the students' data could also be confirmed as it was possible to trace the development of intercultural competence in the e-mail transcripts, reflective blogs, and essays. The analysis revealed that students developed in a variety of ways in the domains of attitudes, awareness, skills, and knowledge, the factors which have been outlined as the key components of intercultural

competence (in addition to language) by Fantini (2000). By looking at the different data available for the students it was possible to see how certain aspects of intercultural competence developed. This confirms other studies which suggested that intercultural competence can best be traced through a combination of data (Deardorff, 2006b; Sinicrope, et al., 2007). Similar to other studies, the present study revealed that for many students the establishment of a personal relationship to their exchange partner was a priority and strategy that helped them increase their learning (Stickler & Emke, 2011).

The reflective blogs played a central role in the tracing of the development of intercultural competence. In the blogs, students were able to discuss their exchange experience freely and without worrying of offending their partners, as the blogs were only read by the US class. This allowed students to share their frustrations, concerns, and questions, as well as their joys and excitements with their peers and the students could help each other and understand problems together. For many students, the ability to deal with their frustrations in this venue allowed them to interact more successfully in their communication with their German partners. The blogs were an important tool for students to develop and maintain a successful e-mail exchange. In certain cases, students' discussions in the blogs could be seen to contribute to the development of specific aspects of intercultural competence in the e-mail exchange, such as the awareness of strategies for resolving conflicts. Students developed in a variety of areas of intercultural competence, including their increase in awareness of cross-cultural differences. Students also gained a lot of cultural knowledge. The suitability of e-mail exchanges for fostering students' knowledge of the target culture has also been confirmed in a dissertation by Leh (1997).

The tracing of specific patterns of intercultural competence development for the separate components of the construct is unique to this study and allows an insight into the kinds of competencies students can and do demonstrate and develop in a virtual exchange. Taken together, they confirm that students are able to exhibit intercultural competence in a variety of ways and are able to refine and develop it further throughout the virtual exchange.

Concerns voiced by some researchers that e-mail is not a suitable communication tool for student-student interaction (Kötter, 2002; Thorne, 2003) could not be confirmed in this study. Similar to a study conducted by Leh (1997), students explained in informal questioning throughout the exchange that they preferred e-mail as communication tool in the present study. However, they also enjoyed the opportunity to talk informally with their partners on Facebook or Skype. They also highlighted their enjoyment of the videoconferences in open-ended feedback questions and even expressed a strong desire to participate in more videoconference sessions. The fact that there was a surge of e-mails written right after the first and second e-mail conference suggests that having the opportunity to see their partners face-to-face was a motivating factor for many students. This is in line with O'Dowd's (2006b) finding about the engaging qualities of videoconferences and Lee's (2007b) conclusion that videoconferences are enjoyed by students.

Additionally, it was revealed that students who produce more writing are more likely to develop their intercultural competence and syntactic complexity. It can therefore be suggested that a virtual exchange should include a length minimum in terms of student output to give students the opportunity to enhance their competencies.

Given the results of the study, virtual exchanges appear to have multiple effects on students' language skills and intercultural competence. These types of electronic exchanges can

support the use and potentially development of students' syntactic complexity in their foreign language writing as well as the development of their intercultural competence. Moreover, virtual exchanges have been shown to increase students' perception of their own intercultural competence as the majority of students believed that their intercultural competence had improved due to the exchange. Thus the exchanges can have a positive impact on students' confidence about their skills of intercultural communication.

The study has also shown that virtual exchanges can be a good tool for tracing students' intercultural competence development as well as the demonstration of their intercultural competence especially when multiple sources of student output are considered together. As such, virtual exchanges could also be used as an assessment tool for intercultural competence. The students did not increase their interest in learning about culture, but this may be because in both the third-year German class in the US and the advanced English class in Germany the majority of students enrolled already possessed a high interest in cultural learning, particularly because these classes were not mandatory for them and thus attest to their interest in the subject matter.

Additionally, the students' high interest in cultural learning and their belief in the effectiveness of online communication for their language development and intercultural competence combined with the promising results of the study in regard to the development of syntactic complexity and intercultural competence support the use of computer-mediated communication tools and virtual exchanges in foreign language instruction. This rich set of tools enables instructors to combine the practice of language skills, with the development of intercultural competence, and by bringing students in contact with members of the target community, culture can be brought into context allowing students to gain insight while learning first-hand from members of the respective culture.

The results of this study suggest that virtual exchanges may be a way to combine the necessity of students developing translingual as well as transcultural competence (MLA Ad Hoc Committee on Foreign Languages, 2007). Additionally, the findings suggest that virtual exchanges can support the National Standards for Foreign Language Learning (1999) by helping students gain “the ability to understand and to be understood in the languages of the worldwide neighborhood” (p. 11) as students in this exchange demonstrated an increase in strategies for communicating successfully cross-culturally. Additionally, the study has shown that through virtual exchanges students “are given ample opportunities to explore, develop, and use communication strategies, learning strategies, critical thinking skills, and skills in technology, as well as the appropriate elements of the language system and culture” (p. 32), which is put forward by the National Standards for Foreign Language Learning as broad objectives of foreign language education. Especially virtual exchanges that combine different communication tools such as asynchronous, synchronous, and reflective tools allow students to develop their skills in different areas of language and culture competence and can be a good means to connecting culture and language learning and achieving important foreign language learning objectives.

6.3. Limitations of the Study

The main limitation of this study is its generalizability. Due to a relatively small sample size of only 19 American students as the focal group, the results cannot easily be generalized. Nonetheless, conducting the virtual exchange with two entire classes allows for some generalization as there is bound to be some difference between the different students.

Additionally, the US class consisted of a very diverse student body with different ethnicities, first languages spoken, varying amounts of time spent abroad, different foreign languages spoken, and different German classes taken prior to the exchange. Therefore, the

subjects in the study presented a diverse sample. However, especially for the statistical analyses, a larger sample size is needed to allow for a stronger generalization of the results. The results from this small sample showed different effects of virtual exchanges on language skills and intercultural competence of language learners but a larger sample as well as control group would help to validate the results.

The lack of a strong control group is an additional limitation which impedes generalization of the results. Without a control group it is impossible to attribute specific developments to the participation in the exchange alone. Because there was no control group available, it is difficult to say whether the other classes would have given the students the same amount of writing practice which would result in a similar increase in syntactic complexity. A control group would help to understand which of the effects seen in this study can be attributed to participation in the virtual exchange. In all, other variables need to be controlled better in a future study to verify the effects of virtual exchanges on students' linguistic and cultural competencies.

Another limitation has to do with the different requirements in terms of the virtual exchange of the German and US class. While the US class was required to participate in the exchange as part of their classwork and was graded for all components on a completion/non-completion basis, the German students participated voluntarily in the exchange and were not graded on their participation. While the voluntary participation attests to the students' high interest in the exchange and in learning more target language and culture, the non-mandatory aspect seemed to impact some of the students' commitment to the exchange. This problem also emerged in the study by Leh (1997) who conducted an e-mail exchange with different requirements for the US and Mexican students. Because of the different requirements, many

German students did not devote as much time to the exchange as was expected of the American students which meant that the American students did not always get a response in a timely manner. This was a problem in terms of student satisfaction and motivation, learning outcomes, and study results. If both classes had been required to write the same number of e-mails with the same grading criteria, the issue of lack of responses could have perhaps been avoided and different patterns of development of intercultural competence might have emerged, especially in those partnerships where infrequent correspondence impeded the students' opportunities for learning.

The self-assessment survey adapted by Fantini (1997a) was useful in exploring the students' own perceptions of their intercultural competence before and after the exchange. However, the lack of objective assessments of students' intercultural competence both before and after the exchange is another limitation. Had the level of students' intercultural competence before the exchange been established, a more nuanced tracing of the students' development could have revealed deeper insights into the effects of the exchange on students' intercultural competence development.

6.4. Contributions of the Study

With this study, I aimed to contribute to ongoing research about the suitability of virtual exchanges to foster language skills and intercultural competence in the foreign language classroom. The study is original in its combination of different computer-mediated communication tools and its blending of quantitative and qualitative methods. While studies have investigated the effects of e-mail (Aitsiselmi, 1999; Appel, 1999; Appel & Mullen, 2002; Gonglewski, et al., 2001; Greenfield, 2003; Johnston, 2008; Kern, 1996; C. Kim, 2008; Little, et al., 1999; O'Dowd, 2003, 2006b; Taki & Ramazani, 2011; Ushioda, 2000; Vogt, 2006), blogs

(Compernelle & Abraham, 2009; Elola & Oskoz, 2008; Hourigan & Murray, 2010; Negueruela-Azarola, 2009; Yang, 2009), and videoconferences (French, 2008; Hampel & Baber, 2003; Kinginger, 1998; H. J. Lee, 2009; L. Lee, 2007a, 2007b; Lim & Freed, 2009; O'Dowd, 2006b; Sanders, 1997), few studies have investigated a combination of asynchronous, synchronous, and reflective computer-mediated communication tools. The present study has shown that the combination of different computer-mediated communication tools can have specific advantages. For example, the combination of blogs with an e-mail exchange can give students the opportunity to deal with the experiences from their individual e-mail partnerships in a peer environment which can help the students react more appropriately in their e-mails. Additionally, the study has shown that incorporating videoconferences can help students become more excited about their e-mail exchange. Many students sent e-mails to their partners right after the videoconferences and expressed their enjoyment of the conference asked follow up questions to things that were discussed. The videoconferences were also a good addition to the e-mail exchange because students were able to see each other face-to-face which helped to create a more personal exchange in most cases. This effect of the combination of videoconferences and e-mail was also suggested by O'Dowd (2006a).

Additionally, studies have focused on culture and intercultural competence (Abrams, 2003; Ahern, 2008; Belz & Kinginger, 2002; González-Bueno & Pérez, 2000; Ware & Canado, 2007; Warschauer, 1996a) or on the development of language skills through computer-mediated communication (Aitsiselmi, 1999; Belz & Kinginger, 2002, 2003; Brammerts, 1996b; Donaldson & Kötter, 1999; Dooly, 2008b; Pellettieri, 2000; Warschauer, 2000; Yates, 1996), but have rarely looked at the development of both linguistic and intercultural skills in one study.

This study has combined both the analysis of linguistic and intercultural developments as well as the use of asynchronous, synchronous and reflective tools. Because of this, data was triangulated and through the combination of quantitative and qualitative analysis measures, a thorough analysis of the effects of a cross-cultural, cross-lingual exchange could be conducted and the results are more multifaceted than in many other studies.

This dissertation has used a modified version of Fantini's (1997a) self-assessment form of intercultural competence and has shown that the statements used in this survey apply well to the context of an electronic exchange. Thus the study suggests that this survey can be a tool for instructors and students to self-assess and other-assess students' skills and serve as an assessment guideline throughout intercultural education. In contrast to the widespread use of Byram's (1997) model in many studies (Belz, 2007a; Dooly, et al., 2008; Hu, 2008; Kramer, 2008; O'Dowd, 2006a, 2006b; Sercu, 2004; Vogt, 2006; Wagner, 2008), this dissertation suggests an alternative model that appears to be well suited for use in foreign language contexts. The self-assessment survey from Fantini (1997a) allows instructors to focus on those levels of intercultural competence that fit the context of the intercultural experiences their students are exposed to according to the different levels outlined in the model. The statements are less specific and detailed and can be applied to an electronic exchange, as has been seen in this study. Additionally, Byram's (1997) assumption that all students are or will be studying abroad, which does not apply to all foreign language education contexts, can be avoided by using Fantini's (1997a) model.

The study implies the suitability of pushed output hypothesis in line with sociocultural theory in general as a framework for the analysis of virtual exchanges. Through the lens of pushed output hypothesis (Swain, 1995), students' output in a cross-cultural e-mail exchange can

be understood better and the hypothesis helps to find reasons for linguistic changes in students' writings or lack thereof. As pushed output hypothesis claims, output may have a part in their second language acquisition. Indeed, in this study it could be seen that students who were pushed to modify their output were able to produce more syntactically complex structures. The importance of language production is emphasized by sociocultural theory (Swain, 2005) and student output has been shown in this study to play a role in students' acquisition of new structures, specifically their use of syntactic complexity.

As emphasized by many scholars (Blake, 2008; Gläsman, 2004; Thorne, 2006; Warschauer, 1995), online communication tools offer many benefits for foreign language education. The present study gives instructors and researchers an idea of the potential benefits of a virtual cross-cultural, cross-lingual exchange which allows learners to connect with native speakers online and enhance their language skills, cultural knowledge, and intercultural competence. Additionally, the virtual exchange presented in this dissertation illustrates one possible way of addressing the suggestions of the Standards of Foreign Language Learning (1999) and the MLA Ad Hoc Committee on Foreign Languages (2007), both of which emphasize the importance of combining language and culture and allowing students to develop linguistic and (trans)cultural competence. The project shows how students can be supported in achieving multiple of the goals outlined in the Standards (1999) in addition to the acquisition of target language skills: the acquisition of communication strategies that can help them in "bridging communication gaps that result from differences of languages and cultures" (p. 34), knowledge of "the richness of the cultures of the languages being studied" (p. 34), learning strategies and familiarity with technology, and critical thinking skills through the opportunity to reflect on their learning.

6.5. Recommendations for the Implementation of Virtual Exchanges

When considering the implementation of a virtual exchange, several steps have to be taken to ensure the effectiveness of the project. In the following, I will briefly outline the major steps in planning and implementing a virtual exchange including how to find a partner class, how to choose the communication medium for the exchange, how to design tasks and activities, and how to assess and evaluate the project and outcomes.

6.5.1. How to Find a Partner Class

When selecting a partner class for the virtual exchange, several factors have to be taken into consideration. For example, the academic calendars of the participating institutions have to make an exchange of the desired length possible (Van Handle & Corl, 1998). The German and US university systems, for example, operate on very different schedules and the spring semester in the US only overlaps with the German spring semester in a few weeks. An exchange between a US and German University class, thus, would be easier if conducted in the fall semester, when the schedules overlap for several months. Due to the semester schedule differences between Germany and the US, the exchange that formed the basis for this dissertation, for example could not be conducted between two universities. Instead, a high school class in Germany was selected as partner class for a US university class. This can be a good alternative, because the German high school schedule resembles the US university semester schedules more closely and a longer duration of an exchange can be guaranteed.

When selecting a partner class, it is important that both classes have motivation for the project (O'Rourke, 2007). If one side is not motivated, the success of the virtual exchange may be impacted. Students who have no motivation may not participate fully, may not fulfill all requirements, or may not respond in timely manners. Moreover, lack of motivation may impact

the amount of willingness students demonstrate to communicate cross-culturally and their receptiveness to learning about the target culture and language. One way that motivation was guaranteed in the German side of the exchange in this dissertation was to make participation voluntary. Because the German side had more students enrolled in the class, not all students needed to participate to provide a partner for each US student. Therefore, the students in the German class could choose freely whether they wanted to be a part of the project or not. This helped to assure, that those students who did participate did so because they were genuinely interested in the project.

Additionally, the classes have to have similar language abilities in order to communicate together in their target languages (O'Rourke, 2007). Depending on whether target language proficiency is a desired outcome of the exchange, a virtual exchange does not have to be conducted in the target culture. Virtual exchanges can also be conducted when students do not possess advanced target language skills. As in the pilot study to this project (Schenker, 2012), the entire exchange was conducted in English, so that the US students did not practice their target language skills, but they were able to grow cross-culturally. However, when both participating classes have the goal of improving target language proficiency, it is important that they have similar language levels so that both sides may complete the assigned tasks together and can learn collaboratively. In this exchange, both sides were able to write in their respective target languages and were able to practice communicating in another language.

Another factor to consider when selecting a partner class is the class size. When conducting a tandem virtual exchange, it is important that every student can have a tandem partner, so class sizes should be similar (O'Rourke, 2007). If class sizes are different, one can include partnerships of three students, as was done in this project to accommodate the larger

number of participants from Germany. However, having partnerships consist of three students is sometimes problematic as students may encounter difficulties arranging a time to meet and participate in the exchange together. This was a problem experienced by several partnerships in this exchange.

From personal experience, one of the most effective ways to find a partner class for a virtual exchange has been through personal connections to instructors in the target country. Knowing the instructor of the partner class can make all stages of a virtual exchange easier, if the two instructors work well together. For this exchange as well as the pilot study (Schenker, 2012), the partner classes were matched through personal connections. However, it is not always possible to rely on personal connections to establish a virtual exchange. Finding e-mail partners has become much easier in recent years and many resources are available on the net for those interested in finding an exchange partner or class for a virtual project.

ListSrvs and mailing lists are sometimes available to help in finding a partner class (Van Handle & Corl, 1998). Brammerts (1996b), for example, suggests using the *International E-mail Tandem Network*, at <<http://tandem.uni-trier.de>>. This network enables instructors to find a partner class by providing the native and target language of the class in a search engine. A matching partner class will then be searched and their information will be e-mailed to the investigator once it has been found. Additionally, the network has a search function for individuals searching for a language exchange. The website is therefore also well-suited for individual students wishing to engage in collaborative learning online outside of the classroom. There are over 43 different languages registered on the network. Having used this website for a smaller project in recent years, I can verify its efficiency in finding a matching partner class or student.

In the European context, the online portal *Etwinning* has been established for the purpose of finding partners for cross-cultural collaboration. Through this portal, accessible at <www.etwinning.net>, classes can find each other and participate in cross-cultural projects together (Miguela, 2007). These projects can be connected to different subject matters so that the portal serves not only language learning purposes but can help students learn collaboratively in a variety of disciplines.

Müller-Hartmann (2007) introduces several other online resources which can help teachers or individual students to find partner classes or partners for cross-cultural exchange. While some of the websites are no longer available, the following four are still accessible and can be used for the purpose of establishing cross-cultural virtual exchanges.

Epals, <www.epals.com>, is an online community, where teachers can connect their classes to other classes in the world. Currently, over 200 different countries have classes registered with the site and over 136 different languages are represented. There are many search functions to choose from, and classes with different age groups can be found so that the website is suitable for K-12 and beyond.

Kidlink, <www.kidlink.org>, is another website where cross-cultural partners can be found for a virtual exchange. This website is dedicated to participating in cross-cultural projects of different kinds. Teachers can browse the available projects and request to join. Most of the projects are conducted in English and meant for younger children, so the website is more suitable for elementary and middle school students. It does not have an extensive list of projects to choose from and is more limited in its scope.

Another online database that can help in finding a partner school is the British Website *Schools Online*, < <http://schoolsonline.britishcouncil.org/>>. This website allows schools to find

partners from other schools “worldwide for fun, friendship and shared learning” (British Council). The website is very comprehensive and offers teachers ideas for projects they can conduct.

Learn, <www.learn.org>, is another portal for finding a partner class for cross-cultural exchange. In the Learn collaboration center, teachers can find projects across the world for a class and similarly to Etwinning, the projects are related to different subject matters. Projects can be found by subject, language, or age level and there is also a keyword search. The website suggests that the projects are suitable for students ages 5 through 20.

Another way to connect language learners is through use of the *Global Virtual Classroom* Website located at <<http://www.virtualclassroom.org/>>. Here, teachers can build partnerships with other teachers across the world for the purpose of fostering global competencies and friendships among students everywhere.

Further available resources are suggested by Torres and Vinagre (2007). For example, the website *Students of the World*, <www.studentsoftheworld/info/>, was initially established for individual students to find pen-pals across the world. Now, it also allows teachers to find partner schools and classes and currently there are schools from 61 different countries registered. For the individual student registrations, Germany currently has over 3000 students signed up on the site looking for pen-pals. The ages of the individuals signed up range from middle school to adults, so that this website can be used in all educational contexts.

The Mixxer, at <<http://www.language-exchanges.org/>>, is another website where students can find individual partners and teachers can find partner classes (Godwin-Jones, 2005). The site is intended to connect students for cross-cultural and language exchange using Skype. The website is therefore suitable for those wishing to offer their students more opportunities to

practice speaking in the target language. It has mainly been used for individual partner exchanges and not as much for class-to-class exchanges.

Once a partner class has been found, both of the teachers can begin planning the virtual exchange together. Dooly (2008a) explains that the first step for successful telecollaboration is negotiation with the partner teacher. Through effective discussion the collaboration can begin. Both teachers have to become active agents in the planning process. Dooly (2008a) recommends developing a 'project map' by going from general to more specific when planning a telecollaborative project. Considerations should be made about the three phases of planning, tracking, and closing the project. In the planning phase, general considerations include the goal of the project, the skills needed, the intended assessment, and the planned outcomes. More specific considerations include the activities for all stages, the language skills needed, and resources and assessment tools for each stage of the project. Finally, teachers need to consider how to promote positive interdependence between the exchange students to ensure that the exchange goes beyond mere exchange of information to a true cross-cultural discussion and reflection of cross-cultural issues.

6.5.2. How to Choose the Communication Medium

As outlined in chapter one of this dissertation, there are many different computer-mediated communication tools available which can be used in virtual exchanges. The different tools need to be selected depending on the specific learning objectives that have been set for the project, and depending on the context of the exchange, such as the students' language level. As outlined by Smith et al. (2003), computer-mediated communication tools differ in their temporality, spatiality, modality, and anonymity. The advantages and challenges inherent to each tool's

degree of these features need to be considered carefully before making a selection for a virtual exchange.

One of the main decisions to be made when planning a virtual exchange pertains to the use of written or oral tools and the tools' temporality - synchronous or asynchronous. The advantages and challenges of synchronous and asynchronous communication tools have been pointed out in chapter two of this dissertation. The main differences of asynchronous and synchronous tools include that asynchronous tools allow students to plan their answers and spend more time composing messages, while synchronous tools give students a chance to interact in real-time. Of course, synchronous and asynchronous tools may also be combined thereby giving students the opportunity to experience both real-time and delayed interaction, such as was the case in this study.

In this exchange, asynchronous e-mails were chosen as the primary communication medium to accommodate the time difference and to give students more opportunities to reflect and re-think their answers before sending them to their partners. E-mail was also chosen because all students had easy access to this technology.

Regardless of what tool is selected, the outcomes of any virtual exchange depend on the tool's application (Dooly, 2007). Before selecting the tool, the teachers should consider what the students' technical background is, what they should learn, what access to technology is available, what the time commitment will be and what expenses are related to the use of the selected communication tools (Dooly, 2007). Videoconferencing, for example, is not available in all German high schools or universities and if the project is intended to include this tool an appropriate partner class with access to this technology has to be found. In this exchange, the German school was able to use the technology at a nearby university, so the problem of lack of

technology could be overcome. Other technology tools that are not videoconference equipment are much more accessible, often not only in the educational institutions but in the students' homes.

E-mail, for example, is an often-used asynchronous tool that has many advantages and is often easily accessible. As outlined in an earlier section, the benefits of using e-mail as the basis for a virtual exchange are plentiful. For example it allows students to write in great detail, compose messages at their own convenience, and gain insights into the target culture through thorough communication with a tandem partner (O'Dowd, 2006b). Additionally, most students are familiar with the tool already. Many virtual exchanges have used e-mail as the primary communication tool and students were able to improve their linguistic abilities (Aitsiselmi, 1999; Belz & Kinginger, 2002) and expand their cultural knowledge and intercultural competence (Belz, 2007a; O'Dowd, 2003). The present study has also shown that students are able to grow cross-culturally through the communication with representatives of the target language in an e-mail exchange.

Blogs are another tool that can be used for computer-mediated communication projects. They are useful in fostering reflection and self-expression, but they are usually public on the Web which may be a disadvantage (Mason & Rennie, 2010). Blogs have been said to be a good way to foster learner autonomy (Alm, 2009), and they have also been used for improving linguistic competence in the target language (Carney, 2009) and for developing cross-cultural awareness (Elola & Oskoz, 2008). In this study, blogs were highly useful as a reflective tool for students and were a suitable addition to the e-mail exchanged. It helped students to deal with frustrations and problems of the exchange and assisted them in developing more flexibility in their e-mail communication.

Moodle can also be selected as the communication tool for a virtual exchange (Chase & Alexander, 2007; Markey, 2007). It is a course-management system that allows the use of discussion forums as well as instant messenger. Moodle is thus a good tool for combining asynchronous and synchronous communication.

Discussion forums are another useful asynchronous tool that can also be used in virtual exchanges. It has the same advantages as other asynchronous tools, and studies have shown that the language used in discussion forums is often of high quality (Rodriguez, 1998). There are different kinds of discussion forums available; some are public, and some can be set up privately for the context of the exchange.

When searching for a tool that allows primarily the practice of speaking in the target language, Skype may be a good choice. Skype exchanges can focus on oral skills of the participants by allowing students to communicate face-to-face with a native speaker of the target language (Mullen, et al., 2009). As with other synchronous tools, coordinating different time schedules and time zones may be a challenge.

Another tool that can be used for practicing speaking skills is videoconferences. They are engaging for students and a good way to connect both partner classes (L. Lee, 2007b). Being a synchronous tool, videoconferences allow students to practice their speaking skills and get to know many different viewpoints of members of the target culture (O'Dowd, 2006b). They are a great tool for connecting both classes and creating a sense of community between the learners.

A virtual exchange can also include the use of text-based chat. A synchronous tool, it allows students to interact in real-time with an exchange partner and learn more about the target culture (Ma, 1996; Tudini, 2007) while at the same time practicing communicating in the target language (Pellettieri, 2000; Sauro & Smith, 2010).

Other tools that can be used in virtual exchanges include social networking sites, such as Facebook (Blattner & Fiori, 2011), or Twitter (Godwin-Jones, 2008), Wikis (Godwin-Jones, 2003), or joint participation in online gaming sites (Sykes & Holden, 2011; Thorne, et al., 2009). Some of these tools have not been used for virtual exchanges as often as other tools, such as e-mails, but they still hold a lot of potential for cross-cultural learning and depending on the learners' needs and selected project goals, these newer technological tools may be very effective when used in a virtual exchange.

6.5.3. How to Design the Tasks

There are a variety of tasks that can be completed by the students in a virtual exchange. Parallel texts (Thorne, 2006), for example, is an often-used task for cross-cultural exchanges. Here, students read the same text and discuss their different understandings together. It can be a good way to foster cross-cultural understanding and awareness of cross-cultural differences.

When designing tasks, the specific needs of the group of learners participating in the exchange need to be taken into account (Dooly, 2008b). This includes a careful consideration of the sociocultural background, different abilities and learning styles, and different preferences in communication medium (Dooly, et al., 2008). The tasks should be of a motivating nature for the students as well. Throughout the tasks, students should have the opportunity to exchange ideas, and analyze and evaluate them collaboratively (Dooly, et al., 2008). In order to ensure that the project is of educational value for both classes, it is important that the tasks are negotiated by both instructors (Guth & Thomas, 2010).

In this exchange, students were assigned cultural topics to discuss which corresponded largely to the US textbook. In the pilot study (Schenker, 2012), the discussion topics were more general in nature and some of the students commented negatively on this, while others

mentioned that would have preferred no pre-assigned topics at all. In the exchange discussed in this dissertation, students reported overall satisfaction with the selected discussion topics.

Media/films, entertainment, music, art, politics, travel, and other languages were suggested by the students as other topics they would have liked to discuss.

Another question to consider when designing the tasks for a virtual exchange is what language should be used for the exchange. Because in most cases both sides of the exchange wish to use the project as a means to improve linguistic skills, many virtual exchanges include students writing part of the time in their native and other part in the target language (Byram, 2007; O'Rourke, 2007). This allows both sides of the exchange to practice their target language as well as experience how native speakers use the language. In this exchange, however, students were given more opportunity to practice their target language by assigning them to write all e-mails in the foreign language. The disadvantage to this choice is that students do not get to experience native speaker language as much.

Related to the question of the language chosen for the virtual exchange, it must also be considered whether students will be expected to give each other language feedback. While language feedback was not mandatory in this study, the positive effects of the partnerships that included language feedback not only on syntactic complexity but on other language areas as well, suggest that required language feedback might be a beneficial component of virtual exchanges. If language feedback is included in the exchange, students need to be well prepared to give and receive this feedback to be able to support their partners with targeted assistance and that can help students push their output and achieve higher levels of language proficiency.

Ware and Canado (2007) suggest that students should give each other feedback on grammar usage and style, for example. Students should be told to differentiate between global

errors and local mistakes. They could be encouraged to rephrase certain passages in their partner's messages to improve syntactic structures. To explain a certain point, they should use several examples. Clarification questions are another good way to help with language. Through requests for clarification, students can be pushed to modify their original output, which has been said to be a tool for second language acquisition (Swain, 1995). Additionally, giving small grammar explanations to each other in the form of mini-lessons can be beneficial for participants in virtual exchanges (Ware & Canado, 2007).

Students should also employ specific strategies to maximize the language learning for both sides. For example, they can ask for help with certain structures, when giving feedback they should include praise and be specific in the feedback, and they should focus more on the overall meaning of the message than on correcting every mistake (Ware & Canado, 2007). In all, students can improve their linguistic abilities through their partners' modeling the language, assistance in formulation and through their corrections (Brammerts, 1996a).

Other possible tasks include the discussion of specific topics. This was the approach selected for this study as well as the pilot study to this project (Schenker, 2012). In many other studies, students were also given specific topics or guidelines for their exchange (Vogt, 2006). Other tasks could be goal-oriented in nature such as completing information-gap activities together (L. Lee, 2007a). Sometimes no specific discussion topics are given and students can discuss topics of their own choice (Kabata & Edasawa, 2011). Some virtual exchanges also include the students' collaborative work on a final class project (Hauck & Lewis, 2007). The choice of tasks for a virtual exchange depends largely on the specific goals of the exchange and the objectives of the class into which the project is incorporated.

6.5.4. How to Prepare and Support the Virtual Exchange

Before the virtual exchange can get started, it has to be ensured that students are prepared for their role in the exchange. In what Dooly (2008a) calls the preliminary stage, students need to be informed about the project and they need to be prepared for the collaborative work they will be doing. The objectives need to be set and checked as well. The students have to know the schedule of the exchange, the due dates of assignments, the assessments, and the expected outcomes. They should also know exactly what they will be graded on (Van Handle & Corl, 1998). They also must be prepared for using the technology and for their specific role and obligations in the exchange (Müller-Hartmann, 2007). If the technology is unfamiliar to the students, they should be given opportunities to practice the use of the technology and technology support should be available to them throughout the project. In order to ensure good student participation, it is recommended to make the exchange a transparent part of the syllabus (Van Handle & Corl, 1998).

During the virtual exchange, it is important that students are well supported and that assistance is given to them in all domains of the exchange (Müller-Hartmann, 2007). Miscommunication and tension might arise in intercultural projects, and it has been suggested to use these instances of misunderstandings and make them a point of analysis and discussion in the classroom (Schneider & Von der Emde, 2006; Ware, 2005). Analyzing messages together in class can also support the students in the acquisition of cross-cultural awareness (Müller-Hartmann, 2007). Additionally, discussing the virtual exchange in class, as was done in this exchange, helps students to compare their own experiences to those of others thereby avoiding viewing the target culture in monolithic ways.

Another possible way to support a virtual exchange is to encourage students to keep a reading journal in which they can reflect on the exchange, discuss questions and issues and the like (Kötter, 2002). Reflective blogs, such as were used in this study, can be a beneficial tool for students which can enable them to deal with their frustrations and concerns of the exchange.

6.5.5. How to Assess the Virtual Exchange

When conducting a virtual exchange, it is important to assess both the students' learning outcomes as well as the exchange itself. The latter is crucial in order to be able to improve future projects and reflect on the successes and challenges of a specific project design.

When assessing students' outcomes, several assessment strategies can be employed, including portfolio work, peer-assessment, learning journals, and products that were created as part of the exchange (Felix, 2003). While it has been suggested that peer-assessment and self-assessment should take place not only at the end but throughout the exchange (Dooly, et al., 2008), this may not always be possible due to time constraints.

Assessing the outcomes or products of a virtual exchange can be useful but also difficult unless good grading rubrics are developed and employed (O'Dowd, 2010). Especially when grading collaborative projects, both instructors should be involved in the assessment process. In addition to evaluating a final project, Dooly (2008b) suggests to have students provide samples of their work from throughout the virtual exchange. Guidelines for self- and peer-assessments should be included and rubrics could be used for assessing the students' achievements. Both sides of the virtual exchange should engage in a reflection process and the project also needs to be wrapped up with both partner classes.

Feedback surveys at the end of the exchange are useful in helping the instructors get a good understanding of how the project was perceived by the students. Such feedback surveys

should be collected anonymously to allow students to voice their opinion freely. In this study, the feedback survey was very useful in understanding how students enjoyed the communication medium, the discussion topics, the set-up of the exchange and also what problems they encountered and what effects of the exchange they had experienced on themselves.

The instructors collaborating in the project should also debrief the project together, to compare how both sides perceived the project. Open conversation about what worked and what did not work well can help both instructors improve their incorporation of virtual exchanges in future classrooms and is a crucial part of conducting a virtual exchange. Likewise, students at the end of the exchange should have the opportunity to discuss the project together and exchange their experiences in an open forum. The evaluation of the project is important so that everyone can learn for future projects.

6.6. A Curricular Model for Virtual Exchanges

In the following section I suggest a curricular model that includes computer-mediated communication from the start. The model shows the different undergraduate semesters and the expected proficiency levels on the common European Framework of Reference (A1-B2) as well as the ACTFL Standards (novice –advanced low). The virtual exchanges suggested in this model move from being conducted in the native language to being conducted in the target language. While first-semester students cannot be expected to communicate over long time periods in the target language, they can benefit from the cultural exchange in a virtual environment and they can begin to experiment with the language forms they are learning in the classroom. Fourth-year students, on the other hand, can be expected to interact entirely in the target language so that virtual exchanges in the later stages of the undergraduate curriculum can be conducted in the target language completely. The model also suggests different tools that can be used in the

various levels of the undergraduate curriculum. Here, too, we see a progression from asynchronous to synchronous tools, because real-time interaction requires a higher level of language proficiency as students have to produce language on the spot. For early language learners, asynchronous tools can be more beneficial as they allow students to think about their answers and consult other sources.

Table 26 *Curricular Model*

Sem-ester	Goal	CMC Use	Language	Study Abroad	Asynchronous
1	A1 N	- e-mail exchange - group to group videoconferencing - discussion forums	English	short-term, 2-3 weeks, Germany or Europe multi-city trip; can be in conjunction with other classes (i.e. history)	Native Language ↓ Target Language ↓ Synchronous
2		- group chats (text-based) - Twitter	English & German		
3	A2 I	- one-on-one chats (text-based) - e-mail exchange	German & English	short-term, 6 weeks, summer study abroad with homestay	
4		- group to group videoconferencing - discussion forums - blogs	German & English		
5	A2 IH	- e-mail exchange - videoconference - text-chat - voice-chat - discussion forums - blogs - social Media (Facebook, Twitter)	German	semester or year abroad - connect to home university through reflective blogs	
6					
7	B1 AL	- whole range of CMC tools, both one-on-one and group-to-group, asynchronous and synchronous	German	semester or year abroad - connect to home university through reflective blogs	
8					

6.7. Suggestions for Further Research

The study suggested that virtual exchanges can be beneficial for the development of intercultural competence as assessed on the basis of Fantini's (2000) model and measured and traced with his self-assessment survey (1997a). Additionally, the study showed that students wrote with more syntactic complexity at the end of the exchange. There are many areas for further research in the context of linguistic and intercultural development.

Further research should investigate how students can develop their syntactic complexity further through virtual exchanges. This could be investigated more thoroughly by expanding the length of the exchange, by including pre- and post-writing assignments which encourage the use of syntactic structures, and by ensuring that the early discussion topics are not less conducive to using complex structures than the later discussion topics in the exchange. To develop a more thorough picture of the effects of virtual exchanges on students' linguistic abilities, other areas of their language competence should be explored in connection to syntactic complexity. For example, studies should look at the effects of an exchange on students' lexical diversity, accuracy or specific aspects of grammatical competence such as use of passive. The use of a control group would be especially useful as it would enable the researcher to differentiate between contributions to language development from being in the class and from participating in the virtual exchange.

Additionally, the study showed that feedback on language forms led in some cases to an improvement of specific aspects of target language use. While language feedback was not mandatory in this project, research should look at the different effects of tandem exchanges that include mandatory language feedback. It would also be interesting to investigate if there would be a relationship between the development of intercultural competence and feedback.

This dissertation suggested that there is a connection between the number of words written in the exchange and the students' linguistic and intercultural development. Further studies should investigate how much students need to write in order to have the opportunity to increase their level of intercultural competence and to develop linguistically. That means, is there a threshold or a minimum number of words or number of e-mails that have to be exchanged for students to be able to enhance their skills? In line with Kabata and Edasawa's (2011) finding of the dependency of linguistic development in e-mail exchanges on the level of language proficiency, it should be investigated if there is a similar dependency of intercultural development on students' language skills.

This study suggested that the ability to form a personal connection is an important prerequisite for students to write more and develop their competencies further. Questions that should be asked in future studies concern the pairing of students, for example. How can students be matched with other students with whom they can establish a personal connection, which appears to be an important basis for a successful exchange and good learning outcomes. It should also be investigated what other factors, for example assigned topics, impact the amount students write.

Additionally, studies should investigate the relationship between linguistic development and the development of intercultural competence further. For example, do students need a specific level of language skills in order for a virtual exchange like the one described in this dissertation to be beneficial for the development of further skills? Additionally, what is the relationship between advanced language skills and the development of intercultural competence? While this study showed specific patterns in the development of intercultural competence, further studies should include more objective assessment forms of intercultural competence

before and after the exchange to which observed episodes throughout the exchange could be compared. Means of assessing students' intercultural competence before and after participation in a virtual exchange need to be more carefully considered.

As indicated in the limitations section, similar to Leh's study (1997), this study showed that the differences in requirements between the classes was a problem in some partnerships. Further studies should therefore take this problem into consideration by giving each class the same requirements and grading scales. Additionally, a virtual exchange between classes at the same education level (high school – high school, or college – college) might also reveal different results and it should be investigated whether there is a difference in the effects of virtual exchanges.

One of the most important areas for further research is the transferability of the competencies developed through virtual exchanges. While this and other studies have shown positive effects of computer-mediated communication on students' intercultural competence, it is unclear if this competence transfers to other contexts. Are students able to communicate successfully with people from cultural backgrounds other than German, after participating in cross-cultural exchanges with German students? And if not, how can the skills gained through such a virtual exchange be made available to students in other contexts as well? This investigation would be especially important because students are likely to encounter people from very diverse, not necessarily German, backgrounds and intercultural competence should be a tool for them to communicate across many cultures. While Guth and Helm (2010b) claim, that “intercultural competence is a transversal skill that can serve learners in numerous contexts that extend beyond the classroom and the specific language being learned” (p. 18), the transferability of intercultural competence cross-culturally and cross-lingually has yet to be investigated.

In future research I hope to further contribute to questions of the effects of virtual exchanges on different language skills of students, as well as their intercultural competence. I hope to be able to investigate the development of speaking skills through virtual exchanges through conducting virtual exchanges that include a larger speaking component. Additionally, I wish to investigate learner differences and their effects on the learning outcomes of virtual exchanges. The predominantly positive results of this study suggest that virtual exchanges can be an effective tool for achieving transcultural and translingual competence (MLA Ad Hoc Committee on Foreign Languages, 2007) and in future studies I hope to be able to explore the multifarious effects of virtual exchanges further by including the analysis of the various factors impacting second language acquisition and the development of intercultural competence.

APPENDICES

APPENDIX A: Pre- and Post-Survey US Class

SURVEY CULTURE

(A) Please answer the following questions.

Name: _____

Gender: ☐ F ☐ M **Age:** ☐ 15-17 ☐ 18-20 ☐ 21-23 ☐ 24-26 ☐ 27-29 ☐ 30-32 ☐ 33-35

1. What is your native language? / What are your native languages?
2. How long have you been studying German and where? (2 yrs in HS, 2 Semesters in college...)
3. Why are you studying German?
4. Have you spent any time in a different country? If so, where, how much time did you spend there, and what was the nature of your stay?
5. What other languages have you studied? How long have you studied them and in what context (at home, in school, through study abroad...)?
6. What is culture? (How would you define culture?)
7. What skills (or knowledge) do you think you need for successfully communicating with people from a different cultural background?

8. How do you think you can best learn a foreign language?
9. Do you think connecting language learners online can help developing your language skills? Explain!
10. Are you aware of differences and similarities between German and US culture? (Give some examples!)
11. How would you characterize your attitude towards learning German language, and about German culture?
12. How would you evaluate your skills for communicating interculturallly?
13. How would you evaluate your knowledge of German history, politics and social norms and the way these have shaped German life and culture?

(B) Please indicate your agreement/disagreement with the following statements by choosing:

(1) strongly disagree (2) disagree (3) somewhat disagree (4) somewhat agree (5) agree (6) strongly agree

Please add any additional comments in the space below each statement.

1. When learning a foreign language, it is NOT important to learn about the foreign culture.	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
Explain:						
2. I am interested in learning more about German culture.	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
Explain:						
3. There should be a strong focus on culture in foreign language classes.	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
Explain:						
4. It is important to learn about the foreign culture when learning a foreign language.	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
Explain:						
5. I have NO interest in gaining more knowledge about German culture.	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
Explain:						
6. There is NO need to emphasize culture in foreign language classes.	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
Explain:						
7. Communicating via the Internet with students from Germany does NOT intrigue me.	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
Explain:						
8. Using online communication with Germans does NOT have an impact on my German language skills.	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
Explain:						

9. I can learn a lot about German culture by talking to German speakers online (through chats, e-mails, or other online communication tools).	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
Explain:						
10. I find NO pleasure in learning about other cultures.	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
Explain:						
11. Communicating electronically (through email or chat, for example) with speakers from Germany can help me improve my language skills.	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
Explain:						
12. I enjoy learning about other cultures.	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
Explain:						
13. Communicating electronically (through email or chat, for example) with speakers from the target language is NOT a good way to learn more about the target culture.	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
Explain:						
14. I am interested in communicating online with students from Germany.	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
Explain:						

15. Please rate the following items by importance. (1 = most important)

In my foreign language classes

_____ I am particularly interested in learning how to write better in the foreign language.

_____ I am particularly interested in learning how to speak in the foreign language.

_____ I am particularly interested in learning how to read in the foreign language.

_____ I am particularly interest in learning how to understand (listening to) the language.

_____ I am particularly interested in learning more about the culture.

ASSESSING INTERCULTURAL COMPETENCE: A YOGA FORM²

C. Please indicate your agreement/disagreement with the following statements by choosing:

(1) strongly disagree (2) disagree (3) somewhat disagree (4) somewhat agree (5) agree (6) strongly agree

LANGUAGE PROFICIENCY

1. I can understand familiar words and very basic phrases concerning myself, my family and immediate concrete surroundings when people speak slowly and clearly. I can understand familiar names, words and very simple sentences, for example on notices and posters or in catalogues.	1 <i>strongly</i> <i>disagree</i>	2	3	4	5	6 <i>strongly</i> <i>agree</i>
2. I can understand familiar names, words and very simple sentences, for example on notices and posters or in catalogues.	1 <i>strongly</i> <i>disagree</i>	2	3	4	5	6 <i>strongly</i> <i>agree</i>
3. I can interact in a simple way provided the other person is prepared to repeat or rephrase things at a slower rate of speech and help me formulate what I'm trying to say. I can ask and answer simple questions in areas of immediate need or on very familiar topics.	1 <i>strongly</i> <i>disagree</i>	2	3	4	5	6 <i>strongly</i> <i>agree</i>
4. I can use simple phrases and sentences to describe where I live and people I know.	1 <i>strongly</i> <i>disagree</i>	2	3	4	5	6 <i>strongly</i> <i>agree</i>
5. I can write a short, simple postcard, for example sending holiday greetings. I can fill in forms with personal details, for example entering my name, nationality and address on a hotel registration form.	1 <i>strongly</i> <i>disagree</i>	2	3	4	5	6 <i>strongly</i> <i>agree</i>
6. I can understand phrases and the highest frequency vocabulary related to areas of most immediate personal relevance (e.g. very basic personal and family information, shopping, local area, employment). I can catch the main point in short, clear, simple messages and announcements.	1 <i>strongly</i> <i>disagree</i>	2	3	4	5	6 <i>strongly</i> <i>agree</i>
7. I can read very short, simple texts. I can find specific, predictable information in simple everyday material such as advertisements, prospectuses, menus and timetables and I can	1 <i>strongly</i> <i>disagree</i>	2	3	4	5	6 <i>strongly</i> <i>agree</i>

² This survey is an adapted from the YOGA (Your Objectives, Guidelines, and Assessment) form for assessing intercultural competence developed by Alvino E. Fantini. (SIT Occasional Papers, Spring 2000).

understand short simple personal letters.						
8. I can communicate in simple and routine tasks requiring a simple and direct exchange of information on familiar topics and activities. I can handle very short social exchanges, even though I can't usually understand enough to keep the conversation going myself.	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
9. I can use a series of phrases and sentences to describe in simple terms my family and other people, living conditions, my educational background and my present or most recent job.	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
10. I can write short, simple notes and messages. I can write a very simple personal letter, for example thanking someone for something.	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
11. I can understand the main points of clear standard speech on familiar matters regularly encountered in work, school, leisure, etc. I can understand the main point of many radio or TV programs on current affairs or topics of personal or professional interest when the delivery is relatively slow and clear.	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
12. I can understand texts that consist mainly of high frequency everyday or job-related language. I can understand the description of events, feelings and wishes in personal letters.	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
13. I can deal with most situations likely to arise whilst travelling in an area where the language is spoken. I can enter unprepared into conversation on topics that are familiar, of personal interest or pertinent to everyday life (e.g. family, hobbies, work, travel and current events).	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
14. I can connect phrases in a simple way in order to describe experiences and events, my dreams, hopes and ambitions. I can briefly give reasons and explanations for opinions and plans. I can narrate a story or relate the plot of a book or film and describe my reactions.	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
15. I can write simple connected text on topics which are familiar or of personal interest. I can write personal letters describing experiences and impressions.	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
16. I can understand extended speech and lectures and follow even complex lines of argument provided the topic is reasonably familiar. I can understand most TV news and current affairs	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>

programs. I can understand the majority of films in standard dialect.						
17. I can read articles and reports concerned with contemporary problems in which the writers adopt particular attitudes or viewpoints. I can understand contemporary literary prose.	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
18. I can interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible. I can take an active part in discussion in familiar contexts, accounting for and sustaining my views.	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
19. I can present clear, detailed descriptions on a wide range of subjects related to my field of interest. I can explain a viewpoint on a topical issue giving the advantages and disadvantages of various options.	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
20. I can write clear, detailed text on a wide range of subjects related to my interests. I can write an essay or report, passing on information or giving reasons in support of or against a particular point of view. I can write letters highlighting the personal significance of events and experiences.	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>

In the following sections, you may add any additional comments in the space below each statement.

ATTITUDE I am willing to...

1. communicate with my exchange partner from Germany	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
2. learn language and culture from my German exchange partner	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
3. try to communicate in German with my exchange partner and behave in ways judged "appropriate" by German culture	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
4. try to deal with the emotions and frustrations caused by my participation in the email exchange	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>

5. show interest in particular aspects of German culture	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
6. adapt my behavior in accordance to what I am learning about communication in German culture	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
7. reflect on the impact and consequences of my decisions, choices, and behavior on my German exchange partner	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>

AWARENESS I am aware of...

8. differences across languages and cultures	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
9. my reactions to these differences	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
10. how a specific context impacts my interaction with others	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
11. how my German exchange partner sees me	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
12. how I am viewed by members of my own culture	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>

13. differences (i.e., diversity aspects such as race, class, gender, age, ability, sexual orientation, etc.) within my own culture	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
14. differences (i.e., diversity aspects such as race, class, gender, age, ability, sexual orientation, etc.) within German culture	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
15. my choices and their consequences	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>

SKILLS

16. I am flexible when interacting with my German exchange partner	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
17. I know how not to offend my German exchange partner with my (verbal) behavior	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
18. I am able to contrast German culture with my own	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
19. I use strategies which aid my communication & reduce misunderstandings when communicating with my German exchange partner	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
20. I develop strategies for learning the German language and about German culture	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
21. I use a variety of effective strategies when interacting with culturally different people	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>

22. I interact appropriately in written exchange with my German exchange partner	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
23. I can name sociopolitical factors which have shaped both my own and German culture	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
24. I employ appropriate strategies for <i>adjusting to</i> intercultural exchange.	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
25. I use appropriate strategies <i>to enhance my learning</i> about German culture and language in the e-mail exchange.	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>

KNOWLEDGE

26. I can give a basic definition of culture and identify its components	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
27. I can contrast aspects of German language and culture with my own	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
28. I know the essential norms and taboos (greetings, dress, behavior, etc.) of German culture	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
29. I know some techniques to maximize my learning of German language and culture	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
30. I can explain at least one definition of culture	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>

31. I can describe and explain my own behavior and that of my German exchange partner in various domains (e.g., social interaction, time orientation, relation to the environment, spiritual, etc.)	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>
32. I can articulate the general history and some sociopolitical factors which have shaped my own and German culture	1 <i>strongly disagree</i>	2	3	4	5	6 <i>strongly agree</i>

D. Please answer the following questions! You may write as much or as little as you want.

16. What did you like about the email exchange?

17. What did you learn from the email exchange?

18. Did you encounter any problems with the email exchange? If so, what were they and how were they resolved?

19. Do you consider yourself to be a more successful intercultural communicator because of what you learned from the exchange? If so why? If not, why not?

20. Do you think your language skills have improved because of the email exchange? If so, can you explain how (or in which areas)?

21. What have you learned about German culture or language, or communicating with individuals from Germany that you did not know before the exchange?
22. Has your attitude towards learning German, or learning about German culture, or towards individuals from Germany changed because of your participation in the exchange? If so, how?
23. Did you learn anything about yourself or your own culture through the exchange? If yes, what?
24. Below is a list of topics you discussed during the e-mail exchange. Please rate each topic from 1-5 (1 being not enjoyable, 5 being very enjoyable) according to your enjoyment of discussing the topic!
- ___ **Free time**
 - ___ **Sports**
 - ___ **Educational systems**
 - ___ **German and US identity**
 - ___ **Multiculturalism**
 - ___ **Family**
 - ___ **Friends**
 - ___ **Violence**
 - ___ **Recent History**
 - ___ **Culture**
25. Are there other topics you would have liked to discuss?
26. Do you have further comments about the email exchange, the blogs, or the videoconferences?

APPENDIX B: Weekly Discussion Topics

E-mail Assignments for E-mail Exchange between German and American Students; Spring Semester 2011

1. Woche (10. – 14.1.)

- *Erklärung des Austausches
- *Wahl der Partner/innen

2. Woche (17. – 21.1.)

- *Erster, informeller Kontakt (zählt nicht als Hausaufgabe)
- *1. Videokonferenz (20.1.)

3. Woche (24. – 28.1.)

- *Thema: Was macht man in der Freizeit in Deutschland und den USA? Und was liest man gern? Liest man dieselben Sachen in der Schule, an der Uni und in der Freizeit? Haben Sie ein Lieblingsbuch?
- *Emails 1 und 2 (bis 28.1.)

4. Woche (31.1. – 4.2.)

- *Winterferien in Deutschland
- *keine offiziellen Aufgaben; Kontakt so weit wie möglich beibehalten; freie Themen

5. Woche (7. – 11.2.)

- *Thema: Welche Rolle spielt Sport in den USA? Und in Deutschland? Treiben Sie einen Sport? Sind Sie Fan eines bestimmten Sports?
- *Emails 3 und 4 (bis 11.2.)
- *Blog-Eintrag 1 (bis 11.2.)
- *Blog-Reaktion 1 (bis 11.2.)

6. Woche (14. – 18.2.)

- *Thema: Beschreiben Sie das Schul- und Unisystem in Deutschland bzw. den USA! Welche Stufen haben die Schulen und die Unis? Was lernt oder studiert man? Welche Unterschiede gibt es zwischen den deutschen und den US-amerikanischen Bildungssystemen? Gibt es auch neue Entwicklungen? Was halten Sie davon?
- *Emails 5 und 6 (bis 18.2.)

7. Woche (21. – 25.2.)

- *Thema: Was bedeutet es, Deutsche/r oder US-Amerikaner/in zu sein? Ist das Ihrer Meinung nach nur eine Frage der Staatsangehörigkeit (*citizenship*) oder gehört mehr dazu? Was wissen Sie über die Gesetze zur Einwanderung (*immigration*) und Einbürgerung (*naturalization*) in Ihrem Land? Was halten Sie von diesen Gesetzen und von Migration im Allgemeinen?
- *Emails 7 und 8 (bis 25.2.)
- *Blog-Eintrag 2 (bis 25.2.)
- *Blog-Reaktion 2 (bis 25.2.)

8. Woche (28.2. – 4.3.)

*Thema: Was ist Ihre Meinung zum Thema Multikulturalismus? Was verstehen Sie unter diesem Konzept? Welche Vor- und Nachteile hat eine multikulturelle Gesellschaft (in Deutschland, in den USA sowie allgemein)?

*Emails 9 und 10 (bis 4.3.)

Spring Break in den USA (7. – 11.3.)

*Keine offiziellen Aufgaben; Kontakt so weit wie möglich beibehalten; freie Themen

9. Woche (14. – 18.3.)

*Thema: Welche Rolle spielt die Familie in Ihrem Leben (v.A. im Vergleich zu Freunden, Schule/Uni und anderen wichtigen Einflüssen in Ihrem Leben)? Wie sieht ihr Familienleben aus? Wie sieht ein typischer Tag bei Ihnen zu Hause aus? Hat sich Ihre Rolle in der Familie mit der Zeit verändert? Wie wichtig ist in den USA bzw. in Deutschland die Familie für den Einzelnen und in der Gesellschaft?

*Emails 11 und 12 (bis 18.3.)

*Blog-Eintrag 3 (bis 18.3.)

*Blog-Reaktion 3 (bis 18.3.)

10. Woche (21. – 25.3.)

*Thema: Ein Thema in dem Roman *Der Mond isst die Sterne auf* ist die Gewalt. Gibt es in Ihrem Umfeld Beispiele von Gewalt (verbal, non-verbal, körperlich oder andere), und wie gehen Sie damit um? Gibt es Ihrer Meinung nach Fälle (*cases*), wo Gewalt moralisch gerechtfertigt sein könnte?

*Emails 13 und 14 (bis 25.3.)

11. Woche (28.3. – 1.4.)

*Thema: Was bedeutet es, ein/e gute/r Freund/in zu sein? Was für Leute sind in Ihrem Freundeskreis? Wie wird man Freund/innen? Welche Rolle spielen Freund/innen in Ihrem Leben? Was macht man zusammen? Wie sieht die Freizeitgestaltung von Menschen in Ihrem Alter bei Ihnen aus?

*Emails 15 und 16 (bis 1.4.)

*Blog-Eintrag 4 (bis 1.4.)

*Blog-Reaktion 4 (bis 1.4.)

12. Woche (4. – 8.4.)

*Thema: Welche Rolle spielen die Ereignisse (*events*) der neueren deutschen und/oder US-amerikanischen Geschichte in Ihrem Leben und in der Gesellschaft im Allgemeinen (z.B. die Wiedervereinigung, die Angriffe vom 11. September, die Kriege in Afghanistan und im Irak und die Wirtschaftskrise)?

*Emails 17 und 18 (bis 8.4.)

13. Woche (11. – 15.4.)

*Thema: Was sind Ihrer Meinung nach die größten Unterschiede zwischen deutscher und US-amerikanischer Kultur? Gibt es auch Ähnlichkeiten? Was ist typisch deutsch, was ist typisch US-amerikanisch? Was sind Vorurteile oder Stereotypen, die Sie vom anderen Land haben oder die über Ihr Land bekannt sind? Wie könnte man diese abbauen?

*Emails 19 und 20 (bis 15.4.)

*Blog-Eintrag 5 (bis 15.4.)

*Blog-Reaktion 5 (bis 15.4.)

*2. Videokonferenz (14.4.)

14. Woche (18. – 22.4.)

*Osterferien in Deutschland

*Keine offiziellen Aufgaben; Kontakt so weit wie möglich beibehalten; freie Themen

15. Woche (25. – 29.4.)

*Osterferien in Deutschland

*Keine offiziellen Aufgaben; Kontakt so weit wie möglich beibehalten; freie Themen

APPENDIX C: Student Instruction Sheet for E-mail Exchange

Email-Austausch

Dieses Semester haben wir einen Email-Austausch mit den Schüler/innen vom [XY] Gymnasium. Die Schüler/innen sind in der 11. Klasse und haben Englisch als Leistungskurs bei [Prof. X] (Leistungskurs: *advanced course, somewhat like a college major*). Der Zweck dieses Austausches ist zweierlei: erstens, mehr über die deutsche Kultur zu lernen und zweitens, die Sprachkenntnisse zu verbessern, und zwar durch persönlichen, informellen Kontakt mit einer/einem Deutschen.



XY Gymnasium in Germany

Der Austausch hat mehrere Komponente: 1) Emails mit der/dem Partner/in, 2) Blog-Einträge; 3) Reaktionen auf die Blog-Einträge anderer Student/innen und 4) der Aufsatz und das Projekt.

1) **Emails (EM im Lehrplan).** Jede Woche—außer der 1., 2., 4., 14. und 15. Wochen und Spring Break—sollst du deiner/ deinem Partner/in zweimal schreiben. Du schreibst auf Deutsch und dein/e Partner/in schreibt auf Englisch. Ihr könnt einander mit der Sprache auch helfen. Fangt mit dem angegebenen Themen an, aber ihr könnt auch andere Themen besprechen und ihr könnt natürlich mehr Emails schreiben, wenn ihr wollt. Nur die ersten zwei zählen als Hausaufgabe und zwar 10 Punkte pro Email. Ich werde die Emails nicht sehen; nur Theresa Schenker wird mir sagen, wer die Emails für die Woche geschrieben hat. Falls du an Frau Schenkers Forschungsprojekt mitmachst, wird sie die Emails erst nach dem Semester lesen. Wenn du nicht mitmachst, wird sie die Emails gar nicht lesen. Ihr könnt die Form der Kommunikation (Email, Chat usw.) auswählen, aber Frau Schenker muss eine Kopie davon bekommen. Ich sage nicht, genau wie viele Sätze du schreiben sollst aber jede Email sollte einen wesentlichen Beitrag zur Diskussion darstellen. Siehe unten für eine Liste der Themen und Termine. Die Emails sind immer spätestens bis Freitag fällig.

2) **Blog-Einträge (BE im Lehrplan).** In den 5., 7., 9., 11. und 13. Wochen sollst du einen Blog-Eintrag schreiben. Hier kannst du den anderen Student/innen in unserem Kurs über deine Diskussionen mit der/dem deutschen Partner/in berichten, Themen weiter diskutieren, Probleme und Schwierigkeiten beschreiben und vielleicht einander helfen. Das ist auch auf Deutsch und alle Mitglieder des Kurses—auch ich und Frau Schenker—werden die Blog-Einträge lesen. Die Deutschen werden sie aber nicht lesen. Ab und zu werden wir auch im Kurs diskutieren, was ihr in den Blogs schreibt. Du kannst natürlich mehr als einen Eintrag pro Woche schreiben, aber nur der erste zählt als Hausaufgabe, und zwar 10 Punkte. Ich sage nicht, genau wie viele Sätze du schreiben sollst, aber jeder Eintrag soll einen wesentlichen Beitrag zur Diskussion darstellen. Das ist immer spätestens bis Freitag fällig.

3) **Blog-Reaktionen (BR im Lehrplan).** In den 5., 7., 9., 11. und 13. Wochen sollst du auf den Blog-Eintrag einer anderen Person kommentieren. Jedes Mal sollst du auf das Blog einer anderen Person reagieren. Das muss auf Deutsch sein. Du kannst mehr als eine Reaktion schreiben, aber nur die erste zählt als Hausaufgabe, und zwar 5 Punkte. Ich sage nicht, genau wie viele Sätze du schreiben sollst, aber jede Reaktion soll einen wesentlichen Beitrag zur Diskussion darstellen. Das ist immer bis Freitag fällig.

4) **Aufsatz und Projekt.** Die Diskussionen, die du mit der/dem deutschen Partner/in hast, sollten dir beim Aufsatz und den 2. und 3. Teil des Projektes helfen. Siehe die Anweisungen für diese Aufgaben für mehr Informationen dazu.

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