

Is the Acquisition of Conceptualizations possible for Foreign Language Students?
A Study on the Conceptualization of time in the English Foreign Language Classroom of
German

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Submitted in partial fulfillment of the requirements
for the degree of Master in Education
at Carthage College

Kenosha, Wisconsin

Spring, 2015

Abstract

The purpose of this study was to predict and test the different conceptualization of time in German as done by German native speaker and L2 German students, who are English native speakers. The overall aim was to determine the cross-cultural difference of conceptualizing time in both languages and to predict and test students' reaction to this difference. Furthermore, the study questions the possibility of an acquisition of cognitive perspectivization in general. It also aims to draw some general conclusions for cognition, second language acquisition, and the foreign language classroom.

The research tested this issue using quantitative measurements and utilized a test of the "Wednesday's meeting has been moved forward" scenario in order to determine if American students of German at an advanced level show the same tendency as German native speakers to use the intrinsic temporal frame of reference. The results showed that the students followed the pattern of their native language English instead of German. Once a frame of reference was chosen, participants consistently used this frame in German and English. Furthermore, there was not difference in results between students who had a long-term study abroad experience and students who did not.

The implications of these findings are that while the possibility that students can acquire the conceptualization of abstract ideas like time still persists, the probability of an acquisition of the perspectivization behind the conceptualization is very small. In order to acquire a deeper understanding of the language and the cultural experience inherent to all areas of the language, students should receive more focused instructions based on an the framework of Cognitive Linguistic which views language as a set part of cognition that will help train and foster cognitive abilities.

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Chapter I

Introduction

Background

The world has become smaller. The growing pressure of globalization forces nations to grow closer. As a result, acquiring a different language and knowing how to interact with different cultures has never been as important as it is now. Therefore, second language acquisition (SLA) can be crucial for the social and economic success of a person. Furthermore, SLA serves as a means to not only acquire a language but also a new way of thinking that is inherent to the language studied and can enhance one's own perspective. As a consequence, students often must face the daunting challenge of acquiring a foreign language in High School or College. The goal is of course to experience a successful and fast language acquisition, 'fast' being the key word here. For many students this does not seem to occur in a language classroom. What is the reason for this? How do we acquire language and what makes it so hard for us to acquire language? And does the current research offer some undiscovered methods that could be utilized to help the acquisition process along? These are all questions that have been of interest for generations of language teachers, and that every generation has to constantly ask again.

As a result, this paper was motivated by three central questions the researcher developed during her first teaching experience: First of all, do we actually think differently depending on our native language? Second of all, does this influence our acquisition process? Thirdly, if we do "think differently", are we able to change this cognitive perspectivization of our native language when we acquire a foreign language? These questions are of essential importance to finding an answer about the nature of the process of language acquisition. Admittedly, these questions are beyond the scope of a master thesis seeing as they basically asks the most fundamental question

of linguistic studies itself: How does language work? Nevertheless, they are the central idea at the core of the field of Cognitive Linguistics (CL) and gave form to the overall topic of this thesis: A comparison of the usage of conceptualization of temporal frames between advanced foreign language students of L1 English and native speakers of German in order to estimate if native speakers of English are not just able to speak correctly but also in accordance with a German native speakers perspectivization of time when it differs significantly from English.

It is the understanding of Cognitive Linguistics that language is the direct result of our individual cognitive development. That cognitive development is formed by cultural models, which are “conventionally constructed and shared cognitive resources of a community that are formed and transformed as a consequence of the endless negotiation that transpires as the members of a community [live]” (Lantolf, 1999, p.31; Shore, 1996). This development might also include personal models, which are our unique life experiences (Lantolf, 1999). The combination of these two models results in unique language codes that are not just tools we use to express our thoughts, but are instead representations of how we structure our cognitive processing. Basically, the way people view the world does not just depend on the ability of their eyes to see it and their brains to process it. As soon as people observe the world, they are already observing it according to the particular cultural model, transported by language that formed their cognitive abilities. To be even more precise: The language somebody speaks will significantly shape how he or she thinks about the world and basic concepts like time, space, quantities, abstract concepts, etc. (Evan, 2009)

Certainly, the idea of language shaping thought, which can be traced back to the Sapir-Whorf theory and linguistic relativity, has not been proven, and has its strong opposition especially in form of the theory of Universal Grammar developed by Chomsky. Nevertheless,

even though people might not ultimately process thoughts that vary according to language, they do conceptualize ideas in different ways according to their cultural background. These conceptualizations have to be acquired during the study of a foreign language. As a result, theories of Cognitive Linguistics and their exploration of the different ways of conceptualization are of use in the language classroom. (Fulga, 2012; Niemeier, 2004)

These ideas drove the researcher to develop two slightly different questions connected to the idea of conceptualization defined by Cognitive Linguistics. First of all, do students of a foreign language acquire the cultural model, and, according to the framework of Cognitive Linguistics, a different way of thinking inherent to a language; and secondly, are they able to achieve this acquisition in a foreign language classroom without studying abroad? Cognitive Linguistics proposes that the acquisition of language-inherent-concepts is the acquisition of culture since concepts and conceptualizations are the result of individual experiences and cultural influence. At first glance this suggest that a study abroad will be necessary for the acquisition of language concepts, but the result achieved in this study give some reasonable doubt to this idea. Thus, taking a closer look at how advanced German students, who are English native speakers, conceptualize certain topics in German in order to estimate whether they are able to actually use concepts that are inherently different in their mother tongue correctly in German, might be an appropriate way to gauge how close they come to a native speakers perspectivization. The comparison of L1 and L2 conceptualization might also allow us to estimate how close learners come to acquiring culture of language inherent to the second language as well.

Statement of the Problem

Whether one agrees with the current research of Cognitive Linguistics or one tends to have an outlook on language that is more in line with universal grammar, the fact remains that every language teacher and student has encountered issues with not just correct use of language but appropriate use of language. Students are told to “think in the foreign language”, but even at an advanced level of acquisition, students are not necessarily able to comply with this request. Even though a student’s use of language might be correct, his or her pattern of speech can still identify her or him as belonging to a different linguistic background (Waara, 2004). Studying abroad is often seen as the only way to achieve appropriate language and thus, many people perceive the language classroom as limited when it comes to language acquisition. The question of this thesis is: Is this really true, and is studying abroad a greater contributing factor than the language classroom can be?

The researcher suggests that a sign of students’ inability to acquire a native speaker’s way of conceptualization does not just include the correct usage of idioms and lexicons, but that even the wrong usage of prepositions, cases, and the way students describe the temporal or spatial domain are a consequence of this inability. Cognitive Linguistics perceives all of these grammatical forms as based on a shared cultural experience of the world that is transmitted by the social group that a person grows up in through the shared perspectivization of universal experiences (Dirven, Wolf & Polzenhagen, 2007). As a result, it might be very helpful to take a closer look at mistakes advanced speaker make in German that are not necessarily grammatically incorrect, but are not in accordance with a German native speaker’s cultural model. Firstly, this might be a tentative way of testing for acquisition of perspectivization, its plausibility and inner workings. Secondly, it will make a helpful contribution to an instructor’s knowledge of reasons

for specific mistakes of English students in German. Thirdly, results will also have implications for strategies in the classroom and the acquisition of different concepts in a language.

Fortunately, a lot of research has been done on how different languages conceptualize certain topics differently, including quite a bit of research on cross-linguistic differences between German and English. Furthermore, this research has been extended to examine the difficulties German L2 speakers of English encounter while studying German. Nevertheless, research has been sparse when it comes to problems that L1 speaker of English might face as a result of cross-linguistic differences of the two languages. Therefore, in order to be able to draw any conclusion for English L2 speakers of German from the cross-linguistic research already done, more specific research has to be done.

Purpose of the Study

The purpose of this study is to predict and test the different conceptualization of time in German as done by German native speakers and L2 German students, who are English native speakers. The overall aim is to determine the cross-cultural difference for conceptualizing time in both languages and to predict and test students' reaction to this difference. Furthermore, the study questions the possibility of an acquisition of cognitive perspectivization in general. It also aims to draw some general conclusions for cognition, second language acquisition, and the foreign language classroom. The specific theme of time has been chosen because time is a language universal topic whose preferred conceptualization can have consequences for many areas of language study. Moreover, the concept of time does share certain properties in English and German but offers a specific difference in conceptualization that makes it ideal for a thorough comparison.

Furthermore, the study will try to explore whether there is a significant difference between the students who spend an extended time abroad and the students who mostly accumulated their German in a language classroom. This is intended to determine whether the degree of exposure did lead to a better understanding of conceptualizations, which research tends to negate. (Boroditsky, 2007; Lantolf, 1999)

This study will not be able to prove that humans conceptualize and, as a result, ultimately think differently depending on the language they speak. It will also not be able to prove the possibility of actually acquiring “new ways of thinking” through a foreign language. That would be, as has been mentioned, far beyond the scope of a Master thesis. It might be able though to make a small contribution to the process of finding the answer for these questions.

Overall, the research will focus on utilizing the research done on different conceptualizations of English and German to make a further inquiry about difficulties English L1 speakers have in German. It has already been stated that research has been focused on difficulties of L2 students of English as well as cross-linguistic differences, which does not necessarily have any consequences for English native speakers’ acquisition of a foreign language.

Research Questions

1. What are the predictions concerning the acquisition of culturally specific concepts of English native speakers in German according to the framework of Cognitive Linguistics?
2. How do English students actually conceptualize cultural specific concepts, specifically time, in German and what are the difficulties they face?
3. Is there a difference between students who acquired their language solely in a language classroom and the students who had prolonged exposure to the language through an extended study abroad experience?
4. Do advanced students of a foreign language acquire not just correct speech but also the perspectivization behind concepts inherent to the L2 that differ from their L1? To be more precise, if students use the correct conceptualization of time in German, did an actual shift in their perception occur?

Hypothesis

Null Hypothesis H_0 (1): The proportion of advanced-level students of German, who preferred the intrinsic temporal frame of reference (t-FoR), is the same as or larger than the 90% of German native speaker who utilize this t-FoR.

Research Hypothesis H_1 (1): The proportion of advanced-level students of German, who preferred the intrinsic t-FoR, is smaller than the 90% of German native speaker who utilize this t-FoR.

Null Hypothesis H_0 (2): There is no significant difference in the usage of t-FoR between students who studied abroad and students who did not study abroad.

Research Hypothesis H_1 (2): There is a significant difference in the usage of t-FoR between students who studied abroad and students who did not study abroad.

Null Hypothesis H_0 (3): The proportion of participant's choice of temporal frame of reference is the same in English and in German.

Research Hypothesis H_1 (3): The proportion of participant's choice of temporal frame of reference is not the same in English and in German.

Chapter Summary

The first chapter of this study introduced the background of the research study as well as the connection of the research to current issues in the foreign language classroom. Moreover, the purpose of this study was proposed and the research questions as well as hypotheses were stated. Based on the theoretical framework of Cognitive Linguistics, the purpose of this paper is to predict and test the different conceptualization of time in German as done by German native speakers and L2 German students, who are English native speakers. The overall aim is to determine the cross-cultural difference for conceptualizing time in both languages and to predict students' reaction to this difference. Furthermore, the study discusses if there is a difference between students who studied abroad and students who did not. It also proposes some general implications for second language acquisition as well as the foreign language classroom. The literature and prior research utilized for this study are presented in the next chapter.

Chapter II

Literature Review

Overview

The purpose of this paper is to predict and test the different conceptualization of time in German as used by German native speakers and L2 German students, who are English native speakers. The overall aim is to determine the cross-cultural difference for conceptualizing time in both languages and to predict students' reaction to this difference. Secondly, the research tested if the difference would result in English-speaking students of German conceptualizing incorrectly, or if they would follow the pattern of a native speaker. Finally, the researcher drew some general conclusions for cognition, second language acquisition and the foreign language classroom.

The following chapter will explain and validate the researcher's inquiry of the following two questions: First of all, do advanced foreign language students of L1 English not just speak correctly but also in accordance with a German native speaker's perspectivization and cultural model of time when it differs significantly from English? Secondly, can students achieve this in a language classroom? The literature review starts out with a general explanation of Cognitive Linguistics, puts the field into context, and explains the consequences the research of cognitive linguists has for language study in general and for second language acquisition in particular.

Furthermore, chapter 2 outlines the different ways of conceptualization defined in cross-linguistic studies. This includes the study of language universals, conceptual metaphors as well as the conceptualization of the spatial realm and time. Moreover, the study gives a more detailed outline of the research done on the conceptualization of time across language with a focus on cross-linguistic differences between English and German. The literature review closes with a

review of some implications. Examples of usage in the language classroom are made.

1. Cognitive Linguistics in Context

In order to acquire a better understanding of temporal conceptualization in language, the researcher will first establish the theoretical framework that is important for the origin of these ideas and for any further understanding of their usage. As a result, the review will give a quick overview of Cognitive Linguistics in general, explain why it is, more than any other theory, connected to cultural acquisition, and sum up the most important research done in the field.

1.1. The Framework of Cognitive Linguistics

Cognitive Linguistics is not one specific theory. Rather, it is a set of theories and hypothesis that share common characteristics. These common characteristics are three-fold according to Geeraerts and Cuyckens (2007) and their introduction of Cognitive Linguistics in *The Oxford Handbook of Cognitive Linguistics*. The first characteristic is the **primacy of semantics**, which refers to the idea of language being meaning-based and dependent on usage. The second characteristic is the **encyclopedic nature of linguistic meaning**, which refers to the assumption that language is an essential part of our general cognitive system. Thirdly, language is the portrayal of a highly subjective view of the world through the **perspectival nature of linguistic meaning**. (Geeraerts & Cuyckens, 2007, p.5)

The concept of **primacy of semantics** indicates that Cognitive Linguistics places a high value on meaning in language. It is seen as the basic function of language and therefore can never be separated from the study of linguistic systems.

The foundational point is simply that language is all about meaning. As it says in the Editorial Statement of the very first issue of the journal *Cognitive Linguistics*, published in 1990, this approach sees language ‘as an instrument for organizing, processing, and conveying information’ – as something primarily semantic, in other words. (Geeraerts, 2006, p.3)

As a result, Cognitive Linguistics is considered to be a functionalist approach seeing as it is fundamentally usage-based. Every description of form has to consider the function that is involved in its usage. It sets itself apart from other functionalist movements by placing emphasis on the semiological function of language. This marks the first major differences to formal approaches of language like the theory of **Universal Grammar** and the framework of **Generative Grammar** (GG) developed by Chomsky (1965; 1995). Those formal approaches look at language as a tool that has to be divided into its separate entities and disciplines. Such division is undertaken in order to define the set possibilities of a language without necessarily considering the usage of these entities. According to GG, language can exist apart from meaning. Cognitive Linguistics acknowledges the usefulness of certain classical characterizations, like for example morphology, syntax and phonology, but follows a **Generalisation Commitment** (Lakoff, 1990), meaning that the overall aim of Cognitive Linguistics is to find a common process of structuring language and linguistic categorizations. Cognitive linguists believe that there are “fundamental organizational features” (Evans & Green, 2006, p.27) applicable to all categorizations in a language. Also, all aspects of language, even grammar, is meaningful. As a result, language cannot be studied without the context of meaning. Meaning is given through the process of conceptualizations. This will be described in detail in a later section.

The second characteristic mentioned is the **encyclopedic nature of linguistic meaning** as well as the fact that language is not perceived as a separated cognitive ability. It is very important to understand that Cognitive Linguistics “rejects the modular theory of the mind” (Evans & Green, 2006, p.41). Language is not a separated cognitive ability; instead language is a tool built according to our cognitive abilities, and is used to mediate the world. This is the second great difference to the formal approach of Generative Grammar, which, in theory, is a cognitive approach as well (Langacker, 1991; Smirnova, & Mortelmans, 2008). While Generative Grammar sees language as a result of our cognitive system, Cognitive Linguistics has a view of language as a mediator or extension of our mental structures. To quote Geeraerts and Cuyckens again: “Whereas Generative Grammar is interested in knowledge *of* the language, Cognitive Linguistics is so to speak interested in knowledge *through* the language.” (2007, p.6). As a result, the overall aim of Cognitive Linguistics is to draw a clearer picture of cognition itself. As the pioneers of Cognitive Linguistics Lakoff and Johnson put it: “Since communication is based on the same conceptual system that we use in thinking and acting, language is an important source of evidence for what that system is like” (1980, p.3). This makes language a field of inquiry for cognitive science in general. Thus, whatever Cognitive Linguistics proposes in terms of linguistic categorization has to be in line with cognitive sciences. Therefore, linguistic meaning is encyclopedic in nature and a reflection of all knowledge of human cognition that includes cultural, personal and physical knowledge (Evans, & Green 2006; Geeraerts, & Cuyckens 2007; Lakoff, 1993). According to Lakoff and Johnson (1999), the fact that we think and act in metaphorical ways and are actually even incapable of expressing abstracts without making use of concrete ideas, is evidence for the idea of language as an extension of human cognition. As a result, Lakoff (1990) sees all avenues of the enterprise of Cognitive Linguistics as under

obligation to follow, what he calls, a **Cognitive Commitment** which means seeing language as mirror of general cognition.

The last defining characteristic of Cognitive Linguistics is the **perspectival nature of linguistics** and the claim that language is not and can never be an objective portrayal of the world. People create a subjective portrayal of an objective situation depending on their individual usage of the various linguistic tools that are at their disposal. These tools, also referred to as language, are an intermediate reflection of cognitive conceptualization and are limited or formed by personal cognitive development. Shore (1996) defines personal and cultural models as the origin of language-specific conceptual thinking. Personal models are the result of a human's individual life experiences while cultural models are the shared cognitive resource of a community" (Lantolf, 1999, p.31). The same objective situation can be expressed and thought about in very different ways, also called "construals", depending on individual experiences and linguistic tools. (Langacker, 2007 p. 435; Verhagen, 2007). As a result, linguistic meaning is perspectival; it reflects the perspective of human cognition shaped through cultural models, personal experiences, and physical embodiment. It is not an objective reflection of the world, but a reflection of the world people perceive. Evan and Green summarize: "[Language reflects] our unique human construal of the world [and our] view of world created by embodiment" (2006, p.41).

The idea of an embodied mind is especially important to cognitive linguists (Langacker, 2008; Lakoff and Johnson, 1980). Cognitive science views the human embodiment as a fundamental contributor to human perception and cognitive development. To put it in simpler terms, we experience the world as we do because of our embodiment. This embodied experience results in embodied cognition. Humans use their specific bodily experiences to structure abstract

thought. Mark Johnson (1987) was the first scholar to evaluate the effect of the theory of embodiment on language. He identifies **image schemas** as one way in which embodiment is of consequences for mind and language. An image schema is, for example, the basic conceptualization through sensory-perceptual experience of balance, containment or motion. An example is the fact that humans use the UP and DOWN motion to explain abstract concepts like emotions or relations between objects. According to Johnson (1987) as well as Lakoff (1993), abstract domains are understood through the concrete domains of image schemas. Thus, humans depend on them for thought processing. Another example for this is the conceptualization of time. When people think of time, they image it in three-dimensional terms; examples are the idea of time flying, or the act of moving an appointment from one point to another. These references are clearly representations of time as something in space that can be touched or constrained (Lakoff & Johnsons, 1980). As soon as a person tries to find another way of expressing or even thinking about time, they reach a cognitive limit. People cannot perceive the 'raw' abstract concept of time, so they structure it according to the terms embodiment enables them to use. The idea of embodied experience shaping the reality transmitted by language is called **Experiential Realism** (Evans & Green, 2006). It also means that language cannot be separated from experience, be it of physical, personal or cultural nature. All of these shape our cognition. The big question this raises, and which will be discussed in a later section of the literature review, is how much influence language has on our cognitive formatting, and if it might limit or even shape our thought process and perception (Langacker, 2008). Basically, does language not only reflect thought, but does the experience of a categorization that is specific to a culture shape the way we think? The theory of Universal Grammar suggests that we all share certain universals and that we are set in certain ways in our cognition. Cognitive Linguistics on the other hand rests on the

assumption that cognitive abilities share human embodiment, but that the vastly different experiences humans can have through embodiment and cultural influences result in different ways of cognition and different conceptualization across languages. The researcher will elaborate this point in a later section of the literature review.

To summarize again, Cognitive Linguistics is a framework of theories which views language as primarily meaning and usage based. This is especially of interest for its application in the language classroom and will be mentioned again. Furthermore, Cognitive Linguistics sees language as the outlet of cognitive categorization and as a result, as one way to study cognition itself. Second language acquisition is an area of language studies that would be of tremendous use to gather more data on this relationship between mind and language, but research in this regard has been sparse. It has also been stated that language is based on experience or as Lakoff and Johnson stated: “It would be more correct to say that all experience is cultural through and through, that we experience our ‘world’ in such a way that our culture is already present in the very experience itself” (1980, p.57). As a result, Cognitive Linguistics places a high importance on culture for language and offers new ways of accessing it. Lastly, the framework holds language as highly subjective portrayal of reality seeing as the human mind is structured in terms of our embodied experiences, cultural models, and personal models. The issue this raises is the nature of the relationship between language and thought and will be discussed next. Any conclusion reached could offer more holistic approaches to language teaching that involve every part of cognition.

1.2. Linguistic Relativity

The framework of Cognitive Linguistics has been established. One question that has been raised along the way and is of great importance for the field is the question of the exact nature of the relationship between language and thought. Seeing as this study is interested in the acquisition process of a specifically German conceptualization of time and a foreigner's usage and acquisition of this concept, it is important to establish the current research consensus of the relationship in the field. After all, the cultural and cognitive relevance of different conceptualization carries implications for second language acquisition as well (Zhuo Jing-Schmidt, 2010).

One of the key questions of Cognitive Linguistics that research is highly focused on is: Do humans not just use different concepts to express thoughts, but do the concepts they use limit or even lead their thought process? If that is the case, can they actually acquire the thought process of a different language or at least become more aware of the limitations of their own language? Many Cognitive Linguists have found the answer in the form of **linguistic relativity**, a theory concerned with the connection between language and thought. The following will explain the origins of the theory, give a brief impression of the problems with empirical evidence and describe research in the field concerned with cognition and language.

The theory of linguistic relativity has its roots in the writings of Humboldt and his theory that every language creates specific view of the world or "Weltsichten" which are a direct result of a human's cultural experiences (Trabant 2012).

Da aller objektiven Wahrnehmung unvermeidlich Subjektivität beigemischt ist, so kann man, schon unabhängig von der Sprache, jede menschliche Individualität als eigenen Standpunkt der Weltansicht betrachten. [...] da auch auf die Sprache in derselben Nation eine gleichartige Subjektivität einwirkt, so liegt in jeder Sprache eine eigene Weltansicht. Wie der einzelne Laut zwischen den Gegenstand und den Menschen, so tritt die ganze

Sprache zwischen ihm und die innerlich und äußerlich auf ihn einwirkende Natur.
(Humboldt, 1836, p.9)

[Because every objective perception is inevitable partly subjective as well, human individuality, regardless of languages, could be regarded as its own point of view of the world. [...] seeing as a similar subjectivity influences the languages of one nation, every language has its own view of the world. Like a particular sound mediates the relationship between man and object, language mediates between man and the outer and inner nature affecting him.]

Humboldt's idea of language and its cultural dependence are of course more of a philosophical statement than a solid linguistic theory. Therefore, the actual theory of linguistic relativity has its linguistic roots in the research done by Sapir and Whorf. Especially Whorf intensely studied the native language of the Hopi, a Native American culture. According to Whorf, the Hopi use a conceptualization of time and space that is very different from western conceptualizations. As a result, their mental process of categorizing is different. Therefore, Whorf reached the conclusion that human's view of the world is build upon the speech agreement of a cultural community and depends on the community's linguistic perspectivizations.

The phenomena of language are background phenomena, of which the talkers are unaware or, at the most, very dimly aware [...]. These automatic, involuntary patterns are not the same for all men but are specific for each language and constitute the formalized side of the language, or its "grammar" - a term that includes much more than the grammar we learned in the textbooks of our school days. From this fact proceeds what I have called the "linguistic relativity principle," which means, in informal terms, that users of markedly different grammars are pointed by their grammars toward different types of observations and different evaluations of externally similar acts of observation, and hence are not equivalent as observers but must arrive at somewhat different views of the world. (Whorf, 1956, p. 221)

This idea has been heavily criticized and with good reason. Sapir and Whorf's hypothesis of language as something that might even control our ability to think has never been empirically proven. Especially in its strong form of linguistic determinism, it seems highly implausible. Studies done on a New Guinean tribe called Dani, which were conducted by Rosch (1975; 1978)

and again by several other scholars (Lucy & Shweder, 1979), undermine the Sapir-Whorf hypothesis greatly. Even though the language of the Dani has only two words to express different colors, they do not have any difficulties acquiring the multitude of differentiations between colors in English. Furthermore, even though Universalism has not yet been able to prove the existence of ‘grammatical’ universals, there does seem to be some agreement on certain conceptualizations across languages also called **semantic primes** in Cognitive Linguistics (Dirven & Verspoor, 2004). This contradicts the idea of the development of cognition as being solely dependent on language. An example is the conceptualization of time through spatial means. Even though the actual use of spatial means can vary drastically and result in very different ideas of time, the image schema of TIME IS SPACE seems to hold true for many languages (Evans, 2003).

The consequence is that the current research is less focused on the question of the plausibility of linguistic determinism, instead the focus, especially in Cognitive Linguistics, has shifted towards the weaker theory of linguistic relativity. This theory does believe that there is a possibility that different languages influence the development of cognition, but it also believes that cognition can exist separately from language. The basic question asked is how are the domains of linguistic cognition and other domains of cognition connected?

One answer to this question is that thinking and the ability to speak are the same and that humans are only able to think when they speak. In this case, the only way to think is to speak and humans would be unable to think in any other way besides through language. That would be in line with linguistic determinism and seems highly implausible (Gleitman & Papatragou, 2013). A second option according to Hinzen (2012) is that language is a factor in cognition because it enables human’s rational thought process. He believes grammar to be a representation of human

thought process. It is useful to make an inquiry as to how thoughts in general are structured. As a result, the ability to speak is essential for specifically human cognition. This version is more in line with linguistic relativity. Interestingly enough, the idea of a dependency between the ability to speak and think at the same time fits universal theories of language and relative theories. The difference between both of them is that Universalism believes that language rests on Universal Grammar and that humans share a common cognition regardless of the language they speak, and that language is the result of a separated Language Acquisition Device (Chomsky, 1965; Van Patten & Benati, 2010). Relativity theories believe that we might share some universals in language and might even share certain linguistic conceptualizations as a result of embodiment. At the same time, the differences between languages that are a result of different cultural experiences as well as cognitive development create a difference in cognition. (Dirven & Verspoor, 2004)

Experiments on the matter as well as empirical studies conducted have not yet been able to produce conclusive evidence for any of the theories. Instead, the evidence collected from different research domains paints a very conflicted picture of the relation between thought and language and one reason for this inconsistency is believed to be the limitation of research tools (Gleitman & Papatragou, 2013). This is an issue linguistic science as a whole faces: how can somebody reach solid conclusions if the subject that is being researched, which is language, is also the tool used to conduct the research? As a result, researchers in the field of Cognitive Linguistics have great difficulties trying to prove that different conceptualization in language influences cognition. A reason for this is that scholars trying to research this issue often have an extremely hard time conducting experiments that can touch upon human cognition without utilizing language even in the form of silent language. Basically: It is hard to research the act of

thinking and potential differences in cognition because humans in general cannot express thoughts well without using language. Humans believe they have a grasp on how their thought process works, but they are actually severely impaired by their dependence on language (Fuhrman & Boroditsky, 2010; Gibbs, 2007). It does not mean that humans are incapable of cognition without language, but it does mean that awareness of the cognitive processes separated from language is not easily studied. Dan Slobin (1996) introduced the discourse approach of “thinking for speaking” as a solution for exactly this issue.

To summarize, both the theory of linguistic relativity and Universalism might actually be correct. There is empirical evidence (Choi & Bowerman, 1991) that humans of different linguistic background categorize differently depending on the language they speak. Still, humans also seem to share universal concepts or as the cross-semantic comparison of Cognitive Linguistics likes to call them: image schemas. This suggests that some fundamental concepts are represented in every language. Furthermore, the theory of embodied cognition also suggests that humans do share some fundamental experiences. These might not result in the same linguistic conceptualizations but must result in shared cognitive abilities. The resulting differences imply that second language acquisition might actually require new skills of categorization. Still, the theory of embodiment does not yet make any inquiries as to the possibility of a conceptual acquisition of these categorizations.

The most important difference to remember are that either language is seen as a separated entity to general cognition or a direct reflection of it. If the first theory is the case, language almost certainly has no influence on cognition. The second theory leaves more options because it can imply that language does influence individual cognition. It is still not proof of any influence on language on cognition. As a result, mixed versions of both theories are present in both

Cognitive Linguistics theories and Universal Grammar theories. Therefore, the fields have started to come into contact during the last ten years, but are still distinct by their stand on linguistic relativity and the influence of language on thought. Seeing as there is still no clear answer to these questions in sight, Dan Slobin (1991; 1996) developed the discourse approach of “Thinking for Speaking”, in order to eliminate some of the problems research faces when looking at language and cognition. This approach is also more useful to actual application in a foreign language classroom. Next, the researcher will take a look at this specific theory and how it might be of help when facing the issues that have been identified during research of thought and language.

1.3. Thinking for Speaking

The origin of the theory of Linguistic Relativity and the issues the theory faces has been introduced. Even though this topic is still of great interest to linguistics studies, the linguist Dan Slobin (1996) introduced the concept of **Thinking for Speaking** as a solution to some of the problems faced by research concerning cognition and language faces.

The concept of Thinking for Speaking was developed by Dan Slobin. Slobin realized that research and experiments trying to reach any conclusion concerning the relationship between language and thought faced the issue of finding “mental structures that underlie perception, reasoning and habitual behavior – as measured outside of the contexts of verbal behavior” (Slobin, 1996, p.75). The biggest issue research concerned with language and thought faces, according to Slobin, is that both these units are too static and not easily defined. While language might more or less be described as the sum of structures studied by linguistics, thought or cognition is not as easily characterized. Slobin suggest using the more active form of these

words, ‘thinking’ and ‘speaking’, in order to have more dynamic concepts. Instead of looking at the general influence grammatical categorizations might have on thought, ‘Thinking for Speaking’ suggest that research should take a look at the “the activity of thinking [that] takes on a particular quality when it is employed in the activity of speaking” (Slobin, 1996, p.76). The focus shifts from the very broad and unclear ideas of language and thought to the instance of thinking while in the process of speaking. Slobin argues that the “selective schematization of [...] concepts” (1996, p.75) inherent to language definitely leads our thought process during its usage in speech. Therefore, depending on the language a human uses, he or she will encode different aspects of a concept during speech. These different foci are of consequence for the process of ‘thinking’. Slobin uses the description of motion events in different languages as an example. He bases his examples on Talmy’s typological differentiation of language as either verb-framed languages or satellite languages (Talmy, 1985). Slobin made the observation that different languages encode direction and motion using different strategies. Slobin continued this by pointing out that this also applies to encoding the manner of motion:

- (1) a. The dog *ran* into the house
- b. Le chien est entré dans la maison *en courant*
 ‘The dog entered the house *by running*’ (Slobin, 2007, p.906)

French is a verb-framed language while English is a satellite-framed language. French uses an adjunct gerund to express manner of motion. English encodes manner of motion using a finite verb. This has implication for how a speaker perceives the situation according to Slobin. It is important to notice that Slobin makes it very clear that just because certain languages do not have grammatical means of encoding certain concepts does not mean that these languages cannot express these concepts. An example is the use of progressive tenses, which is possible in English but not in German. German still has means of encoding progressive, but these means are not

encoded in tense (Hilberink-Schulpen, Nederstigt & Starren, 2014). It does however suggest that these concepts are not salient and that, as a result, the differences in grammatical categories influences our ability of thinking during the speech process. (Slobin 1996; 2007)

The theory of thinking for speaking allows the study conducted for the purpose of this paper to make implications about cognition while still involving language during the testing process. It is also especially useful to help understand and foster the ability of connected discourse in a L2. All statements made about language relativity, the influence language has on cognition, and about second language acquisition will only tentatively explore the realm beyond the framework of Thinking for Speaking as established by Slobin.

1.4. Implications for Second Language Acquisition

After establishing the framework of Cognitive Linguistics as well as the different theories of the relation between Cognition and Language, the research has to turn to the implications for second language acquisition (SLA) and the relation of culture and language. After all, the goal of this study is to make an inquiry into the language acquisition process of English students of German and to draw some general implications for SLA and cognition.

First of all, what does a student have to acquire when studying a foreign language according to a theory of Cognitive Linguistics? He or she has to acquire the concepts that comprise the system which result in linguistic patterns and units. According to Generative Grammar, these patterns are arbitrary. A Cognitive Grammar will stress that every 'arbitrary rule' is part of the system of concepts specific to a language. Not just the lexicon but also grammar is meaningful. Thus, a student will have to acquire the concepts of a linguistic community that are the result of universal experience and cultural models. Because these

concepts are a mixture of universal and individual factors, certain concepts might be universal but others very language specific. Let's take a look at the simple example of the universal event 'eating'.

Jing-Schmidt (2010) explains that 'eating' is a 'universal' event. Different languages might categorize it very differently though depending on their cultural models. For example, German differentiates between *essen* (which generally refers to humans) and *fressen* (which generally refers to animals). *Fressen* could be interchanged for eating, but only if the speaker wants to imply that somebody *eats like an animal*. As a result, an English student has to realize that the German language has more than one concept of eating. This is a rather small example that would probably be easily understood by the students. However, it becomes much more complicated when the concept is of abstract nature like the spatial representations through preposition. In an extension of their experiment in 1991, Bowerman and Choi (2003) showed that our spatial concepts are probably language specific. Concepts like IN and OUT seem universal and they probably are, but they can evolve in very different ways in language. According to Bowerman and Choi, these small differences influence our actual spatial categorization. This makes second language acquisition such a highly difficult process. It does not just require the study of familiar concepts, which are simply not used in a person's native language; it also includes the study of completely 'new concepts'. (Lowie, Verspoor, & Seton, 2008)

Regardless of any other implications of applied Cognitive Linguistics in the classroom, the general idea of Cognitive Grammar should resonate with all language students and teacher. Even knowing and being able to use syntactical structures correctly will not automatically result

in pragmatically correct speech. L2 learners have to learn the social and cultural context inherent to a language as well. (Langacker, 2008)

A second point to consider are the implications of the relationship of language and cognition for SLA. The logical consequence of asking the question ‘does language shape thought?’ is to ask if we can acquire the culture that fostered the experience, which developed our cognition. An easier way to say this: Can learning a new language change the way we think and can we acquire the culture of a language?

In general, the consensus when answering the question tends to be negative. According to the framework of Cognitive Linguistics, cultural experiences and knowledge are an important part in language development and while people might share certain universal concepts, they cannot acquire the cultural experiences a native speaker possesses (Dirven & Verspoor, 2004). As a result, they cannot acquire their instinctive conceptualizations. As Dirven & Verspoor put it: “[The] pattern of native language imposes patterns of habitual thinking.” (2004, p.144). This also means L2 learners can never really acquire a native speaker’s Thinking for Speaking ability. Even when utterances are syntactically correct they can be pragmatically incorrect. Waara calls these units “learner constructions” (2004, p.53). Even extended stays abroad and cultural immersion do not really result in an acquisition of cultural preferences during the usage of the foreign language (Szalay & D’Andrade, 1972; Szalay & Maday, 1983). This has several implications for this study of English students’ conceptualization skills in German. The predicted outcome is that they will not be able to follow a native speakers’ conceptualization of time. It is also the reason why comprehension is tested and not the production of language. Producing correct sentences does not mean a L2 learner actually have acquired the concept. They might

simply imitate from experience.¹ Possible reasons are interference of the native language's concepts as well as their age during the acquisition process. An interesting study done by Lera Boroditzky (2007) on Mandarin and English speaker's conceptualization of time has concluded that the earlier in life the immersion in language occurred, the better participant's skill of conceptualization. This is in accordance with studies that tested the correct acquisition of syntactically correct grammar (Johnson & Newport, 1989). The theory of Universal Grammar suggests that the reason for this is that children's language acquisition device is still 'neutral' and has to be 'programmed' according to a language's grammar (Chomsky, 1965).

Cognitive Linguistics on the other hand traces this phenomenon back to cognitive development in general. According to Cognitive Linguistics, the fact that children apparently do not just learn grammar but are actually able to acquire foreign concepts is in line with neuroscience. Children can still acquire concepts because their brains are still highly suggestible to change. The mature brain can evolve and change, but the growth requires specific training of the brain (Jensen, 2005). As a result, while adults are able to acquire the patterns of language, they are not able to acquire the underlying process of conceptualization based on a change in perspectivization without cognitive training. The development of their cognitive functions has already occurred and they can no longer experience the cultural influence that resulted in native speaker's conceptualization.

All of this is still very much just theory and lacks empirical evidence, which is why scholarly exchange between the areas of cognitive science are important for further research in CL. For this study this means that the more exposure students had to the target language, the higher the probability that they give a correct answer.

¹ One might argue that the fact that even imitation from experience is acquisition, but this discussion would go beyond the scope of this paper.

It also has to be noted that Boroditsky (2007) proposes that language is probably the most influential on cognition when generating abstract thought. Prior research on color conducted by Rosch (1975) conflicted with her results that the native language's conceptualization of time persists even when thinking in a foreign language. The reason for this might be that the active perception of color develops before humans actively start to perceive and express time. A child sees colors, but it takes a much longer time for children to grasp the concept of time (Boroditsky, 2007). This is one of the reasons why time was chosen as a topic for the research study. Moreover, this idea of language acquisition is also in accordance with a learner's experience. A rather old but still very informative study by Kolers done in 1963 showed that while students might easily be able to use and group concrete words like poodle → dog and butterfly → nature, they have a much harder time grouping abstract words like emotions. The reason being that these can be very culturally specific.

These are some of the issues that Cognitive Linguistics addresses concerning second language acquisition. On the other hand, the framework also offers many new ideas about how to teach language and culture in new and different ways. The next section of the paper will try to introduce some of these concepts.

2. The Use of Conceptualization in Language

The framework of Cognitive Linguistic has been established, but in order to understand the implications of conceptual differences in language, a clear picture of the idea of conceptualization and perspectivization in Cognitive Linguistics has to be drawn. Furthermore, the researcher will touch upon different areas of conceptualization in language in order to

introduce important research that is of consequence for current research on the conceptualization of time in German and English.

2.1. General Principals of Conceptualization

The expression **conceptualization** has been used quite a bit over the last few pages, but what exactly is conceptualization and why is it such an important expression for Cognitive Linguistics? The Oxford Dictionary offers two definitions of the word conceptualization:

1. *The action or process of forming a concept or idea of something.*
2. *An abstract idea or concept of something.*

Unfortunately, these are very broad definitions. Maybe a better clarification is to say that conceptualization is the act of turning an abstract idea into a concept in order to facilitate better comprehension. Humans have ‘concepts’ of abstract ideas and conceptualization is the act of making something into a concept. Humans have a concept of time and conceptualization is the act of creating specific forms for the concept of time. In Cognitive Linguistics, conceptualization usually could be equated with meaning. Cognitive linguists find meaning in every linguistic unit by looking at the conceptualization used in a unit’s generation; therefore, the concept, which units of language are based on, gives meaning to these units (Smirnova & Mortelmann, 2010). To specify, meaning in this context refers does not to situational meaning during the moment of speech. It refers to the fact that seemingly random grammatical structures, like prepositions, have autonomous meaning, which was given to them by the concept that generated them. An example would be the CONTAINER metaphor, which refers to the fact that we tend to think in terms of IN and OUT and is the result of human embodiment. It is one of the most basic concepts that gives meaning to many seemingly arbitrary linguistics units, like prepositions. When speakers

make statements like “I see no future *in* this matter” they utilize the CONTAINER metaphor to describe the abstract relation between *future* and *matter*.

The fact that we think in concepts is a consequence of the statement that language is a reflection of cognition, and because human’s cognition is formed by experiences, concepts can vary (Langacker, 2008). Hence, there is not just one way of conceptualizing an idea. Different languages conceptualize the same abstract idea in very different ways. While the English language expresses connection between units in a sentence with the help of sentence order, German utilizes the case system. One purpose of cross-linguistic research in cognitive science is to find different language conceptualizations. An example is the ‘Frog-study conducted by Slobin and Berman in 1994. Slobin and Berman used a children’s storybook, which told a story in 24 pictures without words, in order to elicit narratives with a comparable content but different linguistic realizations across language and age. The study compared English, German, Spanish Hebrew and Turkish, and the result was a vast varied of ways in which languages described motion. An example is, again, the manner of motion, which can be encoded in the verb or as an adverbial construction. Furthermore, different languages also consistently focused on different perspectives in the story. For example: One language community tended to describe the character in the story as *running away from* while another community described the character as *pursued by*. Both words paint a similar picture but inhabit slightly different perspectives.

Different conceptualizations can also occur between different speakers of the same language or might depend on situational use. In these cases, speakers might be familiar with different concepts but prefer a certain one because of context or personal motives. Langacker calls these different ways of conceptualization “construal”: “Construal is our multifaceted capacity to conceive and portray the same situation in alternative ways. The construal imposed on its content

is intrinsic and essential to the meaning of every expression and every symbolic unit.” (Langacker 2007, p.435).

It is important to notice that concepts “reflect and [are] informed by non-linguistic aspects of cognition” (Evans & Green 2006 p.54), and are the result of “general cognitive principles” (p.54) or “shared conceptualization capacity” (p.60). Basically, humans share certain cognitive capacities, like memory or sorting skills. As a result, their languages should share these capacities as well, and even though differences exist, universals should exist as well. The study of Cognitive Linguistics, especially cognitive semantics, is concerned with these cognitive capacities and sees language as a reflection of them. The fact that different languages do conceptualize differently is seen as an indicator that differences exist in the cognitive system of speakers. Therefore, one topic of discussion is how relevant cultural experiences are for cognition. Slobin’s Thinking for Speaking approach suggests at least a cultural relevance during the act of speaking (Dirven & Verspoor, 2004). In general, this means that Cognitive Linguistics also acknowledges the possibility of “linguistic universals”, like for example embodiment, which is a general human experience that has been acknowledged to lead to universal experiences (Dirven, Wolf & Polzenhagen 2007). To summarize, according to Cognitive Linguistics conceptualization and the decision how we conceptualize depends on two things: a basic shared conceptualization capacity as well as cultural and personal experiences.

2.2. Universal Conceptualization and Image Schemas

The more recent approaches in Cognitive Linguistics do acknowledge the possibility of universal conceptualizations or linguistic universals as they might also be called in Generative Grammar. The fact that all humans share certain experiences like embodiment leads to the

assumption that humans share certain conceptualizations or “conceptual universal” (Zlatev, 2007, p. 336). It is important to specify that this is not an acknowledgment of universals of linguistic forms. A cognitive approach to grammar does not believe in universal realizations of language (grammar) across language. Instead, researchers acknowledge the possibility of certain concepts like the concept of ‘one’s self’ that exist across languages. These are certain semantic categories that are the result of universal experiences. Furthermore, seeing as language is a result of cognition and humans do share certain cognitive motor skills or sensory skills, it is only logical that we also share concepts that are the result of these skills.

The theory of **image schemas** developed by Johnson (1987) developed as a consequence of the acknowledgment of universal experiences and universal sensory skills and has become an integral part to Cognitive Linguistics. Image schemas are concepts as well, but they are the first cognitive concepts to be developed and are so fundamental that we are not even aware of them. Again, an example is the UP-DOWN schema that is the result of embodiment. Every human is grounded by a physical body and environmental influences like gravity. As a result, every human develops a vertical axes and the concept of UP-DOWN. Therefore, humans universally use this concept to express more abstract thoughts. (Evans & Green, 2004).

Especially for the conceptualization of abstract concepts of time and space, image schemas are of importance because they supposedly exist across languages. The researcher will take a closer look at the process that is involved in conceptualizing abstract things like time with the help of concrete experiences like embodiment.

2.3. Conceptual Metaphors

The theory of conceptual metaphor is probably one of the most debated and most memorable theories in Cognitive Linguistics. It was developed by Lakoff and Johnson in 1980. The ideas introduced in their book *Metaphors we live by* are still very much present in Cognitive Linguistics because they offered alternative ways of researching language. Together with Cognitive Grammar developed by Langacker (1991; 2008), the theory of conceptual metaphor gave rise to the young field of Cognitive Linguistics and new models of language acquisition.

What is the theory of conceptual metaphor? Basically, it is a model that tries to explain how humans comprehend. The idea behind this is that “our ordinary conceptual system, in terms of which we both think and act, is fundamentally metaphorical in nature” (Lakoff & Johnson, 1980, p.3). This means that metaphor is not just a matter of language but that human’s thought are metaphorical and that studying these metaphors will lead to conclusions concerning cognition. The word ‘metaphor’ in this context does not refer to instances of metaphorical language but to bigger “pattern of conceptual association” (Grady, 2007, p.188). Similarly to image schemas, people are not aware of these patterns or that they are metaphorical in nature because they are so essential to everyday life and to structuring the world. Lakoff and Johnson argue that we are not even able to comprehend certain abstract concepts without metaphors. An abstract target domain is made comprehensible through the use of a concrete source domain. This process is called “mapping”. The consequence of metaphorical conceptualization is that using a specific source domain to describe another abstract concept will highlight certain aspects of the concept but might hide other aspects. Seeing as the conceptual metaphors are also supposedly grounded in our cognition, the difference in source domain used to describe a target domain will result in different perspectivizations. Ergo, the different conceptual metaphors

across languages to conceptualize abstract concepts lead to different perceptions. An example is the conceptual metaphor of ARGUMENT IS WAR (Lakoff & Johnson, 1980, p.4-5). This metaphor highlights the confrontation that might occur during an argument. There might be somebody who wins or loses the argument. In comparison, if a language conceptualizes ARGUMENT IS DANCE, the perspective will shift towards an argument as something balanced and cooperative that can be enjoyed. This is especially interesting for the foreign language classroom because it means that teaching these metaphors will help students gain a new perception of their own language and its limitations as well.

Nevertheless, because humans seem to share certain image schemas, there also seem to be certain mappings that are universal. Lakoff and Johnson (1980) also theorize that certain concepts might exist in all language but the difference in experience will lead to different view of the concept. This is the ‘cultural’ base of the theory of conceptual metaphor. An example is the conceptualization of time as something spatial (Bergen, Polley, & Wheeler, 2010). All languages have the concept of time, but depending on the cultural experience, the concept will be mapped differently across languages. The universality and difference of the conceptualization of time makes it an ideal candidate for cross-linguistic research. This is another reason the researcher chose to study this particular concept. Therefore, the next part of the literature review will present the categorization of time according to its conceptualization and the empirical evidence that preceded this study.

3. Temporal conceptualization

This section of the literature review will outline the connection between the specific conceptualization of space and time. It will also introduce the framework of **temporal frames of**

reference and the important research done in order to investigate the conceptualization of time according to this framework. All this information was used in order to design the test used to investigate L2 learner's conceptualization of time in German.

3.1. TIME AS SPACE

In order to talk about temporal conceptualization, the researcher has to elaborate more on spatial concepts. The reason for this is that the conceptual metaphor of TIME AS SPACE is at the center of conceptualization of time in English and German and seems to be one of the universal metaphors suggested by Lakoff and Johnson (1980). (Evans, 2003; Radden, 2003)

First, some general principals about the conceptualization of space have to be mentioned. In 1980, Lakoff and Johnson proposed that spatial concepts are linguistic universals often used to describe abstract concepts, including time. (Berben, Polley, & Wheeler, 2010). This phenomenon seems to occur across languages and is why spatial conceptualization and its use as conceptual metaphors can be considered universal. Lakoff (1993) even suggests that our spatial understanding of time is biologically determined. No empirical evidence for this exists and recent research even suggests the opposite. Evans convincingly argues that we do 'feel' time and its passage and do not just use spatial concepts because there is 'no choice'. We use them because we have to make our objective processing of the passage of time understood and spatial concepts are accessible and versatile (Evans, 2003). In nearly every language concepts of space are polysemous and have an abstract and a concrete meaning. An example is the word *in*. People use it as a spatial description for physical states like 'the plate is *in* the cupboard'. At the same time, it is used to describe an abstract state like 'you are *in* trouble' or 'Ben is *in* love'. In these cases, *in* retains its original concrete meaning of describing a position but uses this concrete meaning to make an abstract state comprehensible. (Belle, Polley, & Wheeler, 2010)

Because humans' understanding of concrete spatial concepts is a result of their physical experiences like embodiment, the existence of certain universal spatial image schemas seems logical. Still, according to Lakoff (1993), even though the experience of embodiment seems to be universal, our different cultural experience will result in slightly different perceptions. Examples for this are, again, prepositions and how their meaning and variation can be very different across languages. The question this raises is if these differences are not just of linguistic but also of cognitive nature. Does our actual perception of spatial reality change depending on the linguistic environment we grew up in? The question is hard to answer and will only be discussed in relation with the influence of temporal conceptualization on cognition.

To summarize, the use of spatial concepts as source domain for conceptual metaphors seems to be universal. As a result, they are a preferred method of conceptualizing time across languages. The differences that do occur lead cognitive linguists to question if these differences are also of cognitive importance. As a result, the acquisition of these concepts might not be possible anymore because cognitive development significantly halts after childhood. Therefore, these concepts would have to be taught.

3.2. Temporal Frames of Reference (t-FoR)

There are many differences in the conceptualization of time across cultures that are of importance and according to which time can be conceptualized. The researcher will briefly mention some possibilities, explain the model of **Frames of Reference (FoR)**, and why it was chosen as the best way to analyze typological differences between German and English.

Günter Radden (2003) identifies six different mappings according to which the conceptual metaphor of TIME AS SPACE is used across languages. Firstly, differences in the

dimensionality of times can occur. This has already been mentioned and is realized when languages use similar spatial prepositions differently when talking about time. Secondly, the orientation of time-lines can differ. Languages can look at time using a vertical or horizontal axis. Thirdly, language differs when it comes to the shape of the time-line. Some languages look at time as a circle. Both perspectives can even be present in the same language. In English a year is typically perceived as a circle while life is seen as a line. Fourth, the position of the observer in time and of time relative to the observer can be very different. Fifth, the sequence of time can change. This is often connected to the position of time relative to the speaker. Sixth, there are two different ways to conceptualize time as motion: the Moving Ego (ME) perspective and the Moving Time (MT) perspective. The ME perspective means that the Ego moves towards future events and passes them by. The MT perspective perceives the Ego as static. Future events approach it and pass by. These two models can exist coherently in one language and they do in English (Lakoff, 1993). They are not ideal to categorize languages because they are too vague and do not include some of the other important things to consider like the position of the speaker relative to the world for example.

A taxonomy proposed by Bender, Beller and Bennardo (2010) on the other hand is more helpful when comparing English and German. It reveals a slight difference in the conceptualization of time because it uses the spatial concept of frames of reference (FoR) and transfers them to time. Seeing as both English and German use the TIME AS SPACE metaphor, this seems to be a fitting approach. Levinson (2003) was the one to propose the taxonomy of frames of reference for the spatial realm. A FoR is a system that is supposed to describe how objects relate to each other from certain perspectives. Levinson divides the spatial FoR into three types: absolute, intrinsic, and relative. Much research has been done on the use of these frames

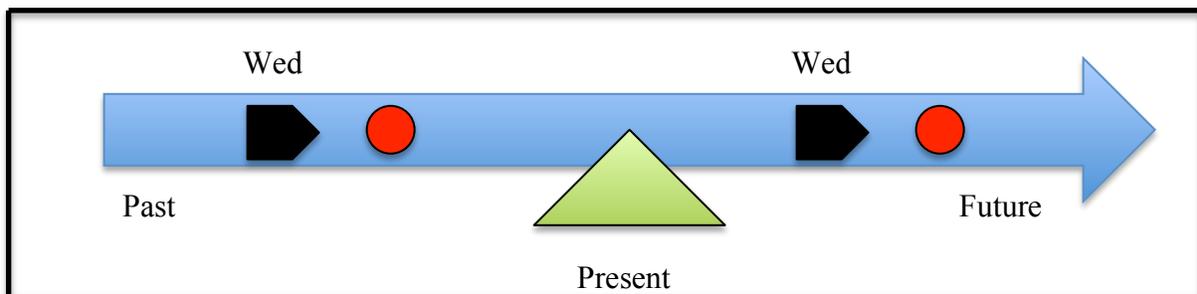
across languages and depending on the language, certain frames seem to be preferred, although the usage can be a consequence of habit and speakers theoretically have alternative options. Bender, Beller and Bennardo (2010) aimed to compare temporal conceptualization across languages. In order to have better results, they transferred Levinson's taxonomy to the temporal realm. Thus, they created **temporal frames of reference (t-FoR)**. Besides studying cross-linguistic differences of the concept of time, this transference was also used to study how strongly our spatial concepts are connected to our perception of time in order to argue for a cognitive influence of different spatial concepts. Results have been inconsistent (Bender, Rothe-Wulf, Hüther, & Beller, 2012).

The taxonomy of **temporal frames of reference (t-FoR)** has potential beyond the comparison of cross-linguistic differences and the connection of the spatial and temporal realm though. First of all, the Moving Time (MT) and Moving Ego (ME) perspectives do not enable research to analyze the smaller differences between such closely related languages like German and English; temporal frames of reference do. Secondly, the native speaker's usage of t-FoR in English and German has a solid empirical standing which is a good base to make further inquiries into non-native speaker's usage.

The taxonomy of temporal frames of reference (t-FoR) is also divided into **absolute**, **intrinsic**, and **relative** t-FoR. The relative FoR possesses more distinctions when applied to the domain of time. Explaining these frames is very complicated seeing as they express a difference in perspective. This is the reason why this chapter limits itself to the frames used in English and German as determined by Rothe-Wulf, Beller and Bender (2014) and Bender, Beller and Bennardo (2010).

German preferably uses the intrinsic temporal frame of reference and English uses both the absolute and the intrinsic t-FoR. What is the difference between these frames? The **absolute t-FoR** is connected to the moving-ego (ME) perspective wherein moving-an-event-forward results in a movement futurewards. As a result, if somebody said to a person with an absolute t-FoR that a Wednesday meeting has been moved forward by two days, they would assume that the meeting has been moved to Friday of the same week. The reason for this is that the absolute frame assigns the FRONT of any object in time as facing towards the future. Basically time is seen as an arrow flying from past to the future. As a result, even though Wednesday comes before Friday, both face toward the future and moving-forwards means moving toward the future. It does not matter if the event is in the past, present or future for this movement to occur as the graphic 1 illustrates.

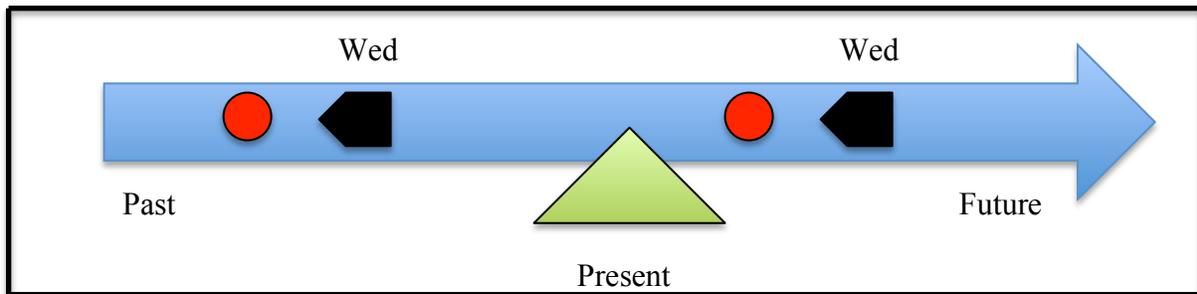
Graphic 1
Wednesday's meeting scenario from the perspective of an absolute t-FoR



By comparison, the **intrinsic temporal frame of reference (t-FoR)** is comparable to the moving-time (MT) perspective, wherein moving an event forward means moving it pastwards. If a person who uses the intrinsic t-FoR is told that a Wednesday meeting has been moved forward two days, the person will assume that the appointment changed to the Monday of the same week. The reason for this is that the intrinsic frame assigns a FRONT to the object itself, in this case Wednesday. Even though time is still perceived as an arrow flying towards the future, the objects

in time have their own FRONT depending on what the speaker perceives as the beginning and ending. For the case of an appointment, the beginning is perceived as the FRONT. Ergo, the meeting moves towards the past against the direction of the flow of time. Graphic 2 illustrates this.

Graphic 2
Wednesday's meeting scenario from the perspective of an intrinsic t-FoR



For both the absolute and the intrinsic t-FoR, the viewpoint of the observer is not important for the assignment of a FRONT to an object. The absolute t-FoR assigns the FRONT according to the direction of the field which the objects move on, in this case time. The intrinsic t-FoR assigns a separated FRONT to the objects on the field. Both the MT and the ME perspective stress the observers' viewpoint, which is why this particular study utilized the framework of temporal frames of reference. The MT and ME perspectives do not allow to look at event in the past and in the future because they consider the speakers' viewpoint. Meanwhile, the framework of t-FoR allows an explanation of the conceptualization of time for both the past and the future.

3.3. Wednesday's Meeting

The aim of the study conducted is to see if American native speakers of English are able to conceptualize according to a German native speaker's preference in German, and if they actually acquire the 'culturally inherent' concept. Temporal frames of reference (t-FoR) are a good way to define conceptualization of time and compare it across different languages. The ideal tool for an inquiry into which t-FoR somebody used is the following statement: "Next Wednesday's meeting has been moved forward two days. What day is the meeting now?" (Bender, Rothe-Wulf, Hüther & Beller, 2012, p.4). This phrase has been researched many times in linguistic studies (Mille & Johnson-Laird, 1976; McGlone & Harding, 1998; Evans, 2003; Rothe-Wulf, Beller, Bender, 2014) and is highly ambiguous in English but not in German. As a result, it will be used to determine if American participants are able to conceptualize correctly in German. Two studies by Rothe-Wulf, Bender and Beller (2014) and Bender, Rothe-Wulf, Hüther, and Beller (2012) will be utilized as models.

In English, roughly one half of native speakers answers that the meeting has been moved to Monday while the other half answers with Friday. The reason for this is that roughly half of the speakers inhabit an MT perspective while the other half maintains a ME perspective. As has been mentioned, both are possible in English and the given phrase does not give any linguistic indicator for a preference in English. As a result, the choice depends on an individual's preference in English (Evans, 2003). What is interesting now is that German native speakers show a definite preference when they answer this question in German. Roughly 95 percent will answer that the meeting has been moved to Friday according to Bender and Beller (2010).

Rothe-Wulf, Bender and Beller (2014) conducted a recent study to test the difference in conceptualization between the three Germanic languages German, English and Swedish. In their

opinion, the framework of MT and ME perspective is not able to express the particular difference in perception that is at work in those languages well enough. The reason is that the approach does not take into account if the event somebody observes is in the future or in the past. In Rothe-Wulf, Bender and Beller's study, this is important to validate results and determine if the difference in answers actually results in a difference in general conceptualization of time. Thus, they use their developed taxonomy of t-FoR instead. As has been mentioned, English seems to use either the intrinsic or the absolute t-FoR while German shows a greater persistency and uses only the intrinsic t-FoR. Rothe-Wulf, Bender and Beller use the phrase of 'moving and event forward' to reach this conclusion. Because this phrase has a long tradition in linguistic research of temporal concepts, it is validated through this tradition (Mille & Johnson-Laird, 1976; McGlone & Harding, 1998; Evans 2003; Rothe-Wulf, Beller, Bender, 2014).

In order to analyze cross-linguistic differences in the use of this phrase, the phrase 'moving forward' has to be translated with a German lexicon that is as inherently ambiguous as the English phrase. This ensures that any difference in answer is the result of different perceptions of time and not inherently different lexicons. Rothe-Wulf, Bender and Beller (2014) decided to use the phrase 'vorverlegen' in German and give a variety of reason for this. Most importantly, both the English word 'for' and the German 'vor' exhibit the same direction of movement. Furthermore, they also argue that the close historic relation between English and German validates the strength of any comparison made between the two languages. They specify that if the vocabulary used is as cognate as possible, differences in interpretation are "unlikely to hinge on the linguistic tools used to express them, but must spring from conventions across speakers and are thus a cultural phenomenon" (2014, p.6).

In one study, Rothe-Wulf, Bender and Beller (2014) ask their participants four questions in total. In order to determine which FoR is used, they ask two questions about the movement of past events and two about the movement future events. According to the answer, a speaker either uses an intrinsic or and absolute temporal FoR as described in table 1.

Table 1

Responses to “Wednesday’s meeting has been moved forward two days...” as indicators for the underlying temporal FoR

t-FoR	Wednesday last week	Wednesday next week
(a) Absolute	→ Friday	→ Friday
(b) Intrinsic	Monday ←	Monday ←

Table according to Rothe-Wulf, Bender and Beller (2014, p.9)

Across studies, which had different aims, results are consistent. Roughly half of the English native speakers answer with either an absolute t-FoR or an intrinsic t-FoR, while German native speaker show greater consistency. Ninety percent and more answered according to an intrinsic t-FoR. In German, the speech community seems to have a stronger contract as to which temporal FoR is used, while in English this contract is more flexible and up to the individual. These results also make this particular framework and topic of conceptualization an ideal means for inquiry of an English student’s conceptualization of the German foreign language. First of all, it suggests that answers in accordance with a German conceptualization occur because the German preference has been acquired. Secondly, German native speaker show a very strong preference for the intrinsic t-FoR, but this frame is not foreign to English native speakers. As a result, while there is a clear difference in conceptualization between the two languages, the concept as such is already familiar to an English native speaker. As has been mentioned when talking about implications for SLA, concepts that are abstract and completely ‘new’ are the hardest to acquire. The intrinsic t-FoR is an abstract concept but not a new one.

Moreover, the strong preference of German native speaker gives room to a tentative suggestion that will be discussed after the results of this study have been analyzed: Maybe the strong enforcement of consistency is a general concept in the German language that is of consequence for many areas of grammar and maybe this tendency has consequences beyond language for culture.

4. The Language Classroom: Study Abroad and Cognitive Applications

To summarize, the literature section of this paper has outlined the general field of Cognitive Linguistics, explained the idea of conceptualization and gave an outline concerning the conceptualization of time as well as the empirical findings for German and English. In the next section, the researcher will close with some important information on study abroad and the application of Cognitive Linguistics in the language classroom.

4.1. Study Abroad

The second research question of this paper is concerned with the difference between the conceptualization of time in German of students who have studied abroad and students who have not. In order to draw any further conclusion for the importance of a study abroad on conceptualization, the researcher will summarize prior studies results concerning language acquisition and study abroad in general.

The literature and research on study abroad and its efficiency is vast but partly inconclusive. The reason for this is first of all, that stays abroad can vary greatly in terms of duration and student's immersion. Furthermore, there are a lot of different factors involved during a stay abroad. To gauge what leads to successful acquisition, one needs to consider all of

them to a certain degree, while still not losing sight of the greater question of what is actually beneficial for acquisition (Wang, 2010).

As mentioned, research has been done on the study abroad experience. One line of inquiry is the question of whether the experience is necessary to acquire the language. Many scholars say yes, especially when the students want to reach pragmatic competence in a language (Regan, Howard, & Lemée, 2009). The general consent is that a stay abroad has positive influences on language proficiency. Still, the success depends on so many different variables that it is not as easy as to say that a stay abroad will always result in acquisition of language and culture. (Freed, 1995). Furthermore, researchers have not necessarily agreed on what exactly a successful study abroad experience looks like. Is it oral proficiency in the language? Or is it a cultural understanding of the language? Or might it be the simply the proficiency in grammar? For this paper, the acquisition of conceptualizations is considered of interest. As has been mentioned, even extended stays abroad do not seem to result in an acquisition of ‘culture’ that Cognitive Linguistics deems necessary for conceptualization. Two consecutive studies done by Szalay and D’Andrade (1972) and Szalay and Maday (1983) find that even people that have lived in a country for more than ten years are not able to completely assimilate to the implicit culture. Even though these studies are old, their empirical findings have not yet been disproven through different, larger empirical finding.

In general, findings suggest that being immersed in the culture, and actually having to perform academically in the language, as well as possessing a certain degree of initial knowledge results in an immense growth in language during a stay abroad (Davidson, 2007). On the other hand, other research suggests that acquisition acquired without any form of tutoring and instructions might result in high communicative language proficiency but not necessarily in an

accurate one (Isabelli, 2007). This suggests that studying abroad is not superior to acquisition in the language classroom. Quite the opposite is the case; successfully studying abroad apparently needs 'instructive' settings. This will have implications for the use of instructions based on Cognitive Linguistics and will be evaluated in chapter 5.

4.2. Application of Cognitive Linguistics in the Language Classroom

In general, theories of Cognitive Linguistics are usage-based. This makes them a prime fit for second language acquisition and a communicative classroom that is highly context based. They put emphasis on language in use and insist that all areas of language have meaning and context. Communicative syllabi also often connect the different skills utilized during language usage and are more focused on helping students to independently find patterns in language (Richards, 2006). Especially the focus on meaning is in agreement with theories of Cognitive Linguistics: "Meaning is viewed as the driving force of learning. Content-based teaching reflects this view and seeks to make the exploration of meaning through content the core of language learning activities" (Richards, 2006, p.25).

This does not necessarily mean that applying Cognitive Linguistics to the language classroom would result in a classroom solely based on communication in the target language though, quite the opposite. The greatest difference is the word 'meaning'. In its communicative use it often refers to the fact that conversation has to be meaningful and has to have an aim. The framework of Cognitive Linguistics is in agreement with this, but it also has an even broader definition of meaning. In a cognitive context, all conceptualization is meaning. This makes even syntactical structures meaningful. As a result, the importance of contextual use of language is definitely acknowledged, but many researchers in applied Cognitive Linguistics argue that

frequency of input and implicit knowledge is not enough to acquire important abstract patterns. Especially if acquisition has to occur fast, there seem to be some great benefits to the explicit use of the Cognitive Linguistics theories in second language pedagogy (Niemeier, 2004). Seeing as some concepts apparently are not even acquired at a very advanced level, some researcher argue that it is even impossible to learn a language at a high level without meta-knowledge. (Ellis, 2002; Niemeier, 2004).

Research has been especially productive in this area concerning the English tense system (Bepperling & Härtl, 2013). The important part is that any instructions given are not just an explanation of syntactical forms but are an explanation of conceptual systems that give these forms meaning beyond their grammatical marking. Olga Liamkina (2008) conducted an interesting study of the German case system and how it could be explained using theories of Cognitive Grammar. She summarizes as followed:

[...] Classroom-based studies that explore the benefits of Cognitive Linguistics theories' application to second language pedagogy [...] document very encouraging results and demonstrate that instruction based on Cognitive Linguistics principles helps solve some difficult problems in various areas of L2 teaching. In this context, systematic investigation of the effects of meaning based instruction that strives to teach the learners the conceptual structure of a case system, and not only its formal manifestations, is a promising and much needed research direction. (p.159)

What kind of meta-knowledge does Cognitive Linguistics offer? Well, first of all, the theory of Cognitive Grammar and its claim that grammar is also meaningful make it clear that the concepts that give life to lexicons, could also give life to grammar. This gives context to arbitrary grammar rules and makes them more approachable, especially for advanced students. For lower

levels as well as for higher level, categorization and prototypes in language would be a very interesting topic to explore. These areas are very useful vocabulary memorization because they give context to groups of words. The same goes for metaphors like LIFE IS A JOURNEY or LOVE IS WAR. Students could develop and connect all the different vocabulary that is associated with these categories and would learn more about the usage of the vocabulary at the same time. It is also a good way to foster individual learning, seeing as the instructor could teach the students to slowly look for these patterns in lexicons and grammar themselves and encourage them to find the overlying system. There are many more ways of inclusion. (Niemeier, 2004)

Beyond the actual acquisition of the language, using cognitive linguistic in the classroom might also be a way to train cognitive abilities in general. Seeing as language is the result of general cognitive abilities according to Cognitive Linguistics, it is not far fetched to assume that we could interconnect the process of language acquisition with visual stimuli or motor skills. (Langacker, 2008)

Beyond all these very skill oriented result, applying cognitive theories of language in the classroom might simply be a very good way to further students' knowledge of other cultures and also of the limitations of their own culture. Seeing how another language may have very different ways of categorizing the world or how it might use a completely different metaphor for the same concept will make students reconsider their own concepts. One of the most developed areas in the framework of Cognitive Linguistics is the study of just how much humans are not aware of the metaphorical nature of their language. They do not perceive how it enables them to express themselves but how it also limits them. Becoming aware of one's own language should be one of the most rewarding results of foreign language, even at the beginner's level. To this end, the study conducted will aim to see if students reap this benefit in the German language classroom or

if more explicit instructions would be necessary. After all, the benefits of language and cultural awareness will reach beyond the foreign language classroom.

Chapter Summary

This chapter gave a detailed account of the framework of Cognitive Linguistics, how conceptualization in general works, and how the specific area of time is conceptualized in English and German. Furthermore, the literature review explained the implications for second language acquisition. As a result, the chapter already gave an answer to the first research question: the outcome of this study could lean either way, but there is a strong suspicion that the students cannot ever acquire the cultural experience of a language. Thus, they will not be able to acquire the perspective inherent to the conceptualization of time in German. This would make focused instructions in the language classroom necessary. The next chapter outlines the methods used in this study.

Chapter III

Methodology

Overview

The purpose of this study was to predict and test the conceptualization of time in German as used by German native speaker and L2 German students, who are native speaker of English, in order to determine the cross-cultural difference for conceptualizing time in both languages and to predict and test student's reaction to this difference. The research also aimed to draw some general conclusions for cognition, second language acquisition, and the foreign language classroom. Therefore, data on students' conceptualization of time in German and English was collected. The following chapter will explain the process of collection, give details concerning the choice of participants, describe the testing instruments in detail, and explain how data was analyzed.

Design and Procedure

This study utilized quantitative methods in order to analyze the research questions. Three hypotheses were proposed and analyzed. Data was collected with the help of a test based on prior research and modified for the purpose of this research (Appendix A). The test consisted of four questions in German, followed by the same four questions in English. This test was based on a prior study and set of questions that has been repeatedly utilized by different researchers (Bender, & Beller, 2012; 2014; Rothe-Wulf, Bender, & Beller, 2014). As a result, the validity of the questions and their scientific significance was reinforced through successfully conducted prior studies. Prior to the test, the researcher also administered a short questionnaire in order to gather background information on student's language studies and to determine if they fulfill the

requirements for participation (Appendix B). The test and questionnaire were only given once and all instructions were in writing. The test was administered in the context of the assessment process of the Department of Modern Languages at a private liberal art College in southern Wisconsin and participation was strictly voluntary. Consent forms were distributed to likely participants (though not signed) at least three days prior to the conduction of the test. The researcher offered more information about the aim of this study to any participant interested. Participants were free to withdraw consent at any time. The pool of potential participants was gathered with the help of professors of German, who taught 300-level classes at the College. Any reasons for exclusion were considered carefully and are accounted for. All participants' identities remained confidential and none is mentioned in this study. The researcher tried to preserve confidentiality by not identifying the participants and by storing all of the results in a secure place only the researcher had access to.

Participants

The participants were 16 advanced students of German who were enrolled in the 300- and 400-level German classes at a private liberal art college in southern Wisconsin and are advanced students of German. Four of these students studied abroad in Germany for at least half a year. All participants were students at one specific College because of accessibility. All participants were of age and there were no exclusions made according to gender, ethnicity, or because of disability. A questionnaire on participant's background was administered in order to determine if they are suitable for the purpose of this study. The only requirement for all participants was that they are American English native speakers and have an advanced understanding of German and English. The reason for this is that the topic of this study aims to understand specifically English native

speakers' conceptualization of time in German. As a result, participants must use the same dialect of English for consistency's sake. They also must have reached a high level of acquisition in German because the test administered utilizes difficult vocabulary.

Instruments

The first instrument utilized in this study was a questionnaire in order to estimate if participants met the requirements for participation in the study (Appendix B). Moreover, the questionnaire was also administered as a useful future source of inquiry in case the results would validate further data collection.

The second instrument utilized in this study was a test designed by the researcher that is based on prior tests conducted by Bender et al. (2012; 2014) and Rother-Wulf et al. (2014). The test can be found in Appendix A. The test consisted of eight questions in total. Four questions were in German. After these four questions had been answered, participants had to answer the same four questions again in English. The test aimed to test non-native speakers' conceptualization of time in German, and the topic of the various questions was *moving an appointment*.

In order to reach a conclusion concerning L2 speaker's conceptualization in general, the researcher chose the topic of time for several reasons. As has been explained in the literature review, the topic of time is a universal concept, a very basic concept, and also a very abstract concept. This makes it an ideal candidate for a study concerned with non-native speakers' conceptualization in a foreign language. Furthermore, German and English are rather closely related languages and conceptualize in very similar ways. Their conceptualization of time on the

other hand has shown some solid difference in prior studies that are appropriate to test for the resources available to this study.

The questions used in the test are variations of the repeatedly utilized scenario: “Next Wednesday’s meeting has been moved forward two days. What day is the meeting now?” (Bender, Rothe-Wulf, Hüther & Beller, 2012, p.4). As has been mentioned, this phrase has a long tradition in linguistic studies and has been used to estimate and compare temporal frames of reference (t-FoR) across different languages. Therefore, it is an ideal tool to compare a non-native speaker’s understanding of this phrase to a native speaker’s understanding. The questions utilized in the test and the tools used to analyze are based specifically on a set of prior tests conducted by Bender et al. (2010; 2012; 2014) and are validated by their extensive prior research. The focus in Bender et al. and in this study is on the English phrase *moving forward* which has been translated to *vorverlegn* in German. An accurate translation is of utmost importance for this study and is validated by Bender et al. (2012). As has been explained in the literature review, there is a certain perspective inherent to the use of *moving something forward in time* that is fundamentally different in German and English. As a result, the German translation has to express the same lexical meaning as *moving something forward in time* while also sounding natural to a native speaker. The verb *vorverlegen* was chosen. The word literally translates to *relocating something forward* (Rothe-Wulf, Bender, & Beller, 2014, p.7). As a result, questions were translated according to the example of question (1):

- 1) *Das Fußballspiel, das am Sonntag letzter Woche stattfinden sollte, wurde um drei Tage **vorverlegt**. An welchem Tag der Woche fand das Fußballspiel statt?*

*[The soccer game scheduled for Sunday last week was **moved forward** two days. On which day of the week did it actually take place?]*

In order to be sure that neither tense nor duration of an appointment influenced student's comprehension of the phrase, two questions asked about moving a past appointment and two questions asked about moving a future appointment. An example:

- 2) *Das Treffen, das am Mittwoch nächster Woche stattfinden sollte, wurde um 2 Tage vorverlegt. An welchem Tag findet das Treffen nun statt?*

[The meeting scheduled for Wednesday next week will be moved forward two days. On which day of the week will it now take place?]

This was done so that the results of the study could be classified according to Rother-Wulf's et al. (2014) distinction of temporal frames of reference (t-FoR). As has been mentioned German prefers the intrinsic t-FoR, while English uses both the absolute and the intrinsic t-FoR. Depending on the frame of reference speaker inhabit, he or she will move the appointment futurewards (absolute t-FoR) or pastwards (intrinsic t-FoR). As a result, participants' answer to question (2) could either be that the meeting has been moved to Friday (absolute t-FoR) or to Monday (intrinsic t-FoR). The questions tested participants' frame of reference by asking two questions that moved the appointment by days and two questions that moved the appointment by the hour:

- 3) *Das Brunch, das gestern um 12 Uhr stattfinden sollte, wurde um 3 Stunden vorverlegt. Um wie viel Uhr fand das Brunch nun statt?*

[The brunch scheduled for 12 pm yesterday was moved forward three hours. At what time did it actually take place?]

This variation was supposed to guarantee that the duration of time is not a factor for the perspective of an appointment in time. Tense and duration should not influence the direction of movement that is prototypical to a language. The repetition through two different sets of questions also validates the stability of the choice in frame of reference.

The researcher did make small changes to the original tests conducted. In order to simplify the test, the researcher changed certain vocabulary for several reasons. First of all, the original tests were aimed at native speakers and required a very solid understanding of German. The researcher wanted to be absolutely sure that the comprehension of vocabulary would not lead to an inability to answer the questions that were asked. The reason is that the aim of the test is not lexical comprehension but conceptual comprehension. Therefore, the researcher changed the occasions of the appointments to a context that is more relatable to American college student's life like a party, football games, or a brunch. This is justified by the fact that it should not matter what type of appointment is moved. Participants' direction of movement should stay the same. Moreover, the researcher added a contextual explanation of the German verb 'vorverlegen' for the same reasons. The word was explained in German using only contextual phrases, so that students were not primed to answer the questions differently because of a translation into their native language, English. This insured that student would have a 'general idea' of the meaning but would not consciously translate the word to English.

Data Analysis

The data analysis procedure consisted of appropriate statistical methods to analyze the data collected for the purpose of this studio. The first step that had to be taken was to identify the participant's t-FoR. Both the English and the German questions were classified as either using an intrinsic frame of reference or an absolute frame of reference as shown in table 1 (see table 2 in the Appendix D for the version concerning the four English questions).

Table 1

Responses to “Appointment has been moved forward days/ hours ...” in German as indicators for the underlying temporal FoR

t-FoR	(1) Appointment last week	(2) Appointment next week	(3) Appointment yesterday	(4) Appointment tomorrow
(a) Absolute	→ Wednesday	→ Friday	→ 3 pm	→ 10 pm
(b) Intrinsic	Thursday ←	Monday ←	9 am ←	6 pm ←

Table according to Rothe-Wulf, Bender and Beller, 2014, p.9

For each question, participant had to follow the same pattern of movement. The direction of movement was of greater importance than the actual day chosen by the students.

1) *Das Fußballspiel, das am Sonntag letzter Woche stattfinden sollte, wurde um drei Tage **vorverlegt**. An welchem Tag der Woche fand das Fußballspiel statt?*

*[The soccer game scheduled for Sunday last week was **moved forward** two days. On which day of the week did it actually take place?]*

Depending on how participants ‘count’ days, the answer to question (1) might be Tuesday instead of Wednesday. Seeing as the direction of movement is still correct, the participant’s answer would still be counted as following an absolute t-FoR.

Any other answer is not considered in line with either an intrinsic or an absolute speaker’s speech pattern and is more than likely the result of invalid comprehension or the limitations of the study. It is counted as a divergent t-FoR. As has been mentioned, tense and duration should not influence the direction of movement prototypical to their individual conceptualization (Bender, Beller, & Bernado, 2014).

In order to reach a conclusion concerning the question of a difference in t-FoR between non-native speaker and native speaker of German, the percentage of the participants’ preferred t-FoR was compared to that of native speakers according to a prior study conducted by Rothe-Wulf et al. (2014). The hypothesis (1) was established to conduct this comparison:

Null Hypothesis H_0 (1): The proportion of advanced-level students of German, who preferred the intrinsic temporal frame of reference (t-FoR), is the same as or large than the 90% of German native speaker who utilize this t-FoR.

Research Hypothesis H_1 (1): The proportion of advanced-level students of German, who preferred the intrinsic t-FoR, is smaller than the 90% of German native speaker who utilize this t-FoR.

Thus, the proportion of the students who use the intrinsic t-FoR, which is the frame preferred by German native speaker, was compared to the general estimation of 90% of German native speaker population that utilize the intrinsic t-FoR. A z-statistic was done in order to test the hypothesis.

Furthermore, the researcher utilized a chi-square test to estimate if there was a significant difference in the use of t-FoR between students, who studied abroad, and students, who did not. Hypothesis (2) was constructed for this comparison:

Null Hypothesis H_0 (2): There is no significant difference in the usage of t-FoR between students who studied abroad and students who did not study abroad.

Research Hypothesis H_1 (2): There is a significant difference in the usage of t-FoR between students who studied abroad and students who did not study abroad.

Because of the small sample size, a Fisher exact test was done as well. The significance level of 0.10 was chosen. The reason for this is that because of the small sample size, there is a

risk of not detecting differences. As a result, the larger significance level was estimated as appropriate.

Hypothesis (3) was concerned with the correlation between participant's usage of t-FoR in English and German. Does a switch in t-FoR occur or do participants tend to use the same frame for both languages?

Null Hypothesis H_0 (3): The proportion of participant's choice of temporal frame of reference is the same in English and in German.

Research Hypothesis H_1 (3): The proportion of participant's choice of temporal frame of reference is not the same in English and in German.

A McNemar test was utilized to answer this question seeing as the data is categorical and paired. The significance level was set at 0.05 for this test. Even though the sample size was small, data indicated that the probability of missing a difference is significantly lower.

Chapter Summary

This chapter described the statistical methods involved in this study. As explained, after the researcher had conducted intensive research on the topic of temporal conceptualization in German and English, a test was designed in order to gain a better understanding of the conceptualization of time in German as done by English native speakers. This test served as the data-collecting instrument. Participants were identified with the help of a questionnaire. The chapter explained all the steps taken in order to choose participants and secure their voluntary participation. Furthermore, the chapter gave a detailed account of the development and design of the research instruments. Finally, the chapter concluded with a description of the data analysis procedure and the statistical methods used. The results of the data analysis are presented in the next chapter.

Chapter IV

Results

Overview

The purpose of this study was to predict and test the different conceptualization of time in German as done by German native speaker and L2 German students, who are English native speakers. The overall aim was to determine the cross-cultural difference for conceptualizing time in both languages and to predict and test students' reaction to this difference. Furthermore, the study discusses if there is a difference between students who studied abroad and students who did not. The following chapter analyzes the data collected through the methods discussed in chapter 3.

Findings

At least three prior studies determining the proportions of temporal frames of reference in German and English have been conducted (Bender, & Beller, 2012; 2014; Rothe-Wulf, Beller, & Bender, 2014). The study done by Rothe-Wulf et al. had the highest consistency of participants' usage of t-FoR with the probability that a native speaker of German uses an intrinsic t-FoR is 0.942 with $n = 139$ and $p < .001$. In all three studies, the proportion of German native speaker using the intrinsic temporal frame of reference (t-FoR) was at least above 90%. As a result, the researcher estimated that the probability of a native speaker answering according to an intrinsic frame is at least 90% and set this as the proportion that would identify a population as being at the level of a native speaker.

In order to estimate the preferences of the sample collected, the first step taken was to categorize the temporal frame of reference (t-FoR) participants utilized. As a reminder, when a

person uses the absolute t-FoR, he or she moves the appointment futurewards. When the intrinsic t-FoR is used, the appointment is moved pastwards. If a participant did not show consistency in their use of t-FoR in the same language, they were categorized as following a diverging t-FoR. Thus, participants' answers were sorted as following an absolute, an intrinsic, or a divergent t-FoR according to this schema, which was further explained in chapters 2 and 3. Table 3.1 gives a detailed account of the all the participants' answers and can be found in the Appendix D. The resulting distribution of the temporal Frame of Reference (t-FoR) is shown in table 3.

Table 3

Percentage of students who either chose an absolute, intrinsic or diverging t-FoR in German and English

t-FoR	In German	In English
	<i>n = 16</i>	<i>n = 16</i>
absolute	56.25	62.5
intrinsic	31.25	25
diverging	12.5	12.5

Looking at the results shown in table 3, it becomes clear that only 31.25 % of the students used the intrinsic t-FoR, 56.25 % used the absolute t-FoR, and 12.5 % diverge between frames in German. These numbers are close to the result Rothe-Wulf, Beller and Bender (2014) found testing U.S English speaker's use of frames in English. This concludes that the majority of this particular group of student did not answer in line with the preference in t-FoR inherent to German. Most students still followed the conceptualization of frames they employ in their native language and are not able to change their preference in German. In order to statistically verify this result, hypothesis (1) was tested using a z-statistic.

Hypothesis 1

Null Hypothesis H_0 (1): The proportion of advanced-level students of German, who preferred the intrinsic temporal frame of reference (t-FoR), is the same as or large than the 90% of German native speaker who utilize this t-FoR.

Research Hypothesis H_1 (1): The proportion of advanced-level students of German, who preferred the intrinsic t-FoR, is smaller than the 90% of German native speaker who utilize this t-FoR.

A z-statistic for a single sample was used to detect if the proportion of English students who use the intrinsic t-FoR is the same or higher than the mean proportion of German native speaker. The null hypothesis proposed was that the proportion of advanced-level students of German, who preferred the intrinsic t-FoR, would be the same as or large than 90%. The research hypothesis proposed that the proportion of advanced-level students of German, who preferred the intrinsic t-FoR, would be smaller than 90%. As explained, 90% is estimated as the percentage of German native speaker that would use the intrinsic t-FoR.

The results of the z-test run for hypothesis (1) were analyzed at a 0.05 significance level and are presented in table 4. A very significant p-value of 0.00001 and a z-score of -7.83 were found. This led the researcher to reject the null hypothesis and accept the research hypothesis. Clearly, the English students do not show the same pattern of behavior concerning t-FoR that is inherent to German speakers

Table 4

Report of the z-test comparing English students use of intrinsic t-FoR to a general German Proportion

Null and Research Hypothesis 1	z-score	p-value	Decision
H ₀ : p intrinsic t-FoR ≥ 0.90	-7.83	0.00001	Reject the H ₀ accept H _a
H _a : p intrinsic t-FoR < 0.90			

After reaching the conclusion that the proportion of participants utilizing the intrinsic t-FoR is lower than the 90 % expected of a group of German native speaker, the researcher was curious to see whether the participants followed the pattern of a group of English native speaker instead. Developing proportions for the English conceptualization of time as done by native speaker is more difficult than for German seeing as there is no temporal frame of reference (t-FoR) that is clearly preferred by the English language. Looking at table 5 however, it becomes clear that the participants’ conceptualization of time is much closer to the proportions exhibited by native speaker in English than to the behavior of German native speaker in German. Even though the percentages are not the same, this inconsistency might be the result of the relatively small sample of participants in this study, the participants’ behavior in German seems to be closer to the behavior English native speaker exhibit in English.

Table 5

Percentage of people who either chose an absolute, intrinsic or diverging t-FoR in German and English

t-FoR	In English by native speakers according to Rothe-Wulf et al. (2014)	In German by native speakers according to Rothe-Wulf et al. (2014)	In German as utilized by the participants of this study
	<i>n = 142</i>	<i>n = 139</i>	<i>n = 16</i>
absolute	40.8	0	56.25
intrinsic	35.9	94.5	31.25
diverging	22.5	5.0	12.5

It has been established that the students do not use the t-FoR typical to the German language. Their results are closer to what would be expected in their native language, English. Still, a few participants did choose to use the intrinsic t-FoR. Who are these participants? Might there be a significant difference in the amount of students who studied abroad and used the intrinsic t-FoR and the students who did not? Hypothesis 2 was conducted in order to answer this question.

Hypothesis 2

Null Hypothesis H_0 (2): There is no significant difference in the usage of t-FoR between students who studied abroad and students who did not study abroad.

Research Hypothesis H_1 (2): There is a significant difference in the usage of t-FoR between students who studied abroad and students who did not study abroad.

A chi-square and Fisher’s exact test were utilized in order to determine whether there is a relationship between the frame of reference and a study abroad experience. Table 6 below shows the numerical distribution of the two different groups of students who studied abroad and students who did not as well as their preferred t-FoR.

Table 6
Contingency table reporting t-FoR in German of the 2 groups of students divided by study-abroad experience

	No intrinsic t-FoR	intrinsic t-FoR	total	<i>Percentage of students using the intrinsic t-FoR</i>
abroad (A)	3	1	4	25
not abroad (A₀)	8	4	12	33.3
total	11	5	16	31.25

The null hypothesis proposed that there is no significant difference in the usage of t-FoR between students who studied abroad and students who did not study abroad. The research hypothesis suggests that there was a difference in their t-FoR. These hypotheses were tested using a chi-square test at the significance level of 0.10. The analysis found $\chi^2 = 0.097$ with 1 degree of freedom and $p = 0.755$. This means the probability of repeating these result if the null hypothesis is true is 0.755 or 75.5% at the significance level of 0.10. As a result, the null hypothesis cannot be rejected and there is no apparent uneven distribution in the usage of t-FoR in German between the students who studied abroad and the students who did not. Tabel 7 summarizes the data.

Table 7
Results of the chi-square concerning the relationship between a t-FoR and S

Null and Research Hypothesis 3	df	X²	Critical value	p-value	Decision
H ₀ : t-FoR and S are independent	1	0.097	2.706	.7555	Do not reject the H ₀
H ₁ : t-FoR and S are dependent					

Study-abroad experience = S

Because the sample of data that was collected was rather small, the researcher also conducted Fisher’s exact test at a 0.10 significance level. There is currently an ongoing debate on when to use either the Fisher’s exact test or the chi-square test. Both have their justification in this case. The result of the Fisher’s exact test is $p = 1$ at a significance level of 0.10 and thus reinforces that the null hypothesis cannot be rejected. This concludes: There seems to be no difference in usage of t-FoR between the students who studied abroad and the students who did not. This is an interesting and to a certain degree unexpected find. The students who had the most exposure to native language do not show a different behavior than the students who

probably had less exposure. This result does not seem conclusive at first glance, but the discussion section of the paper will give several reasons for this particular outcome.

It would have been the best indicator of an actual change in conceptualization if either all advanced German students had shown a similar pattern of behavior to German native speaker, or if at least the students who studied abroad had shown a clear preference for the intrinsic t-FoR. This is not the case and reasons for this will be discussed. In order to see if there was at least some confusion on the student's part because of the differences in German and English, their consistency in frames across German and English will be tested.

Hypothesis 3

Null Hypothesis H_0 (3): The proportion of participant's choice of temporal frame of reference is the same in English and in German.

Research Hypothesis H_1 (3): The proportion of participant's choice of temporal frame of reference is not the same in English and in German.

While it is clear that the majority of students did not use the intrinsic t-FoR, there is still a possibility that there is a higher inconsistency due to some kind of 'concept-blending' in the use of frames between English and German. According to Rothe-Wulf et al. (2014), once participants chose a t-FoR, they usually show a very high consistency in their use of frames. They estimated that 77.5 % consistently use the same frame when answering different question in English. This overall consistency is lower than that of German native speaker, who reach 95%, but it still shows that there is a tendency for individual consistency. Hypothesis 3 estimated whether such a tendency occurred across languages. The researcher utilizes a McNemar-test in

order to test this. The null hypothesis proposed was that the proportion of participant’s choice of temporal frame of reference would be the same in English and in German. Table 8 is the contingency table created for this test.

Table 8
Twin-paired data of students’ t-FoR in German and English

German	English	
	<i>intrinsic t-FoR (E₁)</i>	<i>no intrinsic t-FoR (E₀)</i>
<i>intrinsic t-FoR (G₁)</i>	4	1
<i>no intrinsic t-FoR (G₀)</i>	0	11

The significance level was set at 0.05 and the analysis found a McNemar chi-square statistic of 1 with a p-value = 0.317. This data indicates that the null hypothesis cannot be rejected. There is no evidence that students chose different t-FoR in different languages. Table 9 summarizes the data analysis.

Table 9
Report of the McNemar-test to estimate if there is a difference in the choice of t-FoR between English and German

Null and Research Hypothesis 4	df	McNemar statistic	Critical value	p-value	Decision
H ₀ : G ₀ E ₁ = G ₁ E ₀ H ₁ : G ₀ E ₁ ≠ G ₁ E ₀	1	1	3.84	.317	Do not reject the H ₀

The data summary supports this seeing as not one student used two different frames in English and German correctly (See table 3.1, Appendix D). Instead 3 students, which are 18.75% of all participants, varied between frames in one language. As has been mentioned, such a variation is actually to be expected and supports the theory that students did not change their outlook on time while switching languages. Rothe-Wulf et al. (2014) found that roughly 20

percent of English native speaker do not conceptualize consistently in their own language (see table 5). As a result, the inconsistency of 18.75% of the participants is actually evidence that this particular sample of students conceptualized according to their native language. This led the researcher to make the first overall statement concerning conceptualization of time in German: Even advanced level students of German have difficulties conceptualizing time in German and tend to follow the pattern of their native language.

Chapter Summary

This chapter analyzed the data and the findings from the data analysis according to the methods described in chapter 3. According to the statistical data provided, the first research hypothesis was accepted, but the second and third research hypothesis could not be accepted. Thus, it has been concluded that the advanced students of German have not acquired this specific concept of time yet. They seem to follow the patterns of their native language English instead. What this means for the research questions and further implications are discussed in the next chapter.

Chapter V

Discussion, Implications and Conclusion

Overview

The purpose of this study was to determine if advanced-level students of German, who are English native speakers, still have trouble with concepts, specifically the concept of time, in German. The research also aimed to draw some general conclusions concerning second language acquisition in a language classroom and through a study abroad. Furthermore, this research paper makes some suggestion for future implementations of concepts and perspectivization in a foreign language classroom. Chapter 5 of the study is an in depth discussion of the significance of the study's result for the research questions. Moreover, the limitations of the study will be discussed and further implications for the language classroom as well as future research will be considered.

Discussion

Research Question #1: What are the predictions concerning the acquisition of cultural specific concepts of English native speakers in German according to the framework of Cognitive Linguistics?

The extensive literature review gives room to the prediction that it is not possible to acquire the perspective behind a concept, but that the concept as such can be acquired. Whether language plays a part in the acquisition or not, research suggests that humans cannot change the perspective they acquired through cultural and individual experiences growing up. If they could, it would definitely have to involve a form of direct training. Simply living in the speech community would not be enough. This is connected to the fact that humans of a certain age

cannot acquire the cultural experience necessary for the implementation of language specific perspectivalizations.

Still, it has to be noted that just because it might not be possible to acquire the perspective inherent to a language, it is not impossible to acquire the concept. There is a high chance that a process of imitation can occur and that humans can consciously focus on shifting perspective. This might mean L2 speaker will never really be able to change their perception of the world implemented by their native language, but they might be able to follow the Thinking-for-Speaking-pattern of the foreign language to some degree. As a result, there is a possibility that students could have answered according to a native speaker's speech pattern, but doing so does not prove that students have acquired the perspective inherent to the language.

The question this leads to is as follows: If participants use correct speech patterns, why should they have to learn anything about the perspective inherent to them? There are three simple reasons. Firstly, being at least aware of the shift in perspective will foster a faster understanding of different concepts in a language. Secondly, especially at the advanced level, it would be a great tool to further train pragmatically correct speech. Lastly, it would also contribute to a new outlook of one's own language's limitations. After all, it is the goal of learning a language to further communication and to understand the culture of the people who speak the language. The perspectivalization inherent to a language is a great part of this and actively looking for patterns and drawing conclusions should be part of language study in general. It would not only enhance the relationship between speaker and language but generate a general understanding of the relationship between language and the world.

Research Question #2: How do English students actually conceptualize cultural specific concepts in German, specifically time, and what are the difficulties they face?

With the help of a test constructed specifically for this purpose, the researcher used the distinctive concept of time in order to see if advanced students of German follow German structures when conceptualizing time, or if they would conceptualize according to the structures of their native language, English. As has been mentioned, German native speaker prefer to use the intrinsic temporal frame of reference, while English native speaker can use both the intrinsic and the absolute temporal frames of reference. When a speaker uses the intrinsic t-FoR, he or she will move appointments in time pastward. A person who utilizes the absolute t-FoR will move appointments in time futureward. It has to be mentioned however, that once a frame has been picked, speakers tend to consistently follow that frame even if they have more options of conceptualization available.

Utilizing a z-statistic to test the null hypothesis 1, it becomes clear that the American students do not follow the patterns of a native speaker of German. Only 31.25% of the students use an intrinsic temporal frame of reference while at least 90% of Germans use this specific frame. Furthermore, participants apparently follow the pattern of their native language as the comparison to their usual pattern in English shows. It also has to be noted, that participants showed great consistency once they did choose a frame in a language. Testing the hypothesis 3, which compared the proportions of t-FoR of students' usage of t-FoR in English and German, it becomes clear that there was not variation in the choice of t-FoR in both languages. Consistency persisted in and across languages. This further shows that students are not conflicted in their choice. This might be the effect of the concept 'Thinking for Speaking'. Once participants picked a frame, they could not change their pattern of 'Thinking for Speaking'. Language dictated

which path their cognitive processing followed in this particular instance. This is consistent with prior research that found that a shift in perspective rarely occurs once a person picks a certain path of thought to follow. Thus, these results might not be able to negate participant's ability to change perspectivization in general, but they imply that participants do not change their choice in t-FoR when they are in the state of Thinking for Speaking. No change in perspective can occur during this active thought process. Moreover, this result is in agreement with one further aspect of 'Thinking for Speaking': Humans follow the pattern that they are most familiar with. As the fact that students followed the patterns of an English native speaker, even when speaking in German, shows, habitual language is utilized even in a foreign language.

It has to be noted that the researcher specifically asked the German questions first to avoid students being predisposed to use the model preferred in their native language, and to avoid interference of the native language. This was also done in order to see if participant's results in their native language would change. If they had answered according to the pattern of German native speakers, two options would have been possible: Participants could have switched frames in English again and followed the pattern common to their native language. This would mean that they were able to utilize both languages without any interference of the other. Another option would have been that they follow the pattern of German even in English. This would have further supported the theory of 'Thinking for Speaking'. Nevertheless, students did not conceptualize time according to a German native speaker's preference. This means that even at an advance level of acquisition, abstract concepts like time have not been acquired by this particular sample of German students.

What about students who followed intrinsic patterns? Did they follow German principals of conceptualizing time? The answer to this question is harder to estimate. As has been

mentioned, around 37% of English native speaker do utilize the intrinsic t-FoR, even in English. As a result, these students might just be the percentage that prefers this particular frame in their native language. It is no proof of acquisition of the concept, but it is also no evidence against acquisition. To guarantee actual acquisition, the individual students would have to have switched between frames in English and German. However, not even one student switched frames in English and German.

To summarize, students face several difficulties when using different concepts in a foreign language: The Lack of familiarity with culturally different concepts, the habitual language enforced by their Thinking for Speaking patterns, and an inability to unconsciously switch between concepts in different languages.

Research Question #3: Is there a difference between students who acquired their language solely in a language classroom and the students who had prolonged exposure to the language through an extended study abroad experience?

There was no difference between the students who studied abroad and the students who had not. Therefore, the null hypothesis 2, which suggested no difference, could not be rejected. This is somewhat surprising, but after some consideration, it seems plausible as well. This result also further strengthens the argument that there is a need for specific instructions that aim to help students acquire the perspective and culture behind a language.

The researcher did expect the student who studied abroad to show some kind of different behavior. They could have either shown a greater tendency to use the intrinsic t-FoR or shown a greater fluctuation in their choice of frame. This particular sample did neither. There are several reasons why this result is surprising. First of all, the vast amount of input students receive during

a study abroad was definitely beneficial for their overall language competence. No research will negate this statement. But even though students' overall language competence usually seems to increase during a stay abroad, it is interesting to see that the stay abroad did not seem to have any effects on their actual perception of concepts, or at least the very basic concept of time, in German. Furthermore, as has been explained in the literature review, study abroad has been found to be beneficial for the pragmatic competence of students as well (Regan, Howard & Lemée, 2009). The lack of pragmatic competence is what often results in "learner constructions" as Waara (2004, p.53) calls them. These learner constructions are syntactically correct language, which, nonetheless, does not seem natural to a native speaker. Teachers and students often struggle, especially in the language classroom, to find ways of acquiring pragmatic competence and to avoid learner constructions. Study abroad experience is often seen as a way to acquire this particular competence, and while the researcher agrees that this assumption holds some truth, the results of this study show that further instructions might still be of need for the student's further development. It seems that students do not automatically pick up on the perspectivization behind concepts when it differs from their own language.

To summarize, even though students might produce correct speech and have had a significant increase in pragmatic competence after a stay abroad, they might still not have picked up on the perspectivization and culture inherent to concepts that differ significantly from their native language. This will significantly inhibit their ability to use language in creative ways and will result in learner constructions.

Research question #4: Do advanced students of a foreign language acquire not just correct speech but also the perspectivization behind concepts inherent to the L2 that differ from their

L1? To be more precise, if students use the correct conceptualization of time in German, did an actual shift in their perception occur?

Students did not use the correct conceptualization of time in German. Still, the results the data delivered enable the researcher to give some answers concerning this particular research question. First, this study gives room to a negation of an implication: None of the results are evidence that people's language has influence and limits their thought process. It is not possible to reconstruct the cognitive process that students followed during the test. As a result, it is hard to estimate if language shaped thought in any way. The framework of Cognitive Linguistics would argue that the cognition of students is shaped by their own native language's perspective and that this set cognitive perspective is the reason why they answered the way they did. Even acquiring a foreign language would not easily change this cognitive process generated by their first language during early childhood development. While this theory might be a possible explanation for the result that students are not able to conceptualize according to German patterns, even at an advanced level, the results are not actual evidence for the theory.

However, one consistent result of this study is that once students have chosen a certain concept, they stick to this concept. This supports Sloan's theory of Thinking for Speaking. It seems certain that the participants are able to follow the thought process behind an intrinsic model seeing as their native language, English, allows some degree of variation when choosing a t-FoR. As a result, English native speaker should not have any particular issue comprehending the intrinsic t-FoR. Even when they do not utilize it, it should be a possible concept they could shift towards. Furthermore, being advanced speakers of German, there is a definite possibility for them to shift between frames. Still, there is no confusion or shift in participants' patterns of behavior between English and German. Sloan's theory gives a possible explanation for this

result: No shift in perspective occurs because participant's native language generates habitual patterns of thought which direct their active thinking-ability, even in a foreign language. As a result, students tend to persistently follow the same pattern of behavior, even across languages.

Furthermore, the last implication the results have for cognition is more of a general hypothesis concerning the difference between the two languages German and English. For a German native speaker, the expression of *vorverlegen* (moving forward) is not ambiguous at all. There is a very strong consensus that the appointment will change to a time that is closer to the current time. It also does not matter to a German speaker if the appointment was moved forward or has moved forward. Germans are apparently more set in their view of time compared to English native speakers. The concept of time is less ambiguous in German. It is interesting to see that research shows that time is not the only concept that is more ambiguous in English than in German. Be it the abstract spatial realm, the case system, relative clauses, or the fact that progressive motion tends to be expressed through setting a goal instead of explicit motion marking, the German language seems to possess a lesser overall degree of ambiguity while the English speech community seems to have a much more flexible agreement on the conceptualization of different concepts like time and space. As a German native speaker, the researcher has often faced this issue. While it is possible to be just as precise in English as in German, the researcher has the tentative impression that English and German have very different ways in which they achieve precision. As a result, German native speakers struggle with how to be precise in English because their native language's syntax lends itself to great precision, and they tend to employ familiar methods of specification in a foreign language. On the other hand, English native speakers seem to have trouble with understanding and noticing the precision the German language demands. The result is that American students struggle with the seemingly

very small differences in language that are nevertheless essential to a German native speaker. An example is the case system: English students often do not comprehend how important the choice of the correct case is in order for German native speaker to understand them. English utilizes sentence order and context to mark objects, but Germans do not necessarily perceive these markers. Their markers of preciseness are rooted in the use of article and cases. As a result, even minor mistakes choosing a case lead to misunderstandings, especially when communicating with foreigners. By testing concepts that are very different in their level of ambiguity, like time, teachers could estimate whether students have started to perceive this difference in ambiguity between languages.

Limitations

The researcher detected four different limitations of this study. First of all, the collected sample of participants was very small. Second, it was difficult to compare participant's actual level of German. The third limitation was the use of language as a research tool, and the resulting fourth limitation is a lack of qualitative research that might have strengthened the results.

The greatest limitation of this study was the small number of participants. In order to be even more statistically significant, this study would have to be conducted again using a larger sample. Using a larger sample, and maybe even increasing the variation of the test questions, would have led the researcher to obtain data which would have been statistically more significant. To counter this specific limitation, the researcher took great care in choosing the appropriate tests for the small sample, and additionally changed the level of significance from .05 to .10 for the chi-square test utilized to test hypothesis 2.

A further limitation that has been found is the fact that it is very hard to judge the participants' actual overall level of German without prior testing. This particular sample of students had vastly different backgrounds of language acquisition seeing as they studied German for different amounts of time and at different institutions prior to their current situation. As a result, the researcher ensured that all participants had enrolled in 300-level classes or above at the College where the research was conducted. This ensured a certain amount of uniformity of participant's language skills. Furthermore, the researcher also conducted a prior questionnaire to confirm that none of the participants were raised bilingually or experienced other special circumstances. The lack of certainty concerning participants' level of acquisition is also one of the reasons why the researcher decided to test comprehension and not production. Even though the ability of students to produce output may vary greatly, their ability to process written input should be at an overall high enough level in order to understand the questions asked during the test. To further ensure this, the researcher carefully chose vocabulary that would be familiar to the students and gave further explanations for potentially unfamiliar expressions.

The third limitation is an issue every study trying to analyze the relation between language and cognition faces: How can the influence of language on cognition and perception be analyzed while utilizing language as a research tool? As has been explained in the literature review, this is the reason why this particular paper focuses on any implications for the theory of Thinking for Speaking. The nature of this theory allows the researcher to make statements about the connection between thought and language while utilizing language as a research tool. Any further implications the researcher made concerning cognition and language have to take this limitation of the research tool *language* into consideration.

Finally, the last limitation is less of a limitation and more a consequence of the third limitation: Even though it might have resulted in stronger results, the researcher was unable to include qualitative measurements into the study without potentially clouding the data. This is a direct result of the fact that it is next to impossible for human being to reflect on the actual relation between cognition and language seeing as the reflection always involves language. For future research, it would be important to find ways to further categorize student's background and follow up on their different language developments according to the results.

Implications for Foreign Languages Studies

The researcher found several implications that the results of this study have for the foreign language classroom. First of all, the study confirmed that focused and customized instruction is always of use for the process of language acquisition even when it seems redundant. The fact that the students who studied abroad did not acquire the abstract concepts any more than the students who did not study abroad confirms as much. Students have to be taught how to process input effectively and have to receive additional instructions in areas they struggle with. While it definitely is true that students benefit greatly from a study abroad experience in many different ways, language instructions and a good language classroom are still as important for the student's correct acquisition, especially his or her acquisition of abstract concepts. As a result, it would be interesting to see if student's pragmatic and syntactical competence would benefit from some kind of training that teaches them how to find conceptual patterns in language and urges them to think about the perspective behind these concepts, or the implications these concepts have for their own language use.

Another suggestion this study has for the foreign language classroom is that applying theories of Cognitive Linguistics in a classroom might be especially beneficial for advanced language students, who are trying to significantly improve their language. As has been mentioned, the study abroad experience is often seen as the fastest, most reliable, and easiest way to significantly improve language. Still, experience shows that the results of a study abroad experience can vary greatly and that only going abroad without any further instructions might not be as beneficial as many people seem to think. Moreover, every teacher and every student of a language has had the experience that it seems like improving language skills becomes increasingly difficult once a certain level of acquisition has been reached. It seems like continuously receiving input and producing output is not enough anymore to improve at an advanced stage. Focused and customized instructions become necessary again. The classical theories of grammar are not necessarily a good solution though seeing as they are often arbitrary, not culturally significant, and do not necessarily raise student's interest. Cognitive Linguistics might offer some new ways to implement structures in the classroom in order to significantly improve student's language skill while not being in conflict with a communicative classroom. An example is the concept of progressive: Both English and German share this concept, but express it very differently. Using a cognitive framework, a teacher can showcase the difference and teach students how the specific concept behind the progressive is conceptualized differently.

As a result, the third implication for the foreign language is the fact that concepts and conceptualization are not just useful as a substitution for grammar lessons, they are also useful as a new way of implementing culture. Seeing as the framework of Cognitive Linguistics suggests that grammatical structures are rooted in cultural experience, even analyzing grammar can have implications for culture. For example: In Japanese, no distinction between singular and plural is

made. What might this imply for Japanese culture and the relationship between the individual and society? There are many more ways in which Cognitive Linguistics enables a teacher to connect language and culture. This includes conceptual metaphor, morphology, prototypes in language, and image schemes. All these concepts also offer an alternative to classical grammar and arbitrary rules. Rooting all language in meaning results in explanations for patterns in language that are not arbitrary.

Besides those language-related implementations, teaching language with cognition in mind can result in not just improvement of language but in the improvement of cognitive skills in general. Traditionally, language is often perceived as the subject that not necessarily fosters students' analytical skills. However, this is not true. The framework of Cognitive Linguistics argues that languages are deeply connected to basic cognitive skills like sorting, memorizing, and, as some very recent studies suggest, even motor skills. As a result, learning a language is a way to train the brain. Teachers can increase this effect if they consciously try to implement cognitive skills in the learning process. For example: a teacher can train students to look for recurring patterns and differences in a foreign language. After students are able to perceive the patterns and start looking for them by themselves, the teacher will encourage the students to identify the overall concepts behind the patterns. As a result, students would slowly but surely start to recognize patterns in other areas of their life, including their own language. The final result of this process would be for students to compare the different concepts they acquired and to start realizing how much their individual perspectivization in language enables and limits them

Beyond these very general implications for the language classroom, there are also very specific implications of this study. First of all, conducting a test such as the one utilized in the

study is a way teachers can easily assess students' competence conceptualizing. These tests would allow teachers to determine the student's current status and might also help rouse students' interest in new areas of language, they have not yet touched upon.

Further Research

One area of further research would be to extend and revise the specific test, which was utilized in this study, in order to strengthen the results and to draw further conclusions. Thus, one option would be to determine participants' t-FoR beforehand and specifically question the ones that use the absolute t-FoR in English again. This would be done in order to see if the research hypothesis 1 could have different results and to determine if students exist, whose answer are in accordance with a German t-FoR. If such a pool of participants exists, the researcher could try to further determine why those students are able to change perspective and others are not. The process would also include the additional use of qualitative research and follow-ups on student's language development in order to see if the already mentioned factors of age or direct instructions might be of influence. In general, adding qualitative tools like interviews or more specific questionnaires could significantly help increase the validity of the results.

Seeing that this study has delivered some evidence that advance students struggle with conceptualization, another area of research would be to try and implement theories of Cognitive Linguistics in the language classroom. This implementation would be done in order to see if student's results can be changed. Moreover, this study was limited to the concept of time, but there are many more concepts, some of them completely foreign to the English language, that could be of interest.

The researcher chose a very small topic to test advanced students acquisition of concepts, but it would be very interesting to utilize all the different areas students struggle with as the result of different conceptualization, and to see if a classroom that is not based on grammar but based on teaching the perspective behind these differences would help students understand and change their language. It is important to note however that the implementation of Cognitive Grammar should not result in teacher explaining language using Cognitive grammar. The researcher still very much argues for a language classroom in the target language and not a grammar-based classroom. The implementation of applied Cognitive Linguistic is about strengthening students' overall ability to process language. The researcher suggests that a classroom that bases its understanding of language on principals of Cognitive Linguistics and Cognitive Grammar would quickly improve students' actual language skills.

Conclusion

The aim of this research paper was to make predictions concerning North American students' of German conceptualization of time in German, test their actual conceptualization of time in German, and draw conclusion for the overall process of language acquisition and the foreign language classroom. The research questions lead the researcher to theorize possible outcomes based on the framework of Cognitive Linguistics. The overall goal of the research questions was to find possible difficulties that German students at an advanced level have and to gather some reasons for these difficulties as well as propose some ideas on how to help students improve. The research found that even students of an advanced level, who in theory could have acquired the correct concept, do not follow the speech pattern of German native speaker and interpret the test according to the perspectivization of their native language, English. They also

do not show any hesitation or confusion while doing so. Furthermore, even the students who studied abroad did not conceptualize correctly. As a result, the researcher proposes three statements: (1) Based on the framework of Cognitive Linguistics, the research strengthens the theory that it is not possible, or at least very difficult, for foreign language students to acquire the different perspectivization in a foreign language or override their native language's perspectivization. The proposed reason for this is that cultural experience cannot be subsequently acquired. Because cultural models shape cognition, including language, students cannot easily change their inherent pattern of Thinking for Speaking. (2) Even prolonged exposure to the language and culture through a study abroad did not provide a better acquisition of a concept. (3) As a result, if students want to detect and understand the perspectivization inherent to the foreign language, in order to increase their correct use of concepts in German and their overall pragmatic ability, they need further focused instructions that accompany the usage-based classroom.

To conclude, looking at foreign language and language acquisition with the help of the framework of Cognitive Linguistics results in many new and interesting strategies whose full potential has not yet been reached and will only grow with the current progress in the cognitive sciences. All those strategies have the potential to help students of all levels with the difficult task of improving their pragmatic competence in a foreign language while also enhancing their understanding of the culture inherent to language as well as their own culture.

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Appendix A

Test on the Conceptualization of Time in German and English

Please answer the following questions. This is not test and there is no wrong or right answer to give. If you are unsure about the content of a statement because of vocabulary, please make this known as well. All data collected from this study will be used solely for the purpose of this study and stored in a secure place only accessible to the researcher. You are free to withdraw your participation at anytime. If you have any questions concerning this study, please approach the researcher. Please also take the time to read through the prior information on vocabulary that is given to insure comprehension.

Das Verb **VORVERLEGEN**

In den folgenden Sätzen geht es um Zeit. Das Wort **VORVERLEGEN** ist ein Verb, das aus **verlegen** und dem Präfix **vor** besteht. Das Wort **verlegen** suggeriert eine *Änderung* oder auch eine *Bewegung*. **VORVERLEGEN** wird gebraucht, um zu sagen, dass ein Termin ode ein Zeitpunkt sich geändert hat.

*Herr Baer hat ein Meeting, deshalb wurde die Deutschklasse **vorverlegt**.*

Bitte beantworten Sie die folgenden Fragen in Deutsch über die Änderung von Terminen. Vielen Dank!

TERMINE IN DEUTSCHLAND

1. Das Fußballspiel, das am Sonntag letzter Woche stattfinden sollte, wurde um drei Tage vorverlegt. An welchem Tag der Woche fand das Fußballspiel statt?

2. Das Treffen, das am Mittwoch nächster Woche stattfinden sollte, wurde um 2 Tage vorverlegt. An welchem Tag findet das Treffen nun statt?

3. Das Brunch, das gestern um 12 Uhr stattfinden sollte, wurde um 3 Stunden vorverlegt. Um wie viel Uhr fand das Brunch nun statt?

4. Die Party, die morgen um 20 Uhr stattfinden sollte, wurde um 2 Stunden vorverlegt. Um wie viel Uhr findet die Party tatsächlich statt?

TERMINE IN DEN USA

Bitte beantworten Sie die Fragen auf Englisch.

1. The soccer game scheduled for Sunday last week was moved forward two days. On which day of the week did it actually take place?

2. The meeting scheduled for Wednesday next week will be moved forward two days. On which day of the week will it now take place?

3. The brunch scheduled for 12 pm yesterday was moved forward three hours. At what time did it actually take place?

4. The party scheduled for 8 pm tomorrow will be moved forward three hours. At what time will it now take place?

Appendix B

Questionnaire on Prior Language Acquisition Process

QUESTIONNAIRE ON PRIOR LANGUAGE ACQUISITION PROCESS

In order to make sense of the data that is going to be collected with your help, you will be asked to answer some personal questions about your language acquisition process. All information will be handled confidentially and used solely for the purpose of this study. You are free to withdraw your participation in this study at any time.

1. Where did you study German and for how long at each respective institution? Please name the institutions and the respective years of study.

2. Why did you decide to study German?

3. Do you have any family ties to Germany or any family member that speaks German with you on occasions? If yes, please specify.

Neither of those.

Yes,

4. Have you studied abroad or been on vacation to a German speaking country? If yes, please clarify where and for how long.

No, I have not studied abroad and have not been to a German speaking country.

Yes,

5. Do you speak another language besides English and German? If yes, did you study this language or were you raised bilingually?

No, I do not speak another language besides German and English.

Yes,

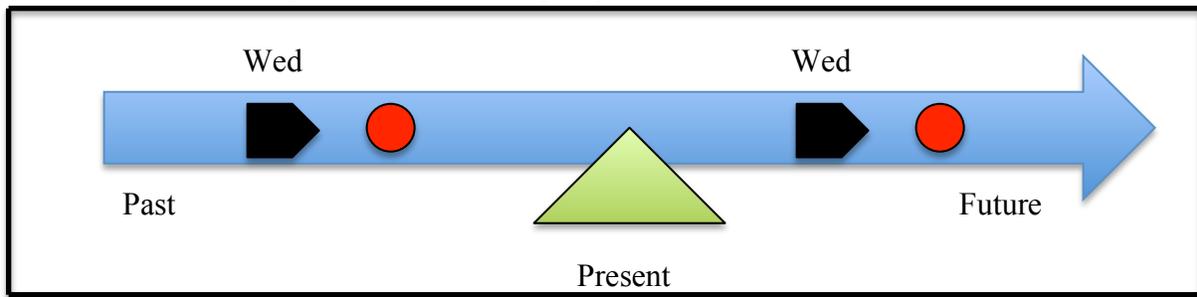
6. How do you culturally immerse yourself into a language? Do you listen to German music, read German books or watch German movies? Please explain how often you do these things and specify your preferred tool of immersion.

Appendix C

Graphics

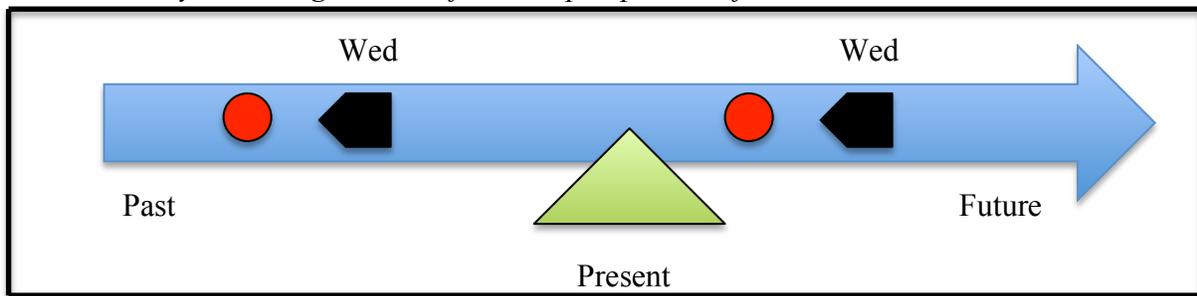
Graphic 1

Wednesday's meeting scenario from the perspective of an absolute t-FoR



Graphic 2

Wednesday's meeting scenario from the perspective of an intrinsic t-FoR



Appendix D

Tables

Table 1

Responses to “Appointment has been moved forward days/ hours ...” in German as indicators for the underlying temporal FoR

t-FoR	(1)Appointment last week	(2) Appointment next week	(3) Appointment yesterday	(4) Appointment tomorrow
(a) Absolute	→ Wednesday	→ Friday	→ 3 pm	→ 10 pm
(b) Intrinsic	Thursday ←	Monday ←	9 am ←	6 pm ←

Table according to Rothe-Wulf, Bender and Beller, 2014, p.9

Table 2

Responses to “Appointment has been moved forward days/ hours ...” in English as indicators for the underlying temporal FoR

t-FoR	(1)Appointment last week	(2) Appointment next week	(3) Appointment yesterday	(4) Appointment tomorrow
(a) Absolute	→ Tuesday	→ Friday	→ 3 pm	→ 11 pm
(b) Intrinsic	Friday ←	Monday ←	9 am ←	5 pm ←

Table according to Rothe-Wulf, Bender and Beller, 2014, p.9

Table 3

Percentage of students who either chose an absolute, intrinsic or divergent t-FoR in German and English

t-FoR	In German	In English
	<i>n = 16</i>	<i>n = 16</i>
absolute	62.5	62.5
intrinsic	31.25	25
divergent	6.25	12.5

Table 3.1.
Summary of all students' answers of the test questions in German and English

Participant	Answer to German Questions				Answer to English Questions			
	Day	Day	Time	Time	Day	Day	Time	Time
1	Donnerstag	Montag	9:00	18:00	Friday	Monday	9:00 AM	5:00 PM
2	Mittwoch	Freitag	15:00	22:00	Tuesday	Friday	3:00 PM	11:00 PM
3	Mittwoch	Freitag	15:00	22:00	Tuesday	Friday	3:00 PM	11:00 PM
4	Mittwoch	Freitag	15:00	22:00	Tuesday	Friday	3:00 PM	11:00 PM
5	Mittwoch	Freitag	15:00	22:00	Tuesday	Friday	3:00 PM	11:00 PM
6	Donnerstag	Montag	9:00	18:00	Tuesday	Monday	9:00 AM	5:00 PM
7	Mittwoch	Freitag	15:00	22:00	Tuesday	Friday	3:00 PM	11:00 PM
8	Freitag	Montag	9:00	18:00	Friday	Monday	9:00 AM	5:00 PM
9	Donnerstag	Montag	10:00	18:00	Friday	Monday	9:00 AM	5:00 PM
10	Mittwoch	Freitag	15:00	22:00	Tuesday	Friday	3:00 PM	11:00 PM
11	Donnerstag	Montag	9:00	18:00	Thursday	Monday	9:00 AM	5:00 PM
12	Mittwoch	Freitag	15:00	18:00	Tuesday	Friday	3:00 PM	11:00 PM
13	Mittwoch	Freitag	15:00	22:00	Tuesday	Friday	3:00 PM	11:00 PM
14	Mittwoch	Freitag	15:00	22:00	Tuesday	Friday	3:00 PM	11:00 PM
15	Donnerstag	Freitag	9:00	22:00	Friday	Monday	9:00 AM	5:00 Pm
16	Mittwoch	Freitag	15:00	22:00	Tuesday	Friday	3:00 PM	11:00 PM

Table 4
Report of the z-test comparing English students use of intrinsic t-FoR to a general German Proportion

Null and Research Hypothesis 1	z-score	p-value	Decision
$H_0 : p \text{ intrinsic t-FoR} \geq 0.90$	-7.83	0.00001	Reject the H_0 accept H_a
$H_a : p \text{ intrinsic t-FoR} < 0.90$			

Table 5
Percentage of people who either chose an absolute, intrinsic or diverging t-FoR in German and English

t-FoR	In English by native speakers according to Rothe-Wulf et al. (2014)	In German by native speakers according to Rothe-Wulf et al. (2014)	In German as utilized by the participants of this study
	<i>n = 142</i>	<i>n = 139</i>	<i>n = 16</i>
absolute	40.8	0	56.25
intrinsic	35.9	94.5	31.25
diverging	22.5	5.0	12.5

Table 6
Contingency table reporting *t-FoR* in German of the 2 groups of students divided by study-abroad experience

	No intrinsic <i>t-FoR</i>	intrinsic <i>t-FoR</i>	total	Percentage of students using the intrinsic <i>t-FoR</i>
abroad (A)	3	1	4	25
not abroad (A₀)	8	4	12	33.3
total	11	5	16	31.25

Table 7
Results of the chi-square concerning the relationship between a *t-FoR* and *S*

Null and Research Hypothesis 3	df	X ²	Critical value	p-value	Decision
H ₀ : <i>t-FoR</i> and <i>S</i> are independent	1	0.097	2.706	.7555	Do not reject the H ₀
H ₁ : <i>t-FoR</i> and <i>S</i> are dependent					

S = Study abroad experience

Table 8
Twin-paired data of students' *t-FoR* in German and English

German	English		
	<i>intrinsic t-FoR</i> (E ₁)	<i>no intrinsic t-FoR</i> (E ₀)	
	<i>intrinsic t-FoR</i> (G ₁)	4	1
	<i>no intrinsic t-FoR</i> (G ₀)	0	11

Table 9

Report of the McNemar-test to estimate if there is a difference in the choice of t-FoR between English and German

Null and Research Hypothesis 4	df	McNemar statistic	Critical value	p-value	Decision
$H_0 : G_0E_1 = G_1E_0$ $H_1 : G_0E_1 \neq G_1E_0$	1	1	3.84	.317	Do not reject the H_0