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University of Iowa

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EXPLORING WORD AND STRATEGY KNOWLEDGE
OF HIGH SCHOOL STUDENTS IN A GERMAN CLASSROOM

by

Kristin Kuchenbecker

An Abstract

Of a thesis submitted in partial fulfillment
of the requirements for the Doctor of Philosophy
degree in Teaching and Learning
(Foreign Language and ESL Education)
in the Graduate College of
The University of Iowa

May 2013

Thesis Supervisor: Associate Professor Leslie Schrier and

Assistant Professor Lia Plakans

ABSTRACT

Vocabulary learning strategies and word knowledge are two central factors in learning a foreign language. Researchers have acknowledged the vital role of vocabulary in second language acquisition. This particular study was trying to fill a void by looking at high-school aged learners, by looking at beginning learners of German and by looking at the demonstration and expression of word knowledge and strategy use qualitatively.

The research methodology for this study was qualitative and exploratory in nature. The participants of this study were 29 high-school students, who participated in a vocabulary review game and filled out exit slips following the game. Of these students, 13 participated in a follow-up interview in which the prompts from the review game were discussed and analyzed.

The study revealed beginning learners of German use a variety of learning strategies. Students preferred semantic context to linguistic and social context. They were also able to describe vocabulary items in the target language German, without major breakdowns in communication. Students displayed partial vocabulary word knowledge, tried to avoid the use of the German articles and confused grammatical terminology at times. Overall, students knew high frequency vocabulary and how to use it.

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Date

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Graduate College
The University of Iowa
Iowa City, Iowa

CERTIFICATE OF APPROVAL

PH.D. THESIS

This is to certify that the Ph.D. thesis of

Kristin Kuchenbecker

has been approved by the Examining Committee
for the thesis requirement for the Doctor of Philosophy
degree in Teaching and Learning (Foreign Language and
ESL Education) at the May 2013 graduation.

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Volker Thomas

To my mom,
Angelika Kuchenbecker
(1956-2012)

In Memoriam

Wenn ihr an mich denkt, seid nicht traurig. Erzählt lieber von mir und traut euch ruhig zu lachen. Lasst mir einen Platz zwischen euch, so wie ich ihn im Leben hatte.

André Rieder

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CHAPTER I

INTRODUCTION

For too long, Americans have relied on other countries to speak our language. But we won't be able to do that in the increasingly complex and interconnected world. -Arne Duncan-

At the Foreign Language Summit, on December 8th 2010, Arne Duncan, U.S. Secretary of Education, called for more foreign language programs in high schools “we obviously need to get better [...] in teaching languages. The United States is a long way from being the multi-lingual society that so many of our economic competitors are.” He continued to say that “world-class education requires students to be able to speak and read languages in addition to English [...] we have an important responsibility to provide opportunities for those who want to master other languages and prepare them to support America’s economic and strategic interests as diplomats, foreign language analysts, and leaders in the military.” CIA director Leon Panetta urged Americans to learn another language to ensure national security and further voices that the United States may be the only country in the world where high school and college diplomas can be earned without the study of another language (Asia Society, Secretary Arne Duncan on importance of languages). Besides colleges and high schools, the entire K-12 system would benefit from more foreign language education programs.

1.1. Context of the Problem

The American Council on Teaching of Foreign Languages (ACTFL), the Modern Language Association (MLA) as well as other professional foreign language

organizations have long lobbied for the inclusion of foreign language education in a K-12 setting. The importance of foreign language learning “in preparing citizens to meet the political, communicative, and social challenges of internationalization and globalization” (Huntington, 2010, p. 148) has been acknowledged by the current administration, policy makers, and educators. Consequently, literacy in a foreign language is integrated in the CORE Curriculum proposed by the U.S. Department of Education, discussed in the National Defense Act, and included in the No Child Left Behind Act (NCLB) from 2001.

Title IX, Part A, Section 9101 of the current federal educational legislation, the No Child Left Behind Act 2001 (NCLB), designates foreign languages as part of the CORE Curriculum along with English language arts, math, science, civics and government, economics, arts, history, and geography content areas. Federal funding is provided for foreign language study through the Foreign Language Assistance Act of 2001, which is Title V, Part D, Subpart 9 of NCLB. (Taylor & Lafayette, 2010, p. 22)

Funding is also provided through Title VI of the Higher Education Act. The Department of Education supports colleges and universities that are teaching strategic languages (Education Week, U.S. Reps. Push for Foreign-Language Teaching in ESEA). Furthermore, Arne Duncan’s plan to reauthorize the Elementary and Secondary Education Act includes a \$265 million fund to support the interconnected global economy and foreign language instruction. (International competitiveness in education: A conversation with Arne Duncan). On one hand, progress has been made within the profession of foreign language education by creating standards and guidelines to unify the field as well as setting goals and expectations based on data driven research. ACTFL proposes teaching standards, also known as the 5 C’s: communication, connection, culture, community, and comparison (ACTFL Standards) as well as performance guidelines based on age and experience in the target language (ACTFL Performance

Descriptors). On the other hand, given the importance of literacy, the respect and appreciation for one's own language, and the importance of communicating effectively in a diverse and ever changing society like the United States, the late onset of foreign language learning is astounding and of concern.

The landscape of foreign language education was shaped by the introduction of Foreign Language in the Elementary Schools (FLES) funded by the National Defense Act of 1958 and at the time heavily influenced by the launch of Sputnik. However, the benefits of early foreign language education have not yet been embraced in the United States and internationally oriented employers are again struggling to find fluent speakers of languages currently in demand. "One in five jobs in the United States is tied to foreign trade; however, children in U.S. public schools are not prepared to take advantage of these benefits of the global economy because they are not literate in a second language. Of 33 million elementary school students in the United States today, only 24% receive world language education" (The Language Educator, 2012, p. 9). This is especially startling since access to an array of native speakers and native cultures is present within the boundaries of the country itself.

Foreign language education is vital to the American national security (Taylor & Lafayette, 2010). Adding to the argument for foreign language education is the focus on matters like a global economy, technological advances, global efforts in research and sciences, and being a responsible and productive world citizen in the 21st century. "The educational goal of internationalizing the curriculum takes on a decidedly moral dimension in the charge to remove barriers to economic, racial, ethnic, cultural, and linguistic inequalities" (Byrnes, 2009, p. 608). Allan Goodman, president and chief

executive officer of the Institute of International Education (IIE) “highlights both the remarkable need, within the U.S. education, for a strong international orientation and the efforts already exerted and yet to be undertaken to assure a gradual closing of the stark gap between that need and actual capacity” (Byrnes, 2009, p. 607).

1.2. Statement of the Problem

World language teachers spend countless hours teaching, reviewing, evaluating, and re-teaching vocabulary using a variety of methods, strategies, and activities. I am interested in vocabulary learning, a crucial part of foreign language learning, and the use of vocabulary learning strategies of high school students. Back in 1990, Nation posed the following questions: “Should vocabulary be taught? What are possible approaches to vocabulary learning?” (p.2). Vocabulary learning has since received increased attention in second language acquisition research (SLA).

Researchers now have acknowledged the vital role of vocabulary in first language (L1) and second language (L2) learning (e.g. Laufer, 1989, 1992; Meara, 1996; Nation, 1990; Singleton, 1999). L2 learners themselves see vocabulary as the main ingredient to foreign language learning, and a breakdown in communication is often attributed to inadequate vocabulary knowledge (Meara 1996; Nation, 1990). No communication, neither written nor oral, is possible without the ability to understand words in one’s native language and in any subsequent foreign language. Wilkins (1972) undoubtedly illustrates the importance of vocabulary by saying: “Without grammar very little can be conveyed, without vocabulary nothing can be conveyed” (p.111). The real challenge of learning a language lies in mastering its vocabulary (Singleton, 1999). However, thus far

it is neither known how vocabulary is acquired nor how multiple encounters change and modify the vocabulary competence of a learner (Nation, 2001). Nevertheless, we as teachers and researchers know that vocabulary learning is multifaceted and are constantly seeking to shed light on relevant and related aspects of vocabulary acquisition.

One of the related aspects is the use of learning strategies, an area that has generated great interest among researchers and educators in the past 25 years. Learning strategies are defined as “the process by which information is obtained, stored, retrieved, [and] used” (Rubin, 1987, p. 29). Interestingly, “appreciation of the importance of both of these areas has led to considerable research in each, yet the place they intersect- vocabulary learning strategies- has attracted a noticeable lack of attention” (Schmitt, 2000, p. 199). Research is conducted in ESL and EFL settings with varying age groups; yet foreign language studies are primarily conducted at the college level ignoring high school foreign language learners. Moreover, my personal interest in vocabulary learning kindled by classroom observations places a demand on examining vocabulary learning strategies, which have been studied numerous times (e.g. Cohen, Weaver, & Li, 1998; Ellis, 1994; O’Malley & Chamot, 1990; O’Malley et al., 1985; Oxford, 1990; Rubin, 1975). Consequently, the foci of my research are word knowledge, vocabulary learning strategies, and how students demonstrate and express their knowledge of words and vocabulary learning. An investigation in what strategies high school learners employ, and what they know about studying a foreign language and learning new words would be worthy of note. The proposed study was designed to fill a void by: (a) looking at high-school aged learners; (b) looking at beginning learners of German; and (c) looking at the expression of word knowledge and strategy use qualitatively.

1.3. Purpose of the Study and Research Questions

As a high school foreign language teacher and researcher, I am finding a lack of research in primary and secondary grades “although many theories have been built on data stemming from research on children’s first language (L1) acquisition, child SLA has not been studied in its own right” (Broner, 2009, p. 644). There is a great discrepancy between the argument our field is making and the research being conducted. As educators and researchers petition to start foreign language education in earlier grades, I would make a case for research to focus more on these earlier grades. Studies ought to be conducted with younger foreign language learners in a variety of L2’s to establish convincing support and to further inform pedagogy.

What is needed now is research on second language learners at the secondary level and above to find out what they know about a selected word in their second language and how they express that knowledge in their own terms. This involves moving beyond simple quantitative measures of the number of ‘words’ in a person’s vocabulary to a more qualitative investigation of how well key words are known. (Read, 1987, p.11)

I strongly agree with Read and believe secondary education deserves more attention in SLA research. Interestingly, Read’s argument dates back to 1987, and yet not enough research has been conducted since addressing second language word knowledge qualitatively. The gap between qualitative and quantitative research is still visible. A review of qualitative studies by Benson showed that only 22% of published articles in 10 major journals between 1997 and 2006 were studies of qualitative nature (Benson et al., 2009).

My challenge was to design a study answering the following research questions:

(a) What distinct vocabulary learning strategies do high-school aged learners of German

employ? (b) How do high-school aged learners of German demonstrate their knowledge of words? The study was qualitative because it was seen as the best fit to answer the research questions due to their exploratory nature. Participants of the study were high school students enrolled in German II. They were prompted in a classroom setting to use German vocabulary and interviewed later. (Details of the data collection methods can be found in Chapter 3.) By conducting the proposed study, I intended to shed more light on vocabulary learning, learning strategies, and word knowledge. Also, I intended to support existing findings and add to the discussion in the field of SLA and foreign language education. “Continued advances in the field should permit students to learn second languages more efficiently through classroom instruction” (O’Malley et al., 1985, p. 43).

1.4. Significance of the Study

Firstly, research related to vocabulary learning is predominantly carried out using a quantitative design. A lack of qualitative description becomes evident when sifting through SLA research. As mentioned previously, only 22% of published articles in the last decade were qualitative studies (Benson et al., 2009). Factors influencing vocabulary learning are multifaceted and are not easily isolated. My interest was a holistic view and giving a voice to the students. It was and still is my hope that a qualitative view could enhance the debate on vocabulary learning. Secondly, the study focused on high-school aged learners, an age group that to date has not received much attention in SLA research. Thirdly, the study concentrated on learners of German, a language that would benefit from additional research. In the United States research is lacking in the field of German as a foreign language. Generally speaking, more research is still needed today in the area

of vocabulary learning. The phenomenon of how learners acquire and learn words is not understood enough to make significant changes in the teaching practice. In this case, the articulation of word knowledge by high school students provided a new perspective. This study had pedagogical implications for my classroom instruction and can have an impact on other foreign language teachers. Furthermore, knowledge from this study can guide the development from a specific lesson plan to overall curriculum design. In summary, my contribution to the field has been a qualitative study of high-school aged German students, which added another dimension to the discussion. It was my goal that this study could be a source of additional insights, new ideas or at least provided reinforcement of existing knowledge. Results have the potential to benefit researchers, educators, and foreign language learners.

1.5. Definition of Terms and Acronyms

ACTFL: American Council on the Teaching of Foreign Languages

CORE: refers to common core standards initiative trying to align state curricula

ESL: English as a second language, the study of English by a non- native English speaker (Stern, 2001)

EFL: English as a foreign language, “the teaching of English in the USA to immigrants who are speakers of other languages. (Stern, 2001, p. 16)

FLES: Foreign Language in the Elementary Schools, a:”movement of the 50’s and 60’s in the U.S.” to teach foreign languages in elementary schools. (Stern, 2001, p. 87)

L1: one's native language or first language, mother tongue. "The L1 terms signal a characteristic level of proficiency in the language. They suggest a intuitive 'native-like' [...] command of the language." (Stern, 2001, p.11)

L2: a second language besides one's native language. "The concept of L2 implies the prior ability to the individual of an L1, in other words some form of bilingualism." (Stern, 2001, p.11)

L2 learner: student of a language other than one's native language

LAD: Language Acquisition Device, a hypothetical device of the brain explaining language acquisition in children

MLA: Modern Language Association

NCLB: No Child Left Behind, an Act of Congress in 2001 meant to support disadvantage students

SLA: learning a language other than one's native language in or outside of a classroom

UG: Universal Grammar, a term coined by Noam Chomsky arguing that all languages share certain properties available to children growing up in normal conditions

ZPD: Zone of Proximal Development. "The distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined" through problem solving under adult guidance, or in collaboration with more capable peers." (Vygotsky, 1978, p86)

CHAPTER II

REVIEW OF LITERATURE

Over the last two decades the role of vocabulary in L2 learning has changed significantly. A variety of SLA theories have emerged. Hypotheses have been formulated, discussed, and challenged. In Chapter 2, I will review relevant literature regarding vocabulary learning and learning strategies. More specifically, the areas addressed in this chapter are the role of vocabulary, theories of vocabulary acquisition, vocabulary knowledge, the teaching and learning of vocabulary, and learning strategies. First, what is second language acquisition (SLA)?

It is the study of how languages are learned. It is the study of how learners create a new language system with only limited exposure to a second language. It is the study of what is learned of a second language and what is not learned; it is the study of why most second language learners do not achieve the same degree of proficiency in more than one language. (Gass & Selinker, 2001, p. 1)

What does it take to learn a new language? A learner needs to learn a new sound system, syntax, morphology, lexicon, new semantics, and pragmatics. The present study focused specifically on the learning of words and vocabulary learning strategies.

2.1. The Role of Vocabulary

2.1.1. Historical Review of the Role of Vocabulary

The roles of vocabulary in first and second language instruction as well as the focus in research have changed over the past decades. Maley commented back in 1986: “It is curious to reflect that so little importance has been given to vocabulary in modern language teaching. Both the behaviorist/structural model and the functional/

communicative model have, in their different ways, consistently underplayed it” (Maley, 1986, p. 3). Supporting this quote I will illustrate how vocabulary learning was viewed in different teaching models. The Grammar Translation Method emphasized the study of grammar and the study of vocabulary mainly through reading and writing activities. Prominence was placed on translation, and the learners’ L1 was the dominant language in the classroom (Gunn, 2003). Vocabulary was translated, typically word for word, and special attention was given to the analysis of grammatical structures. Introduction of new words occurred through vocabulary lists and often “highlight[ed] the obsolete vocabulary of the classics” (Schmitt, 2000, p. 12). Opportunities and occasions to work on oral communication and fluency were scarce.

As communicating in a foreign language became increasingly important, the Direct Method was introduced in the 1950’s. The learner’s L1 was no longer used in the foreign language classroom. All four skills, reading, writing, listening, and speaking were included; however, emphasis was placed on speaking activities, which were teacher directed. Language input was provided by the teacher, who was “expected to model correct speech” (Gunn, 2003, p. 25). The Direct Method was based on “mimicking L1 learning, but did not take into account the differences between L1 and L2 acquisition” (Schmitt, 2000, p. 13).

Similarly, the Natural Approach acknowledged the importance of vocabulary, yet believed that words are acquired without special effort identical to L1 vocabulary acquisition. The only condition was to create a setting capable of replicating L1 vocabulary learning. Researchers agree that L1 and L2 learning are similar but three major differences exist: (a) the learner already knows a language and can build on that

prior knowledge; (b) the learner is older and does not need to go through the same process as a baby; and (c) the learner has background knowledge which can facilitate learning. Foreign language teachers need to take these differences into account in their instruction.

A different method introduced in the classrooms in the 1950's was the Audiolingual Method which was first introduced by the military during World War II. It was centered on the idea that any skill could be mastered through repetition. This notion was based on habit formation research conducted by Skinner (1957), also known as behaviorism. During the Audiolingual period oral skills were emphasized and practiced through oral drills. Drills were restricted to the replication and memorization of dialogues and the accurate pronunciation of vocabulary. Memorization was believed to be a superior technique for language learning. L2 learners were expected to gain native-like fluency through these drills and the ability to produce language without having to think about it (Gunn, 2003). Vocabulary instruction itself was limited. The method, however, was not as successful in the classroom. Students and teachers were not satisfied, became bored quickly, and were not encouraged to use language creatively. Chomsky (1959) heavily criticized the behaviorist approach of language learning.

Started in the 1970's, the Communicative Approach gives prominence to language as discourse and not necessarily to vocabulary instruction. Discourse between people is seen as social use of language. Authentic materials, written by native speakers for native speakers, are included. Meaning is more important than form, which explains the limited amount of error correction in the Communicative Approach (Gunn, 2003). Tying the approach back to vocabulary instruction, the current belief is eclectic and

argues for direct instruction of high frequency words as well as ample opportunities for the learner to encounter additional vocabulary incidentally.

2.1.2. The Importance of Vocabulary and the Vocabulary Threshold

Second language acquisition was previously thought of as mastering a new syntax and morphology. However, more emphasis has been placed on vocabulary acquisition in the last two decades. Laufer and Sim (1985) found that the most important component for a foreign language learner is vocabulary, followed by knowledge of the subject matter and syntactic structures. Many researchers have demonstrated when comparing: (a) L1 reading knowledge; (b) L2 vocabulary knowledge; and (c) L2 grammatical knowledge that L2 vocabulary knowledge is the greatest contributor to L2 reading comprehension. Brisbois (1995) attributes 30% of the variance in L2 reading comprehension to vocabulary knowledge and 20% to L1 reading skills. These numbers are in alignment with Koda's (1989, 1990) and Bernhardt's & Kamil's (1995) findings that 30% of reading comprehension in a foreign language is a language problem and 20% is a reading problem. "Research consistently demonstrates that vocabulary knowledge correlates more highly with reading comprehension than other factors" (Koda, 2005, p. 49). Therefore, word knowledge is an important component in L2 acquisition. Nevertheless, it is not known what actually causes words to be learned.

The relationship of word knowledge and reading skills has been explored further and research has found that reading strategies do not transfer until a certain level of competence has been reached in the target language. This level of competence is also

called the threshold level (Clarke, 1979). Studies indicate that this threshold is of lexical nature. The threshold hypothesis or short circuit hypothesis states that reading comprehension will be impaired and reading strategies do not transfer from L1 to L2 below the vocabulary threshold (Clarke, 1979). Laufer's "main interest has been in determining the minimal language proficiency level at which teachers can usefully switch from concentrating on language development to the development and transfer of reading skills" (Nation, 2001, p. 146). Laufer identified the threshold level at which reading strategies of L2 learners transfer to be 3000 word families in the target language or about 5000 lexical items regardless of academic ability and L1 reading competence.

2.1.3. ACTFL Performance Descriptors for Language Learners

The American Council on the Teaching of Foreign Languages (ACTFL) first published *Performance Guidelines* in 1998. In 2002 ACTFL reprinted guidelines specifically for K-12 foreign language education. These guidelines have been concerned with assessment and curriculum development and provide a continuous view of L2 learning in a classroom setting. Furthermore, ACTFL has proposed content standards also known as the 5 C's: communication, cultures, connections, comparison, and community. "*Standards for Foreign Language Learning* are the content standards that define the 'what' of foreign language learning in American classrooms. The *ACTFL Performance Guidelines* for K-12 learners are the performance standards that define 'how well'" (ACTFL, 2002).

ACTFL also aligns standards and performance guidelines according to the length

of study and/or grade level of the learner. For the target group of this study the 9-10 grade range would apply. The questions “How extensive and applicable is their vocabulary?” is answered in the following table:

Table 2.1. ACTFL Performance Guidelines 9-10 Grade (ACTFL Performance Guidelines for K-12 Learners, 2002)

Interpersonal

- Comprehend and produce vocabulary that is related to everyday objects and actions on a limited number of familiar topics;
- Use words and phrases primarily as lexical items without awareness of grammatical structure
- Recognize and use vocabulary from a variety of topics including those related to other curricular areas;
- May often rely on words and phrases from their native language when attempting to communicate beyond the word and/or gestures level.

Interpretive

- Recognize a variety of vocabulary words and expressions related to familiar topics embedded within relevant curricular areas;
- Demonstrate increased comprehension of vocabulary in spoken passages when these are enhanced by pantomime, props, and/or visual;
- Demonstrate increased comprehension of written passages when accompanied by illustrations and other contextual clues.

Presentational

- Use a limited number of words and phrases for common objects and actions in familiar categories;
 - Supplement their basic vocabulary with expressions acquired from sources such as the teacher or picture dictionaries;
 - Rely on native language words and phrases when expressing personal meaning in less familiar categories
-

In 2012 ACTFL released a new edition of “*Performance Descriptors for Language Learners*. [...] These new performance descriptors reflect how language learners perform whether learning in classrooms, online, through independent project-

based learning, or in blended environments” (p. 3). Moreover, these performance descriptors are trying to answer the question: “How and how well is the language learner able to be understood and to understand?” (p. 9). Four categories have been created to provide the answer to that question:

1. Language Control -How accurate is the language learner’s language?
2. Vocabulary-How extensive and applicable is the language learner’s vocabulary?
3. Communication Strategies -How does the language learner maintain communication and make meaning?
4. Cultural awareness -How is the language learner’s cultural knowledge reflected in language use? (ACTFL, 2012, p. 9)

Table 2.2. 2012 ACTFL Performance Descriptors for the Novice Range

	<i>Interpersonal</i>	<i>Interpretive</i>	<i>Presentational</i>
<i>Language Control</i>	<p>Can usually comprehend highly practiced and basic messages when supported by visual or contextual clues, redundancy or restatement, and when the message contains familiar structures.</p> <p>Can control memorized language sufficiently to be appropriate to the context and understood by those accustomed to dealing with language learners, however at times with difficulty.</p>	<p>Primarily relies on vocabulary to derive meaning from text.</p> <p>May derive meaning by recognizing structural patterns that have been used in familiar and some new contexts.</p>	<p>Produces memorized language that is appropriate to the context; limited language control may require a sympathetic audience to be understood.</p> <p>With practice, polish or editing, may show emerging evidence of Intermediate-level language control.</p>
<i>Vocabulary</i>	<p>Able to understand and produce a number of high frequency words, highly practiced expressions, and formulaic questions.</p>	<p>Comprehends some, but not all the time, highly predictable vocabulary, a limited number of words related to familiar topics, and formulaic expressions.</p>	<p>Produces a number of high frequency words and formulaic expressions; able to use a limited variety of vocabulary on familiar topics.</p>
<i>Communication Strategies</i>	<p>May use some or all of the following strategies to maintain communication, able to:</p> <ul style="list-style-type: none"> • Imitate modeled words • Use facial expressions and gestures 	<p>May use some or all of the following strategies to comprehend text, able to:</p> <ul style="list-style-type: none"> • Skim and scan • Rely on visual support and background knowledge 	<p>May use some or all of the following strategies to communicate, able to:</p> <ul style="list-style-type: none"> • Rely on practiced format • Use facial expressions and gestures

Table 2.2. *continued*

	<ul style="list-style-type: none"> • Repeat words • Resort to first language • Ask for repetition • Indicate lack of understanding 	<ul style="list-style-type: none"> • Predict meaning based on context, prior knowledge, and/or experience <p>For alphabetic languages:</p> <ul style="list-style-type: none"> • Rely on recognition of cognates • May recognize word family root, prefixes and suffixes. 	<ul style="list-style-type: none"> • Repeat words • Resort to first language • Use graphic organizers to present information • Rely on multiple drafts and practice sessions with feedback • Support presentational speaking with visuals and notes • Support presentational writing with visuals or prompts.
<i>Cultural Awareness</i>	<p>May use culturally appropriate gestures and formulaic expressions in highly practiced applications. May show awareness of the most obvious cultural differences or prohibitions, but may often miss cues indicating miscommunication.</p>	<p>Uses own culture to derive meaning from texts that are heard, read, or viewed.</p>	<p>May use some memorized culturally appropriate gestures, formulaic expressions, and basic writing conventions.</p>

These K-12 guidelines and performance descriptors offer a framework of what can be expected of beginning foreign language learners like the German II students chosen for this study.

2.2. Theories of Vocabulary Acquisition

2.2.1. L1 Vocabulary Acquisition

Language and vocabulary acquisition have fascinated researchers for a very long time. Different theories have evolved discussing L1 language acquisition. Presently, words cannot be traced in the brain from a neurological standpoint, and the understanding of vocabulary acquisition is yet limited. In the following section three positions will be described: the behaviorist view, the innatist position, and the interactionist view of vocabulary acquisition.

Behaviorists (e.g. Bloomfield, 1933; Skinner 1957; Thorndike, 1932; Watson, 1924) see L1 acquisition as “a matter of imitation and habit formation” (Lightbrown & Spada, 1997, p. 1). They believe that children repeat sounds and words they hear. Children correct and improve their language skills over time based on positive or negative feedback. In terms of teaching, this approach “believes that practice makes perfect” (Mitchell & Myles, 2004, p. 31). Lightbrown and Spada (1993) analyze imitations and have shown that children imitate adult speech, yet they do not imitate everything that is said. The imitation of children seems selective to what they already know and what they are currently learning. Also error analysis points out that errors and newly created utterances cannot be explained if children are simply imitating language.

The innatist view and Noam Chomsky in particular claim that language is innate (1959). He compares learning a language to learning how to walk, a biological endowment. Children are not born with a blank slate but with an innate ability. In earlier years Chomsky referred to the innate ability as the language acquisition device (LAD), which later became known as Universal Grammar (UG), a set of principles common to

all languages. He proposes that humans learn language through a special innate device, LAD, an independent language faculty in the human mind. His reasoning is based on the incredibly fast pace and accuracy with which a child acquires vocabulary. “[...] the child somehow has the concepts available before experience with language and is basically learning labels for concepts that are already part of his or her conceptual apparatus” (Chomsky, 1988, p. 28). Children also produce output, which was not necessarily provided as input (Lightbrown & Spada, 1993). Investigations in the 1970’s of L1 acquisition (e.g. Brown, 1973; Klima & Bellugi, 1966; Slobin, 1970) found “striking similarities in the language learning behavior of young children, whatever the language they were learning” (Mitchell & Myles, 2004, p. 34).

Lastly, the interactionist position focuses on the combination of linguistic environment and the innate ability of a child. Mothers use speech known as caretaker talk. Caretaker talk is characterized by a slowed down speech, a higher pitched voice, varied intonations, significantly shorter and simpler sentences, and frequent repetitions (Lightbrown & Spada, 1993, 1997, 2006). Children receive modified input from parents, siblings, and/or other adults.

L1 lexical development is still mysterious considering the amount of information an infant has to process and taking the speed of learning into account. Still, a number of developmental stages and concepts have been identified, even though the cause of vocabulary development is still unknown. The four stages of L1 vocabulary development in children are: (a) speech-sound discrimination in infants; (b) concept development prior to the onset of word production; (c) characteristics of late babbling; and (d) lexical development following the onset of word production (Singleton, 1999).

Aitchison is well known for her work on the development of the L1 mental lexicon. Her book *Words in the mind. An introduction to the mental lexicon* provides detailed insights into the state of research such as how learners learn, process, organize, remember, and retrieve words. Aitchison (1987) proposes the following three stages of vocabulary learning:

1. Labeling - attaching a label to a concept,
2. Categorizing - grouping a number of objects under a particular label,
3. Network building - building connections between related words.

Similarly, Miller and Gildea (1987) claim children acquire words in two stages. In stage one, the initial stage, words are organized into categories. In stage two, a much slower process, words within a category are differentiated further. It has been agreed that core meanings are learned first and children categorize things by ‘likeness,’ and over time the criteria for ‘likeness’ change (Schmitt, 2000). Vocabulary acquisition is ongoing and adult native speakers continue to learn new words and new meanings for already known words. L1 lexical development is never finished according to Diller (1971).

A study by Aitchison (1992) entitled *Good Birds, Better Birds and Amazing Birds* looked at prototype theory. Prototype theory organizes words into categories by picking a prototype and comparing the characteristics of a chosen item with other items to see if they belong to the same category. Aitchison tried to answer three questions in her study. “How quickly do learners become confident about borderline items? [...] Are there any identifiable stages which learners go through? [...] Do adults learning a foreign language go through the same learning stages as native speakers?” (Aitchison, 1987, p. 73). The results of the study conducted with English speaking children, adult learners of English and native speakers of English show that children’s language knowledge gradually

increases and becomes more like the language knowledge of an adult. L2 learners are affected by the categorization and ranking of items in their native language.

2.2.2. L2 Vocabulary Acquisition

Singleton (1999) describes the issue of learning words as “the challenge [...] to isolate lexical units in the speech stream and to make connections between such units and the meanings they are intended to communicate” (p. 51). This challenge exists in any spoken language and faces L1 as well as L2 learners. Overall, theories of second language acquisition are based on theories of first language acquisition and are similar in the discussion of an innate capability, the influence of the linguistics environment, and the combination of the two factors (Lightbrown & Spada, 1993, 1997, 2006). Again, theorists take a behaviorist and interactional approach in addition to cognitive theory, creative construction theory, and socio-cultural theory to explain L2 acquisition.

Behaviorist theory relies on imitation of input and habit formation through positive reinforcement. Errors in L2 are seen as interferences of L1 and based on similarities and differences between the native and the target language. However, criticism is expressed since behaviorist theory cannot explain creative use of language and predicted errors. Moreover, beginning L2 learners displayed the use of simple sentence structure regardless of the structure of their L1. Furthermore, if behaviorist theory is correct, errors should be bi-directional. However, English learners of French, for example, and French learners of English did not make the expected errors based on the linguistic features (Lightbrown & Spada, 1993, 1997, 2006).

Once again, Chomsky’s criticism of the behaviorist theory of L1 also applies to

L2 acquisition. However, additional questions arose about the access to the UG for L2 learning. Do L2 learners have no access, full, or only partial access to UG? Does the role of UG change due to the fact that the L2 learner is more cognitively mature, already knows a language, and has different motivations to learn an L2? It is also important to keep in mind that UG is a “linguistic theory, with its own aims and objectives, and not a learning theory” (Mitchell & Myles, 2004, p. 91).

Cognitive theory of second language acquisition is a psychological approach in which learners are building knowledge over time and eventually reach the point of automaticity in their use of L2 (McLaughlin, 1987). In addition to building knowledge cognitive psychologists argue that knowledge can be restructured, an interaction of already existing knowledge and/or new knowledge. Cognitive theory is a learning-based theory and discusses cognitive processing. It is still missing a linguistic framework and cannot predict which L1 structures are transferred to L2. McLaughlin, who proposed the information-processing model (1987), believes that L2 learners first use controlled processing. They are first able to recall memorized phrases; later phrases become automatic and are available at a faster rate.

Finally, phrases can be restructured by the L2 learner. Anderson (1985) introduces the Active Control of Thought Model (ACT). In this model automatization plays an important role. Anderson argues that three kinds of memory are available to the learner: short-term memory, procedural long-term memory, and declarative long-term memory. His belief is based on the notion that declarative (knowing that) and procedural knowledge (knowing how) are different and stored differently. Anderson has been criticized for stating all knowledge is declarative at first (DeKeyser, 1997).

A third theory on vocabulary acquisition is creative construction theory.

“Learners are thought to ‘construct’ internal representations of the language being learned“ (Lightbrown & Spada, p. 26). Foreign language learners go through predictable stages from little knowledge of the second language to full knowledge. Language acquisition takes place internally through L2 input. Output by the learner is seen as the product that internal learning took place and not seen as a process of learning. Order and sequence as well as error analysis play an important role in supporting creative construction theory.

Stephen Krashen has had great influence on L2 learning. He bases his hypothesis of second language acquisition on creative constructionism. Five hypotheses are essential in Krashen’s work: (a) the acquisition learning-hypothesis; (b) the monitor hypothesis; (c) the natural order hypothesis; (d) the input hypothesis; and (e) the affective filter hypothesis (1982). Krashen proposes the idea of ‘acquiring’ a second language and ‘learning’ a second language in his acquisition-learning hypothesis. ‘Acquiring’ in Krashen’s terms means to take in an L2 the same way as an L1, an unconscious process without focusing on form. This is the only way an L2 is easily accessible for fluent speech. L2 learning, however, is a conscious process that takes place in the foreign language classroom and focuses on form and error correction. Furthermore, Krashen argues that learning cannot lead to acquisition. Neither of these constructs can be tested or manipulated, and one never knows which system is operating within the learner.

Alongside acquisition and learning comes the monitor hypothesis stating the learned system functions as a monitor to the output of a learner if there is enough time, the learner knows the rules, and attention is given to form. In the acquired system

correctness of speech is intuitive and not monitored. The natural order hypothesis argues for a natural and predictable order of learning rules, which is independent from the sequence of teaching rules. Comprehensible input is the main ingredient for acquisition to take place and should always be one step ahead of the learner's knowledge ($i+1$), so the learner is continually challenged and continues to comprehend and acquire language. "Comprehensible input is defined as second language input just beyond the learner's current second language competence, in terms of syntactic structures" (Mitchell & Myles, 2004, p. 47). Lastly, the affective filter hypothesis sees an imaginary filter that can be 'up' or 'down' and hamper or encourage learning. The affective filter addresses emotions of the learner that can interfere with learning such as stress and anxiety. While this hypothesis appeals to teachers and may be able to explain learner differences, it does not show causality.

Yet another theory on SLA is the second language interactionist view. Similar to L1 acquisition the modified input of a native speaker interacting with the language learner plays an important role. Comprehensible input is seen as a necessary means by interactionists such as Michael Long (1985, 1996). The question remains how comprehensible input can be achieved in a natural conversation. Long has studied interactions between native speaker pairs and native speaker versus non-native speaker pairs. His findings show grammatical complexity was similar but conversation management was dissimilar. Long introduced the term 'modified interactionism' and examples of these modifications are comprehension checks by the native speaker, confirmation checks, clarification questions, self-repetition or paraphrasing by the learner.

Socio-cultural theorists view language learning as a social process. Vygotsky studied learning theories based on social interaction at the beginning of the 20th century. His works, however, had not been translated into English until 1962. Vygotsky made the concepts of scaffolding and zone of proximal development (ZPD) known. “The domain where learning can most productively take place is christened the Zone of Proximal Development; that is, the domain of knowledge or skill where the learner is not yet capable of independent functioning, but can achieve the desired outcome by given relevant scaffolded help” (Mitchell & Myles, 2004, p. 196). Scaffolding here means a learner, the novice, receives sequenced prompts and support from an expert in solving a task. People are capable of learning throughout lives. In social cultural theory, learning is thought to be a social process in the beginning and a more individual process later on.

Consciousness and conceptual development are seen firstly as inter-mental phenomena, shared between individuals; later, individuals develop their own consciousness, which becomes an intra-mental phenomen[on]. For the human race, and also for the individual infant, language is the prime symbolic mediating tool for the development of consciousness. (Mitchell & Myles, 2004, p. 198)

Infants and learning adults often engage in private speech, which later becomes inner speech and is seen as a conscious thought process and developing maturity. Thinking out loud is no longer necessary for a proficient, autonomous person. This private speech is also taking place when learning a second language (e.g. Frawley & Lantolf, 1985; McCafferty, 1994; Ohta, 2001). Frawley and Lantolf gave L2 learners a picture sequence in order to retell a story. Beginning learners struggled with the task and engaged in private speech, asked themselves questions, and thought out loud. In the more advanced group, comments and questions of that sort were not present. Ohta conducted a case study of learners of Japanese, who wore microphones to class. Again, L2 learners were

engaging in private speech in new or problematic situations. She categorized private speech into: (a) repetition, the most frequent form; (b) vicarious responses, such as private responses to questions, completing a sentence for someone else, or self-correcting; and (c) manipulation of sentences, words, and sounds.

2.2.3. L1 Influence and Transfer

As much as there are similarities between L1 and L2 vocabulary acquisition, there are also differences. Firstly, the learner already knows a language and has experience using this language to communicate. Secondly, school-aged L2 learners are more mature and can organize the information around them in already established categories. The categories for nouns, verbs, adjectives, prepositions, auxiliaries, pronouns, articles, and conjunctions already exist and can be utilized (e.g. Schmitt, 2000; Wode, 1989). Thirdly, L2 learners have to learn the second language at a faster pace compared to their L1 and are usually not given the same amount of time to be salient.

A significant difference between L1 and L2 vocabulary acquisition pointed out by Koda (1994) is the cross-linguistic aspect of L2 vocabulary acquisition. Prior knowledge of vocabulary exists and can support or hinder L2 vocabulary acquisition. L2 learners will experience these interferences as opposed to the L1 learner, who will not (Ringbom, 1987). In Ringbom's study English and Swedish students were learning Finnish, a language with fifteen cases for nouns. The L2 learners of Finnish perceived these cases as redundant. The results of Gabrys-Biskup (1992), who looked at collocation errors of Polish and German learners of English show that German students were more likely to guess, and they produced fewer interferences than Polish students.

Again, this indicates students use and rely on L1 transfer, and the language difference plays an important role in terms of positive or negative transfer. Positive transfer facilitates the learning of a new language (Ellis, 1997), while negative transfer is a “source of error” (Ellis, 1997, p. 51) and can lead to avoidance of unfamiliar and non-existing structures. For example, Chinese and Japanese learners of English avoid the usage of relative clauses but overuse phrases of regret and apology.

2.3. Vocabulary Knowledge

Over the last 50 years the notion of what it takes to know a word has been redefined several times and new components have been added. Applied linguists identified vocabulary knowledge and processes as:

1. Vocabulary size - number of words in one’s lexicon,
2. Knowledge of word characteristics: phonemic, graphemic, morphemic, syntactic, semantic, pragmatic, collocational features,
3. Organization – how are morphemes stored,
4. Access - what processes are needed to access a lexical item (Chapelle, 1994, p.157 ff.).

Vocabulary learning is not a yes or no question, yet many learners and teachers treat it that way. Stahl (1983, p. 36) suggests that a “person who ‘knows’ a word can be thought of as having two types of knowledge about words - definitional information and contextual information.” As early as 1942 Cronbach distinguished five components of knowing a word:

1. Generalization: being able to define a word,
2. Application: selecting an appropriate use of the word,
3. Breadth of meaning: recalling the different meanings of the word,
4. Precision of meaning: applying meaning correctly to all possible situations,
5. Availability: being able to use the word productively (p. 206 ff.).

Over time native speakers as well as learners of a foreign language move “from a background of fuzziness [...] to an intricate network of associations” (Gnoińska, 2002, p. 131). When native speakers know a word, they know its: (a) frequency and collocatability; (b) functional and situational limitations or syntactic properties; (c) syntactic behavior; (d) underlying forms and derivations; (e) network of associations with other words, f) semantic value; and (g) different meanings and connotations of the word (Richards, 1976).

Researchers distinguish the breadth of vocabulary (vocabulary size) as well as the depth of vocabulary (knowledge of word characteristics). This knowledge can be incomplete, or incorrect (Bialystok & Sharwood Smith, 1985). Research is not in agreement on the vocabulary size of an educated person. Numbers vary greatly based on how the term ‘word’ is defined, and based on what assessment instrument is used to quantify and measure words. Goulden, Nation and Read (1990) determined that a native English speaker’s vocabulary is made up of 17,000 base words. These words are learned at a rate of two to three words per day. Miller and Gildea (1987) claim an educated native speaker’s vocabulary consists of 80,000 words, while Diller (1978) estimates the vocabulary size to be even higher at 216,000 words, indicating a great discrepancy among researchers. In any case, any of the aforementioned numbers present a hurdle for a foreign language learner.

2.3.1. Dichotomy or Continuum -Active and Passive Vocabulary

Words have different dimensions. The receptive versus productive distinction is only one of many, albeit the best-known distinction (Paul et al., 1990). In the field of pedagogy, receptive skills comprise listening and reading, and productive skills consist of speaking and writing. Receptive knowledge is also referred to as passive knowledge, and productive knowledge is referred to as active knowledge. A generally accepted assumption is that the passive vocabulary in one's lexicon is larger than the active vocabulary, and that reception precedes production. Researchers for reasons of convenience see receptive and productive knowledge as a dichotomy (McCarthy & Schmitt, 1997), yet Dale expressed the idea of a continuum in 1965. His four steps correlate with the four stages of the learner's perspective identified by Curtis in 1987.

Table 2.3. Stages of a Continuum of a Word

Dale (1965, p. 898)	Curtis (1987, p. 43)
Encountering a word for the first time	"I never saw it before."
Recognition of a word without knowing the meaning	"I've heard of it, but I don't know what it means."
Word can be placed in a context, yet very vague without knowing the meaning (the "twilight zone" going from recognition towards knowledge)	"I recognize it in context-it has something to do with..."
Knowing the meaning of a word	"I know it."

Similar to Dale's stages Paribakht and Wesche (1997) developed a vocabulary knowledge scale: (a) Stage 1-the word is not familiar at all; (b) Stage 2-the word is familiar but the meaning is not known; (c) Stage 3- a correct synonym or translation is given; (d) Stage 4-the word is used with semantic appropriateness in a sentence; and (e) Stage 5- the word is used with semantic appropriateness and grammatical accuracy in a sentence.

Three types of vocabulary knowledge have been identified by Laufer (1998). She distinguishes between passive, controlled active, and free active vocabulary. Passive knowledge means "understanding the most frequent and core meaning of a word" (p. 257). Active knowledge is separated into two different categories, "free productive," in which the use is completely up to the learner, and "controlled productive," in which the use of a certain word is triggered by a prompt.

Laufer conducted a study over one year to see how these three types of vocabulary developed in the same individuals learning an L2. Her results indicate that passive vocabulary increases drastically in a one-year time span, more specifically; the measured growth was 84%. Controlled active vocabulary grew 50%, free active vocabulary, however, increased only slightly. Passive vocabulary is the largest vocabulary and expands the most, therefore, widening the gap between passive vocabulary and controlled active vocabulary. Both vocabularies correlate, and learners with a larger passive vocabulary have a larger controlled active vocabulary. Free active vocabulary cannot yet be measured since Laufer's distinction of types of vocabulary does not allow prompting for free active vocabulary. However, it seemed to plateau in her study, and students did not put the new controlled active vocabulary to use.

A follow-up study by Laufer and Paribakht (1998) supported the previous findings. It stated additionally that: “[the] passive-active vocabulary relationship appears to be affected by passive vocabulary size, context of learning, length of residence in a target language context, and to a lesser extent by knowledge of a related (cognate) language” (p.386 f.). Consequently the question: How can the large and continuously increasing passive vocabulary be activated?

Meara (1990, 1997) questions whether a threshold between productive and receptive vocabulary knowledge exists. Waring’s findings (Receptive and productive foreign language vocabulary size II) show that some production, even though limited, occurred before a word was fully mastered receptively. This would mean that there is some overlap, and one does not follow the other in chronological order. Palmberg (1987) looked at the active and passive continuum claiming words can enter anywhere on that continuum, move around, and disappear again, whereas Melka (1997) feels the distinction of receptive and productive vocabulary is too simplistic. Degrees of receptive and productive knowledge would present a better stance. Drum and Konopak (1987) support the position that the distinction between active and passive vocabulary is not adequate since learners can: (a) know a word orally but not in written form; (b) know a word’s meaning but cannot express it; (c) know a meaning but not the word for it; (d) know the partial meaning of a word; (e) know a different meaning for a word; and (f) know neither the concept nor the word.

According to Meara (1980) passive knowledge can only be accessed with an appropriate external stimulus. A learner can access passive knowledge when he sees or hears a word but cannot bring it to mind without an external stimulus. Active vocabulary

proceeds on a continuum; passive vocabulary, however, is qualitatively different. Passive vocabulary can only become active by linking it to more words, not by reinforcing already existing links. Poorly known words have fewer connections than better known words.

Palmberg (1987) introduces the notion of potential vocabulary, words a learner will know at the first encounter such as cognates. He further separates real vocabulary into passive real vocabulary and active real vocabulary. Passive real vocabulary is understood by the learner, and active real vocabulary is understood and used by the learner. Nation (1984) describes the following aspects of word knowledge: (a) the meaning(s) of a word; (b) the written form of a word; (c) the spoken form of a word; and (d) the grammatical behavior, collocations, register, associations, and frequency. These different aspects are learned over time and in different combinations, meaning there are no set stages or a specific order in which words are learned. Even within each aspect of word knowledge there are varying degrees of mastery. Not much is known about how they may or may not develop together. The aspects are further divided into receptive and productive skills as shown in the table below:

Table 2.4. Knowing a Word (Nation, 1984, p. 31)

<i>FORM</i>		
<i>Spoken form</i>	R	What does the word sound like?
	P	How is the word pronounced?
<i>Written form</i>	R	What does the word look like?
	P	How is the word written or spelled?
<i>POSITION</i>		
<i>Grammatical patterns</i>	R	In what pattern does the word occur?
	P	In what pattern must we use the word?
<i>Collocations</i>	R	What words or type of words can be expected before or after a word?
	P	What words or types of words must we use with this word?
<i>FUNCTION</i>		
<i>Frequency</i>	R	How common is the word?
	P	How often should the word be used?
<i>Appropriateness</i>	R	Where would we expect to meet the word?
	P	Where can this word be used?
<i>MEANING</i>		
<i>Concept</i>	R	What does the word mean?
	P	What word should be used to express that meaning?
<i>Associations</i>	R	What other words does this word make us think of?
	P	What other words could we use instead of this one?

2.3.2. Degrees of Vocabulary Knowledge **-Depth of Vocabulary**

Vocabulary knowledge is a matter of degree, a continuum from not knowing a word to native-like usage of a word. Knowledge of words ranges from superficial to deep. Factors affecting the learning and acquisition of a word as put forth by Laufer (1998) are: (a) pronounceability; (b) orthography; (c) length; (d) morphology; (e) ‘synformy’; (f) grammar; and (g) semantic features (abstractness, specificity and register restriction, idiomaticity, multiple meaning). While vocabulary development goes through

different stages, these stages are not necessarily linear. It is agreed that vocabulary knowledge is a matter of degree and not an all or nothing occurrence. However, researchers vary in the ways they describe or differentiate the degrees of vocabulary knowledge.

Henriksen (1999) discusses incremental development and proposes three dimensions of knowledge. According to her all words have a range of knowledge, from no knowledge to partial knowledge to precise knowledge. McKeown and Beck (1988) use the distinctions of unknown, acquainted, and established words; whereas Anderson and Nagy (1991) employ two dimensions: denotations and connotations. Koda calls word knowledge multifaceted in terms of knowing a word's meaning and knowing a word's properties. These properties are divided into three categories: form, use, and meaning (Nation, 1984, see table 2.4.). Drum and Konopak (1987) explain the stages of knowing a word as recognizing the word orally, recognizing its meaning but not its form, and recognizing a partial or a different meaning. Kameenui, Dixson, and Carnine (1987) differentiate association knowledge, partial concept knowledge, and full concept knowledge.

2.4. Vocabulary Teaching and Learning

Stroller and Grabe (1993) summarized existing hypotheses on language learning. First, the aptitude hypothesis claiming a learner's intellect is the driving force in terms of vocabulary acquisition as well as reading skills. Secondly, the knowledge hypothesis, arguing the vocabulary of a learner reflects one's general knowledge and indirectly affects reading skills. Thirdly, the instrumental hypothesis declaring a direct relationship

between vocabulary knowledge and reading ability exists. Finally, the access hypothesis stating learners not only need to know different word meanings but also need to be able to access them. Kameenui, Dixson, and Carnine (1987) believe that all four hypotheses play a role to some degree and see vocabulary acquisition as a mixture of aptitude, background knowledge, instruction, multiple exposures, and opportunity for practice.

Graves (1987) provides a pedagogical perspective on learning words:

1. Learning to read known words,
2. Learning new meanings representing known concepts,
3. Learning new words representing new concepts,
4. Clarifying and enriching the meaning of known words,
5. Moving words from receptive to expressive vocabularies (p.167).

She also defines the goal of vocabulary instruction as “[...] learning words, learning to learn words, and learning about words” (Graves, 1987, p. 166).

2.4.1. Direct Instruction versus Incidental Vocabulary Learning

Generally speaking, vocabulary is acquired in two ways, explicit or incidental learning. Explicit learning means attention is focused directly on learning the word by providing direct instruction. Incidental learning means a learner encounters a word during a communicative process like reading. Incidental learning or learning from context has to occur due to the number of words children know that have not been taught explicitly. Nagy (1997) favors reading for incidental vocabulary growth and makes a strong case against direct instruction. There are simply too many words to teach, and it would take too much time to teach them well. Others like Deighton (1959), however, see learning from context as ineffective because: (a) only one meaning of a word can be encountered in context at a time; (b) only a few aspects of that one meaning are learned; and (c)

context may not provide enough information about a new word to be guessed or it could be guessed incorrectly. Nation (2001) says Nagy's argument is not valid for L2 learning. The distinction between high and low frequency words is very useful in this matter. Native speakers have learned the high frequency words before schooling starts, and their lexical growth is left with low frequency words. L2 learners, however, have yet to learn the high frequency words of the target language. Direct instruction is a useful and time efficient method to provide information and is appropriate for high-frequency words, especially at the beginning levels. This type of learning is planned by the teacher, and activities or tasks involve the following five steps: (a) encountering a new word; (b) getting the word form; (c) getting the word's meaning; (d) memorizing the word form and meaning together; and (e) using the word (Hatch & Brown, 1995).

Incidental vocabulary learning from reading is divided into two different categories: intensive reading and extensive reading. Intensive reading refers to the reading of shorter texts and the conscious and purposeful study of the meaning, structure, vocabulary, and grammar of the text. In view of that, intensive reading is sometimes questioned and not always considered truthful incidental vocabulary learning. Extensive reading, in contrast, solely focuses on reading for meaning and reading large quantities of text. Two additional subcategories exist based on the purpose for reading, vocabulary growth and fluency development (Nation, 2001). Extensive reading is appealing for three reasons:

Firstly, reading is essentially an individual activity and therefore learners of different proficiency levels could be learning at their own level without being locked into an inflexible class programme. Secondly, it allows learners to follow their interests in choosing what to read and thus increases motivation for learning.

Thirdly, it provides the opportunity for learning to occur outside the classroom. (Nation 2001, p. 151)

Learning from reading happens in small increments. Nagy, Herman, and Anderson (1985) show that learning from context can occur with few exposures. However, the characteristics of the words as well as the context are crucial. Incidental learning can be facilitated by the use of vocabulary learning strategies and by the amount of exposure to new words. Incidental learning through reading is appropriate for more advanced learners and less frequent words. Nagy and Herman stress the importance of providing opportunities for incidental vocabulary learning and the importance of teaching reading and comprehension strategies. Hulstijn (1992) summed up his research on incidental learning:

1. Words are acquired incidentally from context in the normal course of reading and oral interaction, although the number of words acquired from any given context on any given occasion is likely to be rather limited,
2. The relevance of an unknown word to the informational needs of the learner is a determining factor in relation to the amount of attention the learner gives to a word,
3. Making an effort to derive the meaning of unknown words from contextual and formal clues improves such words' chances of being retained (see also involvement load hypothesis by Laufer & Hulstijn, 2001).

2.4.2. Language Learning and Learning Strategies

Weinstein and Mayer (1986) argue that learning strategies are intentional. The use of strategies sets the autonomous learner apart from the dependent learner. O'Malley (1985) found successful learners employ more and better strategies and therefore considers direct strategy training as beneficial to the language learner. Learning strategies are "any specific action taken by the learner to make learning easier, faster, more

enjoyable, more self-directed, more effective, and more transferable to new situations” (1990, p. 8). Language learning strategies “enhance the acquisition, storage, retention, recall, and use of new information” (Ehrmann & Oxford, 1990, p. 16). Oxford further distinguishes direct and indirect strategies and creates a classification system.

Table 2.5. Diagram of Strategy System: Overview (Oxford, 1990, p. 16)

LEARNING STRATEGIES	<i>Direct Strategies</i>	I. Memory Strategies II. Cognitive Strategies III. Compensation Strategies
	<i>Indirect Strategies</i>	I. Metacognitive Strategies II. Affective Strategies III. Social Strategies

Direct strategies require mental processing of the target language and are divided into three groups by Oxford: memory strategies (help store and retrieve information), cognitive strategies (help understand and produce new language), and compensation strategies (assist use of language despite gaps in knowledge). Indirect strategies support language learning without the direct involvement of the target language and consist of metacognitive, affective, and social strategies. Metacognitive strategies involve thinking about the learning process, planning the learning process, monitoring comprehension and production, problem-solving, reflection, and self-evaluation (O’Malley & Chamot, 1990, p. 8). Brown terms these skills higher order executive skills (Brown et al., 1983). Using metacognitive strategies the learner is consciously directing attention to the task (Brown & Palincsar, 1982). Lastly, affective strategies relate to the ability of coping with

emotions, motivation, attitude, and values. Social strategies include working with peers and asking clarification questions.

Learning strategies are steps taken by students to enhance their own learning. Strategies are especially important for language learning because they are tools for active, self-directed involvement, which is essential for developing communicative competence [...] Students without metacognitive approaches are essentially learners without direction. (O'Malley & Chamot, 1990, p. 8)

O'Malley and Chamot discuss language learning strategies in their book *Learning Strategies in Second Language Acquisition*. Ideas and philosophies are “based on cognitive information processing view of human thought and action” (1990, p. 1). They further defined the proposed learning strategies and focused specifically on language learning.

Table 2.6. Preliminary Classification of Learning Strategies (O'Malley & Chamot, 1990, p. 46)

<i>Generic Strategy Classification</i>	<i>Representative Strategies</i>	<i>Definitions</i>
Metacognitive Strategies	Selective attention	Focusing on special aspects of learning tasks, as in planning to listen for key words of phrases.
	Planning	Planning for the organization of either written or spoken discourse.
	Monitoring	Reviewing attention to a task, comprehension of information that should be remembered, or production while it is occurring.
Cognitive Strategies	Evaluation	Checking comprehension after completion of a receptive language activity, or evaluating language production after it has taken place.
	Rehearsal	Repeating the names of items or objects to be remembered.
	Organization	Grouping and classification words, terminology, or concepts according to their semantic or syntactic attributions.
	Inferencing	Using information in text to guess meanings of new linguistic items, predict outcomes, or complete missing parts.
	Summarizing	Intermittently synthesizing what one has heard to ensure the information has been retained.
	Deducing	Applying rules to the understanding of language.
	Imagery	Using visual images to understand and remember new verbal information.
Social/affective strategies	Transfer	Using known linguistic information to facilitate a new learning task.
	Elaboration	Linking ideas contained in new information, or integrating new ideas with known information.
	Cooperation	Working with peers to solve a problem, pool information, check notes, or get feedback on a learning activity.
	Questioning for clarification	Eliciting from a teacher or peer additional explanation, rephrasing, or examples.
	Self-talk	Using mental redirection of thinking to assure oneself that a learning activity will be successful or to reduce anxiety about a task.

O'Neal (1978) was one of the first researchers relating cognitive psychology and learning strategies in SLA. Three major contributions are accredited to O'Neal. Firstly, a definition and classification of learning strategies; secondly, detailed information of how learning strategies are applied depending on the learner and the task. Thirdly, the validation that learning strategies are effective as shown in O'Neal's research and experiments.

Strategy research started with the underlying assumption, proposed by Rubin (1975) and Stern (1975) that a 'good language learner' is working with language differently than a less successful learner. Competent speakers process information and approach tasks differently. At the time this idea was not in alignment with the belief that some learners have language aptitude and an 'ear' for learning a language. The objective of strategy research was to identify what successful language learners do differently, if it could be pin-pointed and taught to other learners. The research results revealed that learners use learning strategies, which can be identified, classified, and categorized (Rubin, 1975; Stern 1975). Naiman et al. (1978) also conducted retrospective interviews with adults and categorized their findings. Rubin's and Naiman's classifications were a source and basis for many other researchers.

Table 2.7. Classification of Learning Strategies in SLA (O'Malley & Chamot 1990, p. 4f.)

<i>Author</i>	<i>Primary Strategy Classification</i>	<i>Representative Strategy Classification</i>	<i>Representative Examples</i>
Rubin (1981)	Strategies that directly affect learning	Classification/ Verification Monitoring Memorization Guessing/ inductive inferencing Deductive reasoning Practice	Asks for an example of how to use a word or expression, repeats words to confirm understanding Corrects errors in own/other's pronunciation, vocabulary, spelling, grammar, style Takes note of new items, pronounces out loud, finds a mnemonic, writes items repeatedly Guesses meaning from key words, structures, pictures, context, etc. Compares native/other language to target language Groups words Looks for rules of co-occurrence Experiments with new sounds Repeats sentences until pronounced easily Listens carefully and tries to imitate Creates situation with native speaker Initiates conversation with fellow students Spends time in language lab, listens to TV, etc.
	Processes that contribute indirectly to learning	Creates opportunities for practice Production tricks	Uses circumlocution, synonyms, or cognates Uses formulaic interaction Contextualizes to clarify meaning
Naiman et al. (1978)	Active task approach	Respond positively to learning opportunity or seeks and exploits learning environments Adds related language learning activities to regular classroom program	Student acknowledges need for a structured learning environment and takes a course prior to immersing him/herself in target language Reads additional items

Table 2.7. *continued*

	Practices	Writes down words to memorize Looks at speakers' mouth and repeats
Realization of language as a system	Analyzes individual problems	Reads alone to hear sounds
	Makes L1/L2 comparisons	Uses cognates Uses what is already known
Realization of language as a means of communication and interaction	Analyzes target language to make inferences	Uses rules to generate possibilities
	Makes use of fact that languages is a system	Relates new dictionary words to others in same category
	Emphasizes fluency over accuracy	Does not hesitate to speak Uses circumlocution
Management of affective demands	Seeks communicative situations with L2 speakers	Communicates whenever possible Establishes close personal contact with L2 native speakers Writes to pen pals
	Finds sociocultural meanings	Memorizes courtesies and phrases
Monitoring L2 performance	Copes with affective demands in learning Constantly revises L2 system by testing inferences and asking L2 native speakers for feedback	Overcomes inhibition to speak Is able to laugh at own mistakes Is prepared for difficulties Generates sentences and looks for reactions Looks for ways to improve so as not to repeat mistakes

Naiman et al. (1978) additionally incorporated "techniques." Techniques focus on one specific area of language learning.

Table 2.8. *Techniques of Language Learning (O'Malley & Chamot 1990, p. 6f. from Naiman et al.)*

<i>Sound Acquisition</i>	Repeating aloud after a teacher, a native speaker, or a tape; Listening carefully; and Talking aloud, including role playing.
<i>Grammar</i>	Following rules given in texts; Inferring grammar rules from text; Comparing L1 and L2; and Memorizing structures and using them often.
<i>Vocabulary</i>	Making up charts and memorizing them; Learning words in context; Learning words that are associated; Using new words in phrases; Using a dictionary when necessary; and Carrying a notebook to note new items.
<i>Listening comprehension</i>	Listening to the radio, records, TV, movies, tapes, etc.; and Exposing oneself to different accents and registers.
<i>Learning to talk</i>	Not being afraid to make mistakes; Making contact with native speakers; Asking for corrections; and Memorizing dialogues.
<i>Learning to write</i>	Having pen pals; Writing frequently; and Frequent reading of what you expect to write.
<i>Learning to read</i>	Reading something every day; Reading things that are familiar; Reading text at the beginner's level; and Looking for meaning from context without consulting a dictionary.

Most of the techniques identified by Naiman focus on vocabulary learning. Krawczyk-Neifar, (2002) identified the most employed vocabulary learning strategies: (a) using a dictionary; (b) asking classmates for meaning; (c) connecting a word to a previous

personal experience; (d) asking teachers for a synonym, paraphrase, or L1 translation of a new word; (e) guessing meaning from textual context; (f) saying new words aloud when studying; (g) connecting the word to synonyms and antonyms; and (h) creating word lists. Nattinger (1988) reviews the importance of strategies and proposes the object of vocabulary teaching should be the enhancement of strategies.

The mind can store 100 trillion bits of information, and memory strategies are necessary to maximize that potential. Examples of memory strategies are: creating mental linkages, applying images and sounds, reviewing, and employing action. Also grouping items together, so-called chunking is used frequently (Miller, 1956). Repetition is another important technique but must involve meaningful cognitive processes. Carpay (1975) argues for 4+1+1+1, which means using a word in four different contexts the day it is introduced and at least once on the following days. Oxford (1990) suggests a specific schedule for review sessions of 15 minutes, 1 hour, 3 hours, 1 day, 2 days, 4 days, 1 week, 2 weeks, etc.

Crothers and Suppes (1967) found that six to seven repetitions are necessary before a word is acquired or memorized. Others say the type of attention is important and not necessarily the amount of repetition. A study by Arabski (2002) showed that students used the following memorization strategies for vocabulary learning: (a) key word; (b) using imagery; (c) representing sound in memory; and (d) placing new words in a context. The key word method was the most common; however, it was not used by all subjects, indicating personal preferences vary among learners. An example of the keyword method from Nation (1990) of Indonesian students learning *parrot*:

First the learner thinks of an Indonesian word that sounds like *parrot* or like a part of *parrot*-for example, the Indonesia word *parit*, which means ‘a ditch’. This is the keyword. Second the learner imagines a parrot lying in the ditch! The more striking and unusual the image, the more effective it is. (p. 166)

Another example of the keyword method I observed in the classroom was the German word ‘bald’ meaning ‘soon.’ A student turned to his friend and said: “You are going bald soon.”

Teaching vocabulary means teaching new concepts and new knowledge.

Schemata may be thought of as interacting knowledge structure such as background knowledge and previous experiences (Bartlett, 1932; Rumelhart, 1980). Skilled readers have developed more word schemata and when learning a new word, links to already acquired words are triggered. The new word can be embedded in and interact with what is already known (Rumelhart, 1980). The importance of this view is that schema theory can now be seen as truly interactive, connecting top-down and bottom-up knowledge structures. Perfetti and Lesgold (1977, 1979) argue when a reader’s effort to recognize a word is slow and labor intensive, short term memory is taxed, and the reader will not be able to take full advantage of the given context. All too often the context is too difficult for weak readers to be utilized, and they fail to comprehend the information.

Comprehension is related to word identification speed and short term memory.

Research on learning strategies is based on the assertion that strategies begin as declarative knowledge that can become proceduralized with practice. [...] At the cognitive stage, the strategy application is still based on declarative knowledge, requires processing in short-term memory, and is not performed automatically. [...] However, if the strategy application has become proceduralized and the strategy use is performed automatically, the student may not be aware of using the strategy. (O’Malley & Chamot 1990, p. 85)

2.4.3. Learner Factors

What characteristics make learners more or less successful? Gardner (1991) believes that individual learner factors affect a learner's choice of strategy use, and therefore affect the learning outcome. Individual learner factors according to Gardner are age, gender, language aptitude, learning style, motivation, and self-esteem, etc.

Lightbrow and Spada organize the characteristics of a 'good language learner' in five categories: "motivation, aptitude, personality, intelligence, and learning style" (1993, p. 35). Some characteristics or observed behaviors of the learner may fall in multiple categories. Hence, learners are different and teaching has become more learner-centered. "We have come to realize that each person is ultimately responsible for his own learning and needs to engage his own personality in the learning process" (Littlewood, 1996, p. 1).

Genese found a connection between intelligence and L2 learning back in 1976, especially in reading, grammar, and vocabulary. Interestingly, no connection was shown for oral skills. Other studies have supported these earlier findings and conclude intelligence is related to the formal study of language. In less formal or more communicative settings, intelligence is less crucial.

Aptitude is tested through the Modern Language Aptitude Test (MLAT) and the Pisleur Language Aptitude Battery. These tests "focus on the ability to identify and remember speech sounds, the ability to memorize words, the ability to recognize how words function grammatically in sentences, the ability to induce grammatical rules from language examples" (Littlewood, 1986, p. 62f.). Nonetheless, results are not conclusive and varying definitions of aptitude exist. Moreover, some learner characteristics or behaviors may also be explained by personality and not aptitude alone. Personality

studies, then again, have not been able to demonstrate empirically that a relationship exists between personality and second language learning. The results thus far are mixed (Lightbrown & Spada, 1993).

Yet studies on inhibition (Guiora et al., 1972), which are seen as an aspect of personality, have shown a negative effect on L2 learning. Researchers continue to investigate the construct of personality and see it as a combination of complex factors. Motivation and aptitude show a positive effect on learning, but it is not clear how they affect learning (Gardner, 1985). Skehan (1989) questions if learners are highly motivated because of their success or are they experiencing success based on high motivation? In a second language learning situation motivation can also be influenced by the learner's need to communicate, the social setting, identity issues, external pressure, and a power relationship between L1 and L2 (Lightbrown & Spada, 1993).

The age of acquisition is a highly debated subject at the moment. Age can be defined and measured unlike many of the previously mentioned factors. As part of SLA theory some scholars suggest a critical period hypothesis in learning a second language. "Critical Period Hypothesis suggests that there is a time in the human development when the brain is predisposed for success in language learning" (Lightbrown & Spada, 1993, p. 42). Changes in the brain, which are believed to occur during puberty, change the innate predisposition and affect second language acquisition. Neurological research has not confirmed such a change in the brain at puberty. However, studies on accents and mastery of an L2 do show a difference depending on the age of the L2 learner.

Patkowski (1980) found older learners have an accent and mispronounce words or phrases. He continued to look beyond pronunciation and conducted other studies dealing

with syntax and morphology and focused on age groups before and after puberty. In his study of 33 pre-puberty learners all but one were rated to have achieved native-like mastery of English, the L2 in that study. The post-puberty group, however, was graphed as a bell curve showing all ratings from low to very high with a high concentration of learners placing in the middle. In summary, Patkowski's study did show a difference between learners before and after the age of fifteen.

Johnson and Newport (1989) looked at grammaticality of Chinese and Korean speakers learning English. All participants spent a minimum of three years in the United States. The results show that pre-puberty learners can achieve native-like fluency and show very little difference in performance among each other. Post puberty learners have greatly varying L2 performance and will not have native-like language skills. Snow and Hoefnagel- Hühle (1978) found that, initially, older learners learn at a faster pace and perform better than children do. While other studies support these findings, they also indicate that children will surpass adults and adolescent learners in the long run.

Taylor and Lafayette (2010, p. 22) conducted a study with elementary school students and compared students who learned a foreign language with students who do not learn a foreign language. They were given the Iowa Test of Basic Skills (ITBS) and a test called Louisiana Educational Assessment Program for the 21st Century (LEAP 21). The results show that FL students achieved higher scores in all areas of the test in both the criterion referenced LEAP 21 test and the norm-referenced ITBS. A study conducted by Rafferty as early as 1986 shows that 3rd, 4th, and 5th graders enrolled in a FLES program outperformed non FLES students in language arts on the Louisiana Basic Skills Test regardless of race, sex or academic level. Saunders (1998) encountered similar findings

looking at math scores in Georgia FLES programs.

Ultimately, learners demonstrate different learning styles and may achieve similar success with differing approaches to a task. Acknowledging learners' preferences and providing the freedom to choose among learning styles will lead to better results. Oxford (1990) encourages a variety of methods and techniques to support learning.

2.5. Chapter Summary

Vocabulary knowledge is crucial to overall literacy, and instruction has an impact on both vocabulary knowledge and reading comprehension. Vocabulary learning involves multiple exposures, the acquisition of a range of skills and varying degrees of mastery. Students must be equipped with independent learning strategies. Individual learner factors play a significant role in language learning. Overall, a variety of factors affect and contribute to vocabulary learning. These factors cannot be isolated from each other as they create a complex construct.

CHAPTER III

RESEARCH METHODOLOGY

The term methodology refers to the way in which we approach problems and seek answers. [It] applies to how research is conducted. Our assumptions, interests, and purposes shape which methodology we choose. When stripped to their essentials debates over methodology are debates over assumptions and purposes, over theory and perspective (Taylor & Bogdan, 1998, p. 3).

In the review of relevant literature, I attempted to provide insights into the areas of word knowledge, learning, and acquiring words. Nevertheless, each study discussed poses new questions and points to an array of directions for further research. Thus, I discussed a combination of deficient areas as a starting point for this study. More specifically, I was interested in contributing to the field with a qualitative study involving students younger than university students. This study looked at high school foreign language learners and presented the phenomenon of word and strategy knowledge from a teenager's perspective.

The present study was designed to explore how high-school aged beginning learners of German demonstrate and express their knowledge of words. The study identified vocabulary learning strategies learners employ and explored how these foreign language learners conceptualized their knowledge. The following chapter describes the methodology I used to conduct the study and to collect the data. I will also describe the participants of this study and how the data were analyzed.

3.1. Characteristics of Qualitative Research

I conducted a qualitative study, which I saw as the best fit to answer the proposed exploratory research questions. "The key to good research lies not in choosing the right

method, but rather in asking the right question and picking the most powerful method for answering that particular questions” (Bouchard, 1976, p. 402). Furthermore, Denzin and Lincoln (2005) argue that:

The word *qualitative* implies an emphasis on the qualities of entities and on processes and meanings that are not experimentally examined or measured (if measured at all) in terms of quantity, amount, intensity, or frequency. Qualitative researchers stress the socially constructed nature of reality, the intimate relationship between the researcher and what is studied, and the situational constraints that shape inquiry (p.10).

Other researchers such as Lee et al. call for qualitative research to “inspire [other researchers] to seek opportunities to expand their thinking and research” and to help them “learn from this larger and collective experience and avoid misdirection” (1999, p. 161). Lee (1999) also concludes that qualitative research is well-suited for the purposes of description, interpretation, and explanation. Edmondson and McManus (2007) are trying to answer the questions of methodological fit and organize research in three archetypes presented in the following table.

Table 3.1. Three Archetypes of Methodological Fit in Field Research (Edmondson & McManus, 2007, p. 1160)

<i>State of Prior Theory and Research</i>	<i>Nascent</i>	<i>Intermediate</i>	<i>Mature</i>
Research questions	Open-ended inquiry about a phenomenon of interest	Proposed relationships between new and established constructs	Focused questions and/or hypotheses relating existing constructs
Type of data collected	Qualitative, initially open-ended data that need to be interpreted for meaning	Hybrid (both qualitative and quantitative)	Quantitative data; focused measures where extent or amount is meaningful
Illustrative methods for collecting data	Interviews; observations; obtaining documents or other material from field sites relevant to the phenomena of interest	Interviews; observations; surveys; obtaining material from field sites relevant to the phenomena of interest	Surveys; interviews or observations designed to be systematically coded and quantified; obtaining data from field sites that measure the extent or amount of salient constructs
Constructs and measures	Typically new constructs, few formal measures	Typically one or more new constructs and/or new measures	Typically relying heavily on existing constructs and measures
Goal of data analysis	Pattern identification	Preliminary or exploratory testing of new propositions and/or new constructs	Formal hypothesis testing
Data analysis methods	Thematic content analysis coding for evidence of constructs	Content analysis, exploratory statistics, and preliminary tests	Statistical inference, standard statistical analyses
Theoretical contribution	A suggestive theory, often an invitation for further work on the issue or set of issues opened up by the study	A provisional theory, often one that integrates previously separate bodies of work	A supported theory that may add specificity, new mechanisms, or new boundaries to existing theories

The presented study according to the distinctions of Edmondson and McManus was nascent research, meaning it was not known what issues could arise, and I did not identify specific variables nor test any hypothesis. As the study was exploratory in nature, rich and detailed data were needed to illuminate the phenomenon. “Interviews, observations, open ended questions, and longitudinal investigations are methods for learning with an open mind” (Edmondson & McManus 2007, p. 1162).

Qualitative research is defined by Taylor and Bogdan (1998) as “research that produces descriptive data” (p. 7). Additionally, Taylor and Bogdan outline subsequent characteristics of qualitative research, which are also supported by Bogdan and Biklen (1992), Eisner (1991), Marshall and Rossmann (1999, 2010), and Rossman and Rallis (1998):

1. Qualitative researchers are concerned with the meanings people attach to things in their lives.
2. Qualitative research is inductive.
3. In qualitative methodology the researcher looks at settings and people holistically.
4. Qualitative researchers are concerned with how people think and act in their everyday lives.
5. For the qualitative researcher, all perspectives are worthy of study.
6. Qualitative researchers emphasize the meaningfulness of their research.
7. For the qualitative researcher, there is something to be learned in all settings and groups (Taylor & Bogdan, 1998, p. 7ff.).

Creswell (1998) takes these characteristics further and proposes a higher norm with “characteristics of a ‘good’ qualitative study” (p. 21f.).

We employ rigorous data collection procedures. [...] We frame the study within the assumptions and characteristics of the qualitative research approach. [...] We use a tradition of inquiry, we begin with a single [...] idea or problem the researcher seeks to understand. [...] The study includes detailed methods. [...] We write persuasively so that the reader experiences “being there.” [...] We analyze data using multiple levels of abstractions [...] The writing is clear, engaging, and full with unexpected ideas. (Creswell, 1998 p. 21f.)

In alignment with the characteristics of qualitative research, I selected a qualitative design as preferred methodology for this study to answer the proposed research question effectively.

3.2. Rationale and Context of the Study

The topic of how foreign language learners demonstrate their knowledge of words and vocabulary learning strategies still needs to be explored further. Exploration and description were additional reasons for the use of qualitative measures. Creswell (1998) provides eight reasons for a qualitative study, which assisted my decision to use a qualitative methodology: (a) the nature of the research question; (b) the topic needs to be explored; (c) the need to present a detailed view of the topic; (d) the study of individuals in their natural setting; (e) the interest in writing in a literary style; (f) the sufficient time and resources to spend on extensive data collection in the field and detailed data analysis of “text” information; (g) the audiences are receptive to qualitative research; and (h) the researcher’s role as an active learner (Creswell, 1998, p. 17f.). The major strength of qualitative methodology is that it “delves in depth into complexities and processes, [...] on little known phenomena” (Marshall & Rossmann, 1999, p. 57).

3.3. Research Design and Research Questions

Brantlinger (1997) sets forth seven assumptions on the part of the qualitative researcher, which guided the research methods employed in this study. These assumptions are as follows: (a) the nature of the research; (b) the positioning of the

researcher relative to the participants; (c) the direction of ‘gaze’; (d) the purpose of the research; (e) the intended audience of the study; (f) the political positioning; and (g) the exercise of agency (p. 4). I conducted classroom-oriented research, which is defined as “research conducted in the classrooms, research that deals with learning and teaching in institutional context, and other research that is highly relevant to language teaching and learning” (Johnson, 1993, p. 1).

Within classroom-oriented research the six most prominent approaches are: correlation approaches, case studies, survey research, ethnographic research, experiments, and discourse analysis (Johnson, 1993). Many of these approaches can also be combined and are not exclusive. Eisner and Peskin (1990) argue that a multimethodological approach is a more sophisticated and scholarly approach. This particular study took a look at classroom discourse answering the research questions: (a) What distinct vocabulary learning strategies do high-school aged learners of German employ? (b) How do high-school aged learners of German demonstrate their knowledge of words? I chose a qualitative design, as such research places its emphasis on descriptive data; words are used rather than numbers to answer the research questions. Wiersma (1995) goes as far as saying that the qualitative method does not necessarily depend on a theory base for the study to retain its full descriptive value and validity.

3.4. Participants of the Study and Sampling Procedure

As a German teacher, I spend time reflecting on issues of learning and teaching and developed an interest in how students learn words, what they know about learning

words, and what they know about the words they learned. The research questions were qualitative in nature and called for non-probability sampling. With the sampling procedure identified for qualitative analysis, I chose a purposeful sampling technique, namely criterion sampling.

It is important to recognize that the essence of the qualitative approach is that it is naturalistic—studying real people in natural settings rather than in artificial isolation. Sampling therefore has to take account not only of the individual's characteristics but also temporal, spatial and situational influences, that is, the context of the study. The researcher should consider the broader picture: would this individual express a different opinion if they were interviewed next week or next month? (Marshall, 1996, p. 523)

I conducted this study halfway through the 2011/2012 school year with two sections of German II students. The rationale behind choosing these students was twofold. On the one hand, German II students are still beginners in their course of language study, and on the other hand, the students have been exposed to German for a significant amount of time. It was of great interest to me to see how they demonstrate and express their yet limited knowledge.

The school district and the school

The school district was located in a midsize city in the Midwest of the United States. The district was a public school district serving 21,000 students. The selected high school was a school of 2,000 students and during the 2011/2012 school year 123 students were enrolled in the German program. 64 in German I, 38 in German II, 17 in German III and 4 in German IV (numbers provided by the classroom teacher). I worked closely with the classroom teacher as well as the assistant superintendent, who graciously granted me permission to conduct the study in their school, and who gave me access to the student population of two sections of German II at one of the high schools in the district.

The Participants

The classroom teacher sent out an initial e-mail inviting parents to a parent meeting. The IRB (Institutional Review Board) approved initial parent e-mail was sent as an attachment from the classroom teacher to the parents of the German II students. I wanted to ensure that parents received the initial e-mail from someone they knew from school. However, there were several scheduling conflicts, and parents preferred communication through the school via their children to a parent meeting. The informed consent forms were sent home with the students through the classroom teacher. A total of 38 students were invited to participate in the study. Not all students who originally signed the informed consent forms were present on the day of the data collection and were therefore not enrolled in the study.

The day of the data collection a total of 27 students with signed parental and personal permission slips were present. There were two additional students, with oral consent from a parent, over the phone, who submitted the informed consent after data collection took place. The following chart shows the gender, age, and grade level of all participating German II students. Thirteen students chose to participate in the follow-up interview. These students, who participated in the game and the interview, are marked with an asterisk (*), all other students participated in the game only.

Table 3.2. Participants from German II section

<i>Participants</i>	<i>Gender</i>	<i>Age</i>	<i>Grade</i>
P(1)	M	15	10
P(2)	M	16	10
P(3)*	F	16	10
P(4)	M	17	12
P(5)*	F	15	10
P(6)	M	18	11
P(7)*	F	16	11
P(8)*	F	15	10
P(9)	M	18	12
P(10)	F	16	10
P(11)*	F	16	10
P(12)*	M	18	12
P(13)	M	16	10
P(14)	M	17	11
P(15)	M	16	11

Table 3.3. Participants from German II Section II

<i>Participants</i>	<i>Gender</i>	<i>Age</i>	<i>Grade</i>
P(16)*	F	17	11
P(17)*	F	17	12
P(18)	F	16	10
P(19)*	M	16	10
P(20)*	F	17	11
P(21)	M	17	11
P(22)*	M	16	11
P(23)	M	17	11
P(24)	M	16	10
P(25)	M	17	11
P(26)	M	16	11
P(27)*	F	17	12
P(28)	M	16	10
P(29)*	F	16	10

Table 3.4. Demographics of Participants

	<i>Number</i>	<i>Percentage (rounded)</i>
<i>Gender</i>	17 male	59
	12 female	41
<i>Age</i>	3 age of 15	10
	14 age of 16	49
	9 age of 17	31
	3 age of 18	10
<i>Grade Level</i>	13 were in 10 th grade	45
	11 were in 11 th grade	38
	5 were in 12 th grade	17
<i>Interview</i>	10 female	77
	3 male	23

Note: The interviews had to be conducted after school at two different times. Due to extra-curricular activities some students were not able to attend. This explains the reversed ratio of male and female participants during the game and during the interview. As indicated in the table above the majority of male participants did not attend in the follow-up interviews.

3.5. Role of the Researcher

3.5.1. The Teacher as Researcher

If teacher research is made central to the pedagogy, and is in fact successful in enhancing teachers' understanding of classroom language pedagogy, then not only will the professional development aim be well served, but so will potentially an additional aim of general 'research progress.' (Allwright, 1993, p. 127)

I think of myself as a reflective teacher. Zeichner and Liston (1985) describe reflective teachers as "willing and able to reflect on the origins, purposes and consequences of their

actions, as well as the material and ideological constraints and encouragements embedded in the classroom, school, and societal context in which they live” (p. 4). I am mindful of the importance of current pedagogical theories in foreign language teaching yet see limitations of implementing theory into the classroom. The teacher as researcher debate has fascinated me since I was a beginning teacher. I see myself as an example of a teacher as researcher and see many of my personal and professional beliefs presented in the literature. As teachers are engaged and informed about current theories and literature, they may become researchers themselves and can investigate and examine their own teaching (Gunn, 2003). Often teacher research is “motivated by local pedagogical concerns” (Ellis, 1997, p. 200).

On the one hand, there is a call for teachers to continue to stay informed and to be more involved in research. On the other hand, there is also a need to make research more accessible to classroom teachers (Gunn, 2003). Nunan argues “in the final analysis, the key distinction should be not whether an activity is practitioner research or regular research but whether it is good research or poor research” (1997, p. 367). Another scholar encouraging teachers to become researchers is Freeman (1998), who believes the situation should be reversed and the real question is: “What is it that they [teachers] know that we [researchers] don’t, rather than what it is that we know that they should” (p. 5). I strongly agree with Mendelsohn (2001) who attempts to settle the argument:

When teachers become more involved in research, and when researchers become more actively involved in teaching, then the divide between research and practice will disappear, the hierarchy between researchers and teachers will cease to exist, teachers will be more valued, and research will ipso facto become more relevant to classroom practitioners. (p. 13)

3.5.2. The Researcher in Person

I was raised in the German Democratic Republic (former East Germany) and learned English as a foreign language as a teenager, similar to the age of the participants of the study. I came to the United States through a university exchange program in 1996. I attended different universities in Germany and the United States. I received a Bachelor's Degree in Russian from Arizona State University in 1998, a Master's Degree in Secondary Education teaching German, English, and Russian from The University of South Dakota in 2001. I am currently in my 11th year of teaching.

Furthermore, I hold certain personal as well as professional beliefs and values. The biases and preferences I bring to the study are based on the fact that I am a foreign language teacher and my interest in the study and its outcomes were high. Therefore, the anticipation of results may bias the data analysis. In order to reduce bias I conducted interviews with 13 students and was engaged in ongoing data analysis and discussions with other professionals in the field who were less biased towards the students or the outcome of the study. By acknowledging the human factor and keeping an open mind during the interview the researcher's biases can be reduced.

3.5.3. Research and Researcher Effect

Qualitative research brings along four identified research and researcher effects such as: (a) reactions of program participants and staff to the presence of the qualitative fieldworker; (b) changes in the fieldworker (the measuring instrument) during the course of the data collection or analysis, that is, instrumentation effects; (c) the predispositions, selective perceptions, and/or biases of the qualitative researcher; and (d) researcher

incompetence (Patton, 1999, p. 1202). I made every attempt to reduce the effects by using a task and a setting the students were familiar with. They played the review game before and were in their regular classroom setting, which should have eased tension and anxiety participants may have experienced.

I completed all required coursework and training to be prepared to conduct this study. I was working with my advisor and my committee members who oversaw this study. As Denzin and Lincoln (2005) state, all qualitative research carries biases and values, and the researcher engages in an interpretive cycle.

Debate about the research value of qualitative methods means that researchers must make their own peace with how they are going to describe what they do. The meaning and connotations of words like objectivity, subjectivity, neutrality, and impartiality will have to be worked out with the particular audiences in mind. (Patton, 1999, p. 1204)

3.6. Data Collection Procedures

3.6.1. The Data Collection

“The major objective of data collection in studying learning strategies is to elicit information about the ways in which the strategies are used with specific second language tasks by various learners operating under different types of conditions. However, beyond this primary objective, there may be at least three secondary objectives:”

1. To focus on strategies that are represented as declarative or as procedural knowledge,
2. To identify overt and covert strategies, or
3. To distinguish among executive strategies (metacognitive), and strategies that operate directly on learning materials (cognitive), and strategies that require the presence of another person (social), or involve affective control during learning (affective strategies) (O'Malley & Chamot, 1990, p. 86).

Three data collection instruments were used in this study. After careful consideration of possible options, I chose a vocabulary review game, exit slips, and group interviews as sources of data for this qualitative study. The objective of the review game is to function as a prompt for the retrospective interviews and to support the elicitation of data. The exit slips provided immediate feedback after the task (immediate retrospection), were used during the retrospective interviews (delayed retrospection), and were a source of additional information (Faerch & Kaspar, 1987). The review game was videotaped. Proper consent was obtained from the participants and their parents/guardians beforehand. The selected techniques evolved from the research questions and are regarded as appropriate and sufficiently rigorous by me, the researcher.

Interviews were conducted in English about the learning of German vocabulary. The German of beginning language learners is not strong enough to conduct the interviews in the target language. As vocabulary learning crosses over in all four modalities of language learning: reading, listening, speaking, and writing, no specific modality was chosen. Examples and discussions of the language learner included all modalities as well as mixed modalities. Oral as well as written responses were collected from the participants. The written questions were presented in the form of an exit slip.

All three above-mentioned methods of data collection were used in order to triangulate the data. Triangulation can be achieved by using different data collection methods or by incorporating “multiple kinds of data sources, multiple investigators, and multiple theoretical perspectives” (Glesne, 2006, p. 36).

The Game

Students in the class were asked to play the vocabulary review game '*Der König*' (the king) during class. Students were split into two teams, Y and Z. One student from team Y sat on a chair facing his/her team and with his/her back to the other team Z. A crown was placed on his/her head. A sticky note with a German word or phrase was attached to the crown. It was now the task of team Y to explain the word in German so that their teammate could guess the word on the sticky note. If team Y could not guess the word within the given time, in this case one minute, the opposing team (team Z) was given the opportunity to guess or 'steal' the word in question. Students and teams were taking turns being 'the king.' The game was videotaped with permission of all participants, transcribed, and used for further analysis.

The vocabulary review game '*Der König*' was part of my data collection and served as a prompt for the follow-up interviews. The class used the textbook *Team Deutsch 1* and at the time of data collection had covered chapters 1-9 and 12. I chose the words for the study from these chapters. I tried to choose five to six words from each chapter including nouns, verbs, verb phrases, and adjectives. I discussed the selected words with the classroom teacher for additional input. She removed several words that were not taught. Due to the time constraints in the classroom not all initially chosen words could be used. The following chart shows the words that were used which came from the textbook and were approved by the classroom teacher. Nouns were presented to the students without the articles, verbs were given in the infinitive form, and a few phrases were included as presented in the vocabulary list from the textbook.

Table 3.5. Words for the Game ‘Der König’

<i>Lektion 1</i> Grüß dich! Wie geht’s? Auf Wiedersehen! Computer spielen	<i>Lektion 2</i> Taschenrechner Handy Religion Lieblingsfach uninteressant zeichnen	<i>Lektion 3</i> telefonieren Geburtstag Kaffee trinken
<i>Lektion 4</i> bequem sympatisch Comics sammeln Eis	<i>Lektion 5</i> frühstücken fernsehen Hausaufgabe Kino Kirche zu Hause bleiben	<i>Lektion 6</i> Einkaufszentrum in die Disco gehen pünktlich Mineralwasser Es gefällt mir.
<i>Lektion 7</i> Ferien	<i>Lektion 8</i> Sonnenbrille Erdgeschoss verbringen Sms verschicken	<i>Lektion 9</i> Dorf <i>Lektion 12</i> Nutella Wurst

Exit Slips

The students guessing the word were asked to fill out an exit slip immediately after their turn as ‘the king.’ Students were asked to reflect briefly on what they were thinking as they were given the clues and what hints or combination of hints helped them guess the word. The exit slips were an idea that came from the pilot study to have immediate feedback from the participants and a starting point for the follow-up interview. The exit slips contained the following questions:

Please take a moment and answer the following questions as truthfully and detailed as you can.

1. What was the word you had to guess?
2. Were you able to guess the word?
3. What hints or clues from your classmates helped you guess the word?
4. What additional hints would have been helpful to guess the word?
5. What hints or clues from your classmates were confusing?
6. Can you think of anything else that was either helpful or not helpful at all when you were playing the game?

Retrospective Interview

Participants were interviewed in the classroom after school for 35-45 minutes.

With permission of the subjects the interviews were tape recorded and later transcribed.

Besides written consent participants also provided their oral consent on tape for a second time. The signed consent form familiarized the participants of the study with its purpose, their role in the study, and the interview procedures. Participants were informed about their right to discontinue at any time and the protection of their privacy.

Parents/guardians signed the Informed Consent Form before an interview was scheduled with the participants. Every attempt was made to make participants feel at ease during the interview. The interviews were transcribed within two weeks thereafter.

For this study the general interview guide was used and can be found in Appendix B. A set of questions about the game was covered, however, not in any particular order. The style of the interview was conversational. The questions were open-ended so that the interviewee had permission to answer in his or her own words and did not perceive a question to have a right or wrong answer (Ehrman, 1996).

The interview was a small group retrospective interview conducted shortly after the game 'Der König' was played. A total of 13 students participated in the group

interviews. The first group interview was conducted with five students from German II section I and the second group interview with seven students from German II section II and one student from German II section I. O'Malley and Chamot "have found that retrospective interviews with students of high school age can be performed in small groups, and that students build on the response provided by other students by adding strategies of their own" (p. 95). Group interviews were also found to be productive by Cohen and Apehek (1981). O'Malley and Chamot "found that students are all the more motivated to respond in an interview because they are pleased to have someone take a personal interest in their learning processes. [...] Students rarely have an opportunity to discuss the way that they think about learning or to provide this type of assistance to future students attempting to learn a second language" (1990, p. 94).

During the interview students were reminded of the words played, and the exit slips were read to them to start the conversation. The interview took 35-45 minutes. The complete student interview guide can be found in Appendix B. All interviews were tape recorded with permission of the participants and their parents/guardians. The interviews were transcribed within two weeks of data collection. The primary advantage with interview data collection is the richness of the description obtained of the respondent's use of learning strategies (e.g. Politzer & McGroarty 1985, Zimmerman & Pons, 1986). "The researcher obtains in-depth information about the use of strategies with individual tasks that would be difficult to obtain using other techniques. The principal disadvantage in conducting group interviews is that the strategies reported are difficult to relate to individual learning outcomes" (O'Malley & Chamot 1990, p. 94f.).

3.6.2. Rationale for Using Interviews

Interviews are used to learn about events and activities that cannot be observed, with the interviewees being the informants. Interviews were a practical, efficient, feasible, and ethical method for this study. “The qualitative research interview is a construction site of knowledge. An interview is literally an *inter view*, an inter change of views between two persons conversing about a theme of mutual interest” (Kvale, 1996, p. 14). Kvale also puts forth the analogy of the interviewer as a miner, who is looking for buried metal by stripping the surface. The knowledge lies within the subject and needs to be uncovered. Wiersma (1980) argues that interviews are suited for probing but also cautions that the interviewee must be willing to respond truthfully. In some cases the interviewee might be uneasy about disclosing information or may misunderstand the question. Good rapport between the interviewer and interviewee is essential. There is no method that can guarantee accuracy of the information obtained in an interview; however, responses can be checked for consistency.

An interview is “a conversation with a purpose” (Kahn & Cannell, 1957, p. 149), is carried out systematically, “a careful questioning and listening approach” (Kvale, 1996, p. 81), and supports the purpose of gaining new information and knowledge. The interviewer defines and controls the situation making it one of unequal power. An interview is not reciprocal by nature. The researcher determines the topic of conversation and continually follows up and probes. According to Kvale the qualitative interview has the following seven stages: “thematizing, designing, interviewing, transcribing, analyzing, verifying, and reporting” (p. 81).

Table 3.6. Seven Stages of a Qualitative Interview by Kvale (1996)

<i>Seven Stages of an Interview Investigation (p. 88)</i>	<i>Ethical Issues of the Seven Research Stages (p. 111)</i>	<i>Validation of Seven Stages (p. 237)</i>
<p>Formulate Purpose of an investigation and describe the concepts of the topic to be investigated before the interviews start. The <i>why</i> and <i>how</i> of the investigation should be clarified before the question of <i>how-method-</i> is posed.</p>	<p><u><i>Thematizing</i></u> The purpose of an interview study should, beyond the scientific value of the knowledge sought, also be considered with regard to improvement of the human situation investigated.</p>	<p>The validity of an investigation rests on the soundness of the theoretical presuppositions of a study and on the logic of the derivations from theory to the research questions of the study.</p>
<p>Plan the design of the study, taking into consideration all seven stages of the investigation, before the interviewing starts. Designing the study is undertaken with regard to obtaining the intended <i>knowledge</i> and taking into account the <i>moral</i> implications of the study.</p>	<p><u><i>Designing</i></u> Ethical issues of design involve obtaining the subject's informed consent to participate in the study, securing confidentiality, and considering the possible consequences of the study for the subjects.</p>	<p>The validity of the knowledge produced depends on the adequacy of the design and the methods used for the subject matter and the purpose of the study. From an ethical perspective, a valid research design involves beneficence-producing knowledge beneficial to the human situation while minimizing harmful consequences.</p>
<p>Conduct the interviews based on an interview guide and with a reflective approach to the knowledge sought and the interpersonal relation of the interview situation.</p>	<p><u><i>Interviewing</i></u> Here the confidentiality of the subjects reports needs to be clarified and the consequences [...need] to be taken into account, such as stress during the interview and changes in self-image. Also the potential closeness of the research interview to the therapeutic interview should be considered.</p>	<p>Validity here pertains to the trustworthiness of the subject's reports and quality of the interviewing itself, which should include a careful questioning as to the meaning of what is said and a continual checking of the information obtained as a validation.</p>

Table 3.6. continued

Prepare the interview material for analysis, which commonly includes a transcription from oral speech to written text.	<p><u>Transcribing</u></p> <p>Here again is the issue of confidentiality, as well as the questions of what is a loyal written transcription of an interviewee's oral statement.</p>	The question of what constitutes a valid translation from oral to written language is involved in the choice of linguistics style for the transcript.
Decide, on the basis of the purpose and topic of the investigation, and on the nature of the interview material, which methods of analysis are appropriate for the interviews.	<p><u>Analyzing</u></p> <p>Ethical issues in analysis involve the question of how deeply and critically the interviews can be analyzed and of whether the subjects should have a say in how their statements are interpreted.</p>	This has to do with whether the questions put to an interview text are valid and whether the logic of the interpretations is sound.
Ascertain the generalizability, reliability, and validity of the interview findings. <i>Reliability</i> refers to how consistent the results are, and <i>validity</i> means whether an interview study investigates what is intended to be investigated.	<p><u>Verifying</u></p> <p>It is the ethical responsibility to the researcher to report knowledge that is as secured and verified as possible.</p>	This entails a reflected judgment as to what forms of validation are relevant to a specific study, the application of the concrete procedures of validation, and a decision on what the appropriate community is for a dialogue on validity.
Communicate the findings of the study and the method applied in a form that lives up to scientific criteria, takes the ethical aspects of the investigation into consideration, and that results in a readable product.	<p><u>Reporting</u></p> <p>Here again is the issue of confidentiality when reporting the interviews, as well as the question of consequences of the published report for the interviewees as well as for the group or institution they represent.</p>	This involves the question of whether a given report is a valid account of the main findings of a study, as well as the role of the readers of the report in validating the results.

Interviews provide the necessary flexibility, are dynamic in nature, and allow the researcher to ask follow-up questions until the desired level of depth and detail has been reached. Patton (1990) distinguishes three types of interviews: (a) “the informal conversational interview; (b) the general interview guide approach; (c) the standardized open-ended interview” (p. 280f.). Interviews present clear advantages: large amounts of data can be collected quickly, follow-up questions are possible, probing is possible when necessary, and clarification questions can be asked.

Nevertheless, the researcher also needs to cope with disadvantages such as the fact that personal interaction is necessary and requires cooperation of the participant. The interviewee may withhold information or may not be entirely truthful during the interview process. Further, the interviewer may misinterpret responses (Marshall & Rossman, 1998). Other limitations of interviews found by Deutscher are that people do different things in different situations, and a person may not say the same thing again (e.g. Deutscher, 1973; Deutscher, Pestello & Pestello, 1993). Sometimes interviewees are unable or unwilling to articulate ideas, and interviewers could potentially make assumptions that could be incorrect (Becker & Geer, 1957).

Two additional considerations are necessary when interviewing children, or in this case, adolescents, in this special form of interview: (a) age; and (b) role (Marshall & Rossman, 1999). The age group presents itself with unique challenges and rewards (Marshall & Rossman, 1999). The attention span and the level of comfort may be different from adults; specific needs and developmental issues also play a role. Fine and Sandstrom (1988) present two different dimensions: “(a) the extent of positive contact between adult and child; and (b) the extent to which the adult has direct authority over the

child” (p. 14). Their research has shown that the role of a friend was found most fruitful in an interview situation. Fine and Sandstrom also caution that age and power are salient. Based on my experience interacting with adolescents, I tried to create an environment conducive to interviewing.

3.6.3. Editing of the Data

I administered two rounds of data collection in two different sections of a German II classroom. Both sections were in the same school and taught by the same teacher. A total number of 29 students participated in the game *‘Der König’* and filled out exit slips; 13 of them came to the follow-up interviews. Follow-up interviews were held right after school and no later than 60 minutes after the game was played. Shortly after data collection, I edited and cut the video footage into separate segments. I eliminated some of the footage when editing the video clips, such as students switching seats when taking turns, announcements through the school’s intercom system, roll call at the beginning of class, and the dismissal and rearranging of desks at the end of class. I transcribed the video footage from the game *‘Der König’* as well as the audio recordings from the interviews within two weeks of the data collection. While editing, cutting, and replaying the footage, I also took notes on initial themes and patterns I noticed. Reading and rereading the typed data, I continued to look for patterns and themes. I added examples from the data under each theme initially identified. I read through the data from the game and from the interviews separately at first. Later, I combined the data from the game and the interviews according to the word that was described. Due to the time limitations in the classroom setting, some words were used both days of the data collection and some only

one time. I sorted out the words the students did not know with the explanation from the teacher that some words are in the book but were not taught or only briefly mentioned. The initially selected words can be found in Table 3.5. in Chapter 3.

3.7. Data Analysis Procedures

Data analysis followed Walcott's proposition "identify critical elements and write plausible interpretations from them" (1990, p. 146). The analysis was ongoing as interviews were transcribed and exit slips were analyzed. Analytic induction, known since the 1950's, is a method of constructing theories from qualitative data (Robinson, 1951; Turner, 1953) and was used to analyze the data. Wiersma (1995) supports ongoing analysis and states: "[E]arly data collection might suggest a hypothesis or theory, and then more data might be collected to support, disconfirm, or extend the hypothesis or theory" (p. 139).

I took the following steps in analyzing the data according to some of Creswell's suggestions (1998): "(a) organize and prepare the data (transcribe the video and interview within a week of recording); (b) read through all data; (c) code the data, and follow the coding process described below by Tesch (1990); (d) present and discuss the findings; and (e) interpret the findings. The coding process was guided by the eight steps:

1. Get a sense of the whole. Read all the transcripts carefully. Perhaps jot down some ideas as they come to mind.
2. Pick one document (i.e. one interview). Go through it, asking yourself "what is it about?" Do not think about the "substance" of the information but its underlying meaning.
3. Write thoughts in the margin. When you have completed this task for several informants, make a list of all topics. Cluster together similar topics. Form these topics into columns that might be arrayed as major topics, unique topics and leftovers.

4. Now take the list and go back to your data. Abbreviate the topics as codes and write the codes next to the appropriate segments of text. Try this preliminary organizing scheme to see if new categories and themes emerge.
5. Find the most descriptive wording for your topic and turn them into categories. Look for ways of reducing your total categories by grouping topics that relate to each other. Perhaps draw lines between your categories to show interrelationships.
6. Make a final decision on the abbreviation for each category and alphabetize these codes.
7. Assemble the data material belonging to each category in one place and perform a preliminary analysis.
8. If necessary, recode your existing data. (Tesch, 1990, p. 142ff.)

As I went through the transcripts, I employed qualitative analysis techniques such as pattern matching and hermeneutic techniques like interpreting text (printed or oral text).

3.8. Data Verification

Verification is the process of ensuring internal validity. Creswell describes eight verification procedures including triangulation, using member checks, using rich, thick description, clarifying the bias, presenting negative or discrepant information, spending prolonged time, using peer debriefing, and using an external auditor. Halloway and Jefferson (2000) propose the following four questions to continually check for trustworthiness in the interpretation of data: (a) What do you notice?; (b) Why do you notice what you notice?; (c) How can you interpret what you notice?; and (d) How can you know that your interpretation is the 'right' one?

According to Eisner (1991) credibility is established first by relating multiple types of data, which in this study was done by analyzing the game, the exit slips, and the interviews. Secondly, the interpretations need to be supported by the data, often with recurring themes, and the researcher needs to seek the opinions of others. By following

these steps “we seek a confluence of evidence that breeds credibility that allows us to feel confident about our observations, interpretations, and conclusions” (Eisner, 1991, p. 110). In summary and in alignment with Patton (1999), I have previously addressed all areas concerning the credibility of the study.

The credibility issue for qualitative inquiry depends on three distinct but related inquiry elements: (a) rigorous techniques and methods for gathering high-quality data that are carefully analyzed, with attention to issues of validity, reliability, and triangulation; (b) the credibility of the researcher, which is dependent on training, experience, track record, status, and presentation of self; and (c) philosophical belief in the value of qualitative inquiry, that is, a fundamental appreciation of naturalistic inquiry, qualitative methods, inductive analysis, purposeful sampling, and holistic thinking (p. 1190).

3.9. The Pilot Study

The pilot study was conducted in one section of German I at the end of the 2008/2009 school year. The game was played in a regular classroom setting, and 18 students were present that day. Most students were actively engaged in the game. All students were ‘the king’ at least once during the course of the game. I noticed during the pilot study immediate feedback from the students was missing, so as a result exit slips were added to the data collection as a means to follow up on utilized strategies. The questions targeting this issue on the exit slip were: What hints and/or clues from your classmates helped you guess the word? What additional hints would have been helpful to guess the word? What hints from your classmates were confusing? Can you think of

anything else that was either helpful or not helpful at all when you were playing the game? The exit slip provided an opportunity to the student guessing the word to explain from his or her perspective how the clues from the classmates were received and if the communicated message was understood.

In summary, the pilot study generated the idea of using exit slips in order to: (a) receive immediate feedback from the students; (b) have a conversation starter for the interview portion of the data collection; and (c) have an additional source of data for triangulation. Secondly, the pilot study indicated that the interview responses were very minimalistic. The format of the interviews for the actual study was changed to small groups as previously discussed in more detail. Lastly, the pilot study helped to start a filing system to organize the data.

3.10. Ethical Issues

I tried to anticipate ethical issues and referred to the American Educational Research Association Ethical Standards found on the world wide web under <http://www.aera.net/AboutAERA/KeyPrograms/SocialJustice/EthicalStandardsoftheAERA/tabid/10939/Default.aspx>. Creswell (1998) urges the researcher to pay attention to “protecting the anonymity of the informants, disclosing the purpose of the research, deciding whether (or how) to use information ‘shared off the record’ in an interview, determining whether the researcher should share personal experiences” (p. 132). Christians (2005) lists four guidelines that lie beneath all codes of ethics, which were developed across varying fields of study: informed consent, deception, privacy, confidentiality, and accuracy (p. 144f.). First, informed consent means “subjects have the

right to be informed about the nature and consequences of experiments in which they are involved” (Christians, 2005, p. 144).

All subjects in this study participated on a voluntary basis and were fully informed before agreeing to participate. Furthermore, the parents/guardians of the students agreed as well and were also fully informed about the procedures of the study. Secondly, deception was a non-issue in this study. Students as well as parents were informed upfront and truthfully. There was no benefit to this particular study based on deception. Thirdly, privacy and confidentiality were guaranteed “to protect people’s identities and those of the research locations” (Christians, 2005, p. 145). Participants were not named or identified, and the location was disguised as best as possible. All data were secured during the course of the study. Lastly, it was not in my interest to skew, change, add or omit any data, as it is neither ethical nor scientific. My goal was to report accurate findings and to contribute to the field of research in an appropriate and accepted approach.

The ethical issues addressed and of concern for this study were related to informed consent, the right to confidentiality, honesty in the relationship between researcher and subject, the right to withdraw from the study, exploitation, and personal gain, which all were previously addressed with IRB. The study received IRB approval. It was furthermore important to be mindful of personal backgrounds (religion, gender, and race) of the participants in the study.

CHAPTER IV

RESULTS

Before presenting the results of the study, I will briefly revisit how the data were collected. Two rounds of data collection took place in two different sections of German II. A total of 29 students participated in the game *'Der König'* and filled out exit slips after every prompt they received, and 13 of these students participated in the follow-up interviews.

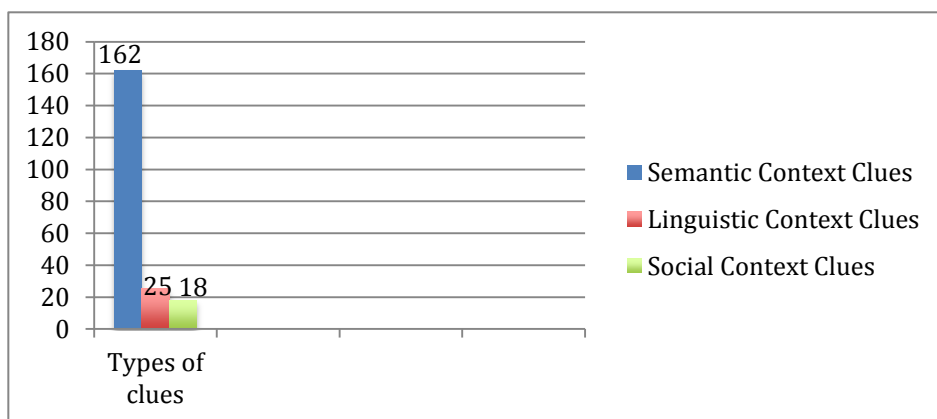
This upcoming chapter will present the results of the study and answer the posed research questions: (a) What distinct vocabulary learning strategies do high school learners of German employ? (b) How do high-school aged learners of German demonstrate their knowledge of words? The first section of this chapter will show a typology of vocabulary strategies used during the game. The descriptions will be enhanced with examples from the data and followed by a discussion of vocabulary learning strategies. The second section will look at the *ACTFL Performance Descriptors* and discuss “how and how well” (ACTFL 2012, p. 9) participants of this study were performing.

4.1. Typology of Vocabulary Learning Strategies

The data reveal a variety of strategies used by the L2 to communicate in the target language. The subsequent table shows a typology of vocabulary learning strategies. The categories for this typology emerged from the exit slips. Students' comments during the game *'Der König'* and the follow-up interviews were matched with the findings from the

exit slips to confirm these categories. The analysis of all the transcribed data showed three overarching categories of clues students used during the game: semantic, linguistic, and social context clues. A frequency graph shows these overarching categories.

Graph 4.1. Frequency Graph



As can be seen in the Frequency Graph 4.1, students heavily relied on semantic clues to explain the word in question. A total of 162 clues were of semantic nature, 25 clues were linguistic clues, and 18 clues described social scenarios. Within the three overarching categories, I identified specific sub-strategies. The next chart shows a representation of the strategies used within the overarching categories.

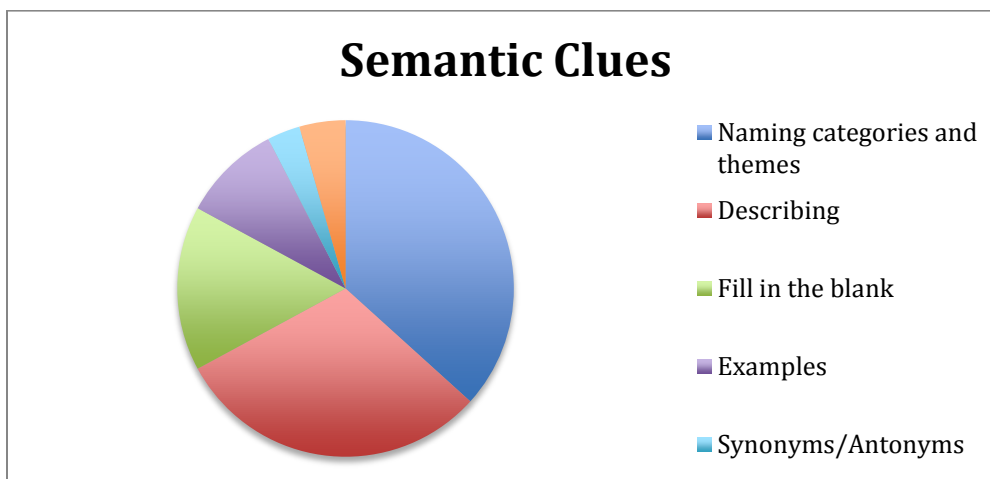
Table 4.1. Representation of Vocabulary Learning Strategies and Amount of Occurrences

<i>Category</i>	<i>Strategy</i>	<i>Occurrences</i>
Using Semantic Clues	Naming categories and themes	58
	Describing	48
	Creating fill-in-the-blank statements	25
	Giving examples	15
	Using synonyms and antonyms	9
	Asking questions	7
Using Linguistic Clues	Hinting at the gender of the word	8
	Hinting at the length of the word	8
	Using compounds	6
	Hinting at the form of the word	5
	Phonetic and graphemic hints	4
Using Social Context	Describing social scenarios	18

4.1.1. Semantic Clues

Again, looking at the typology in Table 4.1., six different strategies were identified within the category of semantic context clues: (a) naming categories and themes; (b) describing; (c) creating fill-in-the-blank statements; (d) giving examples; (e) using synonyms and antonyms; (f) asking questions. Semantic clues were used the most, and the following pie chart will provide a visual representation of the six categories within the 162 semantic clues.

Graph 4.2. Visual Representation of Semantic Clues



Subsequently, I would like to revisit each of the strategies mentioned above and further illustrate how they were used. Students were able to describe the word in question by creating context surrounding it. They were instructed to explain the word in German and to avoid using the word itself in their description. The use of gestures or sound effects was also discouraged as the focus of the study was on language use. Next are examples how students embedded the word in question semantically using the before mentioned strategies.

One of the strategies students displayed was naming categories and related themes. Students named words they associated with the word in question or words they had learned in the same semantic field. This strategy was used the most with 58 occurrences during the game. Trying to describe the word *Dorf* (village) student P(23) named other places to live such as “*nicht Stadt, nicht Hochhaus, nicht Reihenhause, nicht Wohnung, nicht Bauernhof, nicht See, nicht Meer*” (not city, not skyscraper, not

townhouse, not apartment, not farm, not lake, not sea). Students pointed out in the interview that vocabulary such as “*Bauernhof*” (farm, P11), “*das Hochhaus*” (high rise, P11), and “*auf dem Land*” (in the country, P3) falls in the same category as *Dorf* (village). A second example is the phrase *Computer spielen* (to play on the computer), P(12) merely said “*Video*” (video), and P(6) said “*Facebook*” (Facebook). P(3) guessed “*Computer spielen*” (to play on the computer) after these hints. In the follow-up interview P(9) explained: “this is the word I had to guess, and they said ‘*Video*’ (video), and I remember *Video spielen* (to play videos), so I got *spielen* (to play) right away, and then they were just saying things I associate with computers, and I got it.” Once again, listing related words was used the most.

Another form of contextualizing words semantically was describing the word in question. Descriptions were used 48 times. For instance, the word *Kaffee trinken* (to drink coffee) was depicted as “*warm*” (warm, P23) and “*schwarz*” (black, P22). The word *Erdgeschoss* (ground floor) was described as “*unter eins im Hochhaus*” (under one in a high rise, P1) and “*im Einkaufszentrum*” (in the shopping center, P23). Another successful description was “**klein Computer*” (small computer, P23) “*für Mathematik*” (for mathematics, P24) as hint for *Taschenrechner* (calculator). P(9) found this description helpful: “I just heard ‘*kleiner Computer*’ (small computer) and ‘*Mathematik*’ (mathematics), and I like instantly got it.” P(20) described *sms verschicken* (to send a text) with the words “*nicht sprechen aber Handy*” (not talking but cell phone). The words *Geburtstag* (birthday) had the following descriptions:

Kuchen (cake, P4)

Was Tag ist dein... ? (What is your ..., P4)

Mein ist Juni 30igste. (My is June 30th, P4)

Kuchen (cake, P20)
Du isst Kuchen. (you eat cake, P22)
Ich bin zehn Jahre alt. (I am ten years old, P29)
 **neben Jahre* (next year, P20)
achtzehn Jahre (eighteen years, P20)

Similarly, the word *Hausaufgaben* (to do homework) had a variety of descriptions:

der Arbeitsheft (work book, P9)
Was ist es? (What is it?, P12)
Schule (school, P21)
Arbeitsheft (work book, P29)
ich habe (I have, P25)
 **ich Arbeitsheft in einem Einfamilienhaus* (I workbook in a house, P25)
 **Ich mache Arbeitsheft.* (I make workbook, P25)

P(17) later explained “For *Hausaufgaben* (homework) we get assigned stuff from our *Arbeitsheft* (workbook) a lot.”

An additional strategy students displayed was using the word in question in a fill in-the-blank statement. For example, in order to guess the phrase *Wie geht's?* (How are you?) P(29) used hints such as “*Hallo! [...]und du? Gut.*” (Hello! ... And you? Good.) modeling the exchange of two people greeting each other. The words *Wie geht's?* (How are you?) were blanked out and had to be filled in by a teammate. During the follow-up interview P(29) explained:

I was having a conversation with myself. Because that is the first thing we learned. I remember sitting here, and Frau was ‘*Hallo! Wie geht's?*’ (Hello! How are you?) every single day. That’s the first thing that pops into my head. I don’t know how to explain it another way ‘How are you?’ so I tried to just go around it.

Another example was used when describing the word *Kino* (movie theater). P(9) used the phrase “*ins [...] gehen*” (to go to the ...) in which the word *Kino* (movie theater) was blanked out and embedded in a phrase students had learned previously. P(27) commented: “That was a fairly easy one [to guess]. You can use words like theater and

going to a place like movie. We know all those words. “In order to describe *Geburtstag* (birthday) P(4) combined asking a question with a fill-in-the blank statement. “**Was ist dein [...]?* *Mein ist Juni 30igste.* (When is your... ? Mine is June 30th.)” triggered the answer “*Geburtstag*” (birthday) in P(5). Examples that differed from the other fill-in-the-blank statements were the hints given to guess the word *Eis* (ice cream) such as “...*Kaffee*“ (iced coffee, P21), “... *crème*” (ice cream, P22), and “*Spaghetti ...*” (spaghetti ice cream, P20). Students thought of words that included *Eis* (ice cream) as part of a compound noun and blanked out the part with the word in question.

The examples above show how students were able to create meaningful fill-in-the-blank statements to embed the word in question semantically. Overall, the fill-in-the-blank statements varied: some were at the word level, some in phrases, some in complete sentences, and others even in brief conversations. There were 25 hints from students using this strategy.

The next section will illustrate how students used examples as hints for the word in question. In order to explain the term *Lieblingsfach* (favorite subject) P(22) used the examples “*Mathe, Biologie*” (math, biology). P(12) used an example in a fill-in-the-blank statement: “*Mathematik ist *meine...*” (math is my ...), and P(11) substituted: “*Englisch ist mein...*” (English is my...). Similarly, when explaining the phrase *Comics sammeln* (to collect comics) examples of comics were used as hints such as “*Marvel, Hulk*” (Marvel, Hulk, P21) and “*Batman, Superman*” (Batman, Superman, P22). P(16) commented later on the helpfulness of these examples: “I had really good hints like ‘*Batman*’ and ‘*Superman*’.” Examples like the ones mentioned were used 15 times to help describe the word in question.

Yet another strategy under semantic context clues is the use of synonyms and antonyms. This strategy was only utilized nine times, and during the interview students indicated that they know one word for many things, but not multiple words. P(29): “I think for like nouns and stuff, we didn’t know as many synonyms as we should, probably.” P(19) added : “It’s like you know the word but you can’t really explain it. [...] I didn’t really know how to say what I wanted to explain.” Nevertheless, students did use multiple synonymous expressions to describe *Es gefällt mir* (I like it) such as “*Ich finde es gut.*” (I find it great, P9) or “*Das finde ich sehr gut.*” (I think it is really great, P9). In the interview P(11) added “*Ich mag*” (I like) and “*Lieblings*” (favorite), and P(8) added “*Ich liebe dich*” (I love you) demonstrating that students know additional synonyms in the target language. An example for an antonym was found in *Kaffee trinken* (to drink coffee) when P(20) said “*nicht essen*” (not eating). However, P(29), the student guessing did not find it helpful; on the contrary, P(29) was confused by the provided hint:

‘*nicht essen*’ (not to eat), so ok then it’s probably an object that you do not typically consume. I did not really think, oh maybe they will drink it then. I don’t know, I was just thrown off, maybe it is *teuer* (expensive) or something, and then like ‘*schwarz*’ (black), so it is black, ok. I never got the hint that it was actually, like something you still eat or drink.

Nevertheless, P(29) guessed the word and was only initially “thrown off“ as described in the interview. An additional word on antonyms and negations is needed. The majority of the antonyms, more specifically six out of nine, were stated in negations like “*nicht Stadt*“ (not city, P23, P27) as hints for the word *village* (Dorf). However, students preferred to explain the word in question in terms of what it is rather than what it is not. Only 6 out of 162 hints were true antonyms such as “*nicht Stadt*“ (not city, P27) as antonym for village, “*nicht essen*” (not to eat, P20) as antonym for to drink. A total of 21

negations were used that were not true antonyms but rather associations like the list of places from P(23): “*nicht Hochhaus, nicht Reihenhause, nicht Wohnung, nicht Bauernhof, nicht See, nicht Meer*” (not city, not skyscraper, not townhouse, not apartment, not farm, not lake not sea). These were previously mentioned under naming related categories and themes as hints for the word *Dorf* (village).

The final strategy under semantic clues was asking questions. Students asked questions triggering a response that included the word in question. P(4) asked the question “*Wo tanzt du?*” (Where do you dance?) to successfully prompt the response “*in einer Disco*” (in a dance club, P15). An additional question, also from P(4) was “*Was trinkst du?*” (What are you drinking?). P(28) responded “*Wasser*” (water) and immediately followed up with “*Mineralwasser*” (mineral water), which was the word in question. Yet another example from P(5) “*Was machst du mit *dein Handy?*” (What do you do with your cell phone?) hinting at “*sms verschicken*” (to text), which was the correct answer from P(6). Again, P(4) combined a question with a fill-in-the-blank statement as discussed earlier: “**Was ist dein ? Mein ist Juni 30igste.*” (When is your ...? Mine is June 30th P4), which triggered the response “*Geburtstag*” (birthday) in P(6). Alternatively, some questions have multiple correct answers, and this strategy was not always successful. For instance, P(4) posed the question “*Wo wohnst du?*” (Where do you live?) and wanted to trigger the response *in einem Dorf* (in a village), yet, P(8) answered “*ein Haus*” (a house). Additional hints were necessary in order to guess the word in question.

In summary, within the category of semantic context I identified six different strategies used by the students: (a) naming categories and themes; (b) describing; (c)

creating fill-in-the-blank statements; (d) giving examples; (e) using synonyms and antonyms; and (f) asking questions. Note, some of the examples cited overlap, and multiple strategies were employed simultaneously. Often a word was explained in a variety of ways, and multiple clues, hints, and strategies were used. Merging and combinations of strategies will be discussed later in this chapter.

4.1.2. Linguistic Clues

Next, I would like to illustrate how students used grammatical clues. First, a brief explanation of the German case system. The German language uses three different genders for nouns. The article *der* is used for masculine nouns, *die* for feminine nouns, *das* for neuter nouns, and *die*, again, to indicate plural. Rules for the gender of a noun exist; however, as there are many rules as well as many exceptions they are typically not taught to beginning learners of German. A beginning learner of German cannot guess the gender as there are no specific endings; therefore, the gender of a German noun must be memorized. Furthermore, the definite and indefinite articles pose an additional challenge as they change to indicate cases. The German language system uses four cases, nominative, genitive, dative, and accusative. Nominative is referred to as the case of the subject, accusative is the case of the direct object, dative the case of the indirect object, and genitive shows possession.

One example of linguistic clues observed during the game included hints at the gender of the word in question. In particular three students P(4), P(23), and P(27) wanted to assist their classmates by revealing the gender on eight different occasions. Students reversed the gender issue by telling their teammate what gender is not the correct one.

For example, when describing the word *Dorf* (village), P(23) and P(4) said “*in einem*” (in a). This hint is in dative case and rules out all words that are plural or feminine. P(27) also tried to support a teammate by hinting at the gender. When the phrase in question was *in die Disco gehen* (to go to the dance club) P(27) used hints like “*nicht der*” (not masculine) and “*nicht das*” (not neuter), which leaves only *die* as possible article for the word in question. This strategy eliminates some answer choices, but only if the student guessing knows the gender of the word in question. During the interview, however, it showed that students had difficulties identifying the gender of a noun and often guessed. For instance, when asked for the gender of the word *Geburtstag* (birthday), students guessed, *der*, *die*, and *das*. The same was true for the words *Eis* and *Tag*. P(11) commented “The articles are hard.” During the game students used the gender incorrectly and often omitted the articles altogether.

An additional linguistic clue students used on eight occasions was giving the length of the word or how many words. P(23) said “*zwei Wörter*” (two words) when the phrase *Comics sammeln* (to collect comics) had to be described. Similarly, P(2) told the teammate *Computer spielen* (to play on the computer) is made up of two words, as did P(27) for the phrase *Grüß dich!* (greetings to you), and P(29) for *sms verschicken* (to send a text). The first hint for *Einkaufszentrum* (shopping center) was “**großes Wort*” (a big word) from P(20) and P(21). “*Zwei Wörter plus verb*” (two words plus verb) was a hint given by P(21) for *Kaffee trinken* (to drink coffee.) Most of the prompts were limited to one word. I wanted to see how students would use the word in context, and I wanted to keep the prompts in the same format as students had encountered them in their textbook. More specifically, there were a total of 36 different prompts as listed in table 3.5. The

study used 26 prompts consisting of one word only; six prompts were two word phrases, and four prompts were prepositional phrases.

Six times students used fill-in-the-blank statements in combination with compound nouns. For example, P(12) said “*Hoch...*” (high...), the missing word is *Haus* (house), which again is one part of the compound noun *Hausaufgaben* (home work). Similarly, in order to isolate the word *Eis* (ice) P(21) used “... *Kaffee* “ (...coffee), P(22) “... *crème*” (...cream), and P(20) “*Spaghetti ...*” (spaghetti...) indicating the ability to identify and substitute parts of words.

Another grammatical clue included naming the form of the word in question. The study used nouns, noun phrases, verbs, adjectives, and some sentences. All prompts were presented to the students in the same format used by the textbook *Team Deutsch*. This strategy was only used five times and always in combination with other hints. Examples of this strategy are “*zwei Wörter plus verb*” (two words plus a verb, P21), “*Es ist ein Adjektiv*” (it is an adjective, P22), and “*Frage*” (questions, P22). When asked about the form of a word P(27) responded: “All German nouns are capitalized. And, I guess, [Frau] drilled into us what is a verb, what is an adjective and what is a noun. How do you use prepositional phrases when communicating with people [...]. That helped.”

Lastly, some students were willing to take chances by guessing phonetically. P(23) tried to sound out the word “*Ticket*” (ticket) as if it were a cognate, P(21) “Christianity” (Christianity), and P(10) “*Religion*” (religion). One student hinted at a homophone, yet pointed out the difference in spelling. “*Brat... Du isst das. Mit zwei ss*” (fried/ brat... you eat it, with double ‘s,’P4). Note: In German the words *ist* (is) and *isst* (eats) are homophones, by explaining the spelling P(4) was able to differentiate the

words. Phonetic hints occurred four times during the game.

In summary, the linguistic clues found in this study were: (a) hinting at the gender of the word; (b) hinting at the length of the word; (c) using compounds; (d) hinting at the form of the word; and (e) phonetic guesses.

4.1.3. Social Context Clues

The third and final category in the typology of vocabulary strategies is embedding words in social context or social scenarios. For example, P(20) used the phrase “**unter Schreibtisch in Schule*” (under the desk at school). This was meant to hint at the social behavior of students using cell phones at school, texting during class, and hiding the phone under the desk. P(25) correctly guessed “*sms verschicken*” (to send a text) after that description. A different clue for the word *Handy* (cell phone) was “*Mein ist in *meine Jeans*” (mine is in my jeans, P4). Again, P(7) was able to guess the word in question after that explanation, hinting at a social behavior. Moreover, students described the phrase *in die Disco gehen* (to go to a dance club) using social context clues such as “*viel tanzen*”(dance a lot, P23) and “*am Wochenende*” (on the weekend, P17). Another illustration of a social setting can be found in the description for the phrase *Kaffee trinken* (to drink coffee). P(4) described it as “**Party, das wir haben mit das Schüler*” (party we had with the students) as a reminder of a social event at school when American learners of German and German exchange students had a social coffee hour together. To illustrate further, the word *Geburtstag* (birthday) was depicted as “*du isst Kuchen*” (you eat cake, P22) as it is common to have a birthday cake. During the follow-up interview P(3) recalled the phrase “**Alles Gut!*” (all the best) my German exchange student posted that

on my wall on my birthday.“ Again, an example where social context helped P(3) remember the German phrase.

4.1.4. Merging Clues and Combinations of Clues

At times semantic and linguistic clues merged, and students were using the word as part of a compound like *Hoch[haus]* (skyscraper) to hint at *Hausaufgaben* (homework). This example is not related by meaning in English but the German compound nouns have the word *Haus* (house or home) as part of both words *Hochhaus* and *Hausaufgaben* (literally: a high house versus work for your house). These merging clues were found in compound nouns, and students were isolating the individual meanings. When describing the word *Eis* (ice cream) students used a similar strategy and tried to use the word *Eis* (ice cream) as part of a compound noun such as “*Eiskaffee*” (iced coffee, P4 and P21) or “*Spaghettieis*” (an ice cream dish looking like Spaghetti, P20). Similarly, the words *Stadtzentrum* (city center) and *Einkaufszentrum* (shopping center) have a common part. Secondly, at times, fill-in-the-blank statements merged with hinting at the gender of a word like in the phrase *Ich wohne in einem...* (I live in a, P4).

Also, some of the social scenarios merged with a description and related words. When describing *Geburtstag* (birthday) the word “*Kuchen*” (cake, P4, P20) was used and the phrase “*Du isst Kuchen.*” (you eat cake, P22). The word functions as a description what people do on birthdays and at the same time as a social clue as birthdays without birthday cake are rare in the US. The same holds true for the clues to describe *Hausaufgaben* (homework). “**Ich Arbeitsheft in einem Einfamilienhaus*” (I workbook in

a one family house, P25) followed by a self-corrected statement “**Ich mache Arbeitsheft*”. (I make workbook, P25) describing the word homework and at the same time including the social setting where P(25) completes homework.

Besides merging clues the study also showed a variety of combinations of clues were utilized to describe the word in question. The subsequent table shows the combination of hints and their success rate. A detailed discussion on the success rate of the guesses can be found in section 4.2.5.

Table 4.2. Combination of Hints and Success Rate

<i>Amount of Hints</i>	<i>Success Rate</i>
1 hint	7 successful guesses 3 partially successful guesses
2 or 3 hints	9 successful guesses 2 partially successful guesses
More than 4 hints	14 successful guesses 3 partially successful guesses

All in all 10 words were guessed after only one hint, 11 after two or three hints, and 17 after four or more hints. When multiple hints were used to describe a word, students either repeated clues with added information or used different types of clues. The tables below show three examples of combination of clues.

Table 4.3. Combination of Clues

<i>Teams Input: <u>Dorf</u> (village)</i>	<i>Type of clue</i>
<i>*Hause</i> (house, P10)	Description
<i>*viele Hause</i> (many houses, P10)	Description
<i>bei dem Wald</i> (at the forest, P4)	Description
<i>Wo wohnst du?</i> (Where do you live?, P4)	Question
<i>Ich wohne in einem...</i> (I live in a, P4)	Fill-in-the-blank statement/hinting at the gender
<i>Kleinstadt</i> (small town, P10)	Related category or theme
<i>in einem...</i> (in a, P4)	Fill-in-the-blank statement/hinting at the gender
<i>in einem...</i> (in a, P23)	Fill-in-the-blank statement/hinting at the gender
<i>nicht Stadt</i> (not city, P27)	Antonym
<i>*Es ist Platz.</i> (it is a place, P23)	Description
<i>nicht Stadt</i> (not city, P23)	Antonym
<i>in einem ...</i> (in a, P23)	Fill-in-the-blank statement/hinting at the gender
<i>*in einem Platz</i> (with a market square, P23)	Description
<i>nicht Hochhaus</i> (not high rise, P23)	Related category or theme
<i>nicht Reihenhause</i> (not town house, P23)	Related category or theme
<i>nicht Wohnung</i> (not apartment, P23)	Related category or theme
<i>nicht Bauernhof</i> (not farm, P(23)	Related category or theme
<i>nicht See</i> (not lake, P23)	Related category or theme
<i>nicht Meer</i> (not sea, P23)	Related category or theme
<i>Teams Input: <u>Geburtstag</u> (birthday)</i>	<i>Types of Clues</i>
<i>Kuchen</i> (cake, P4)	
<i>*Was Tag ist dein... ?</i> (What is you ..., P4)	Social Clue/ Related category or theme
<i>Mein ist Juni 30igste.</i> (My is June 30 th , P4)	Fill-in-the-blank statement/hinting at the gender
<i>Kuchen</i> (cake, P20)	Example
<i>Du isst Kuchen.</i> (you eat cake, P22)	Social Clue/ Related category or theme
<i>Ich bin zehn Jahre alt.</i> (I am ten years old, P29)	Social Clue/ Related category or theme
<i>*neben Jahre</i> (next year, P20)	Example
<i>achtzehn Jahre</i> (eighteen years, P20)	Description
<i>elf, zwölf, dreizehn, vierzehn... achtzehn</i> (eleven, twelve, thirteen, fourteen, eighteen, P20)	Example
	Fill-in-the-blank statement

Table 4.3. continued

<i>Teams Input: sms verschicken (to send an text)</i>	<i>Types of Clues</i>
* <i>Was machst du mit dein Handy?</i> (What do you do with you cell phone?, P4)	Question
<i>Das ist ein Verb.</i> (It is a verb, P4)	Hinting at the form of the word
* <i>Du machst mit deine</i> (you do it with yours, P4)	Social Clue/Description
<i>ein Handy</i> (a cell phone, P22)	Related category of theme
<i>nicht sprechen aber Handy</i> (not talking but cell phone, P20)	Description
<i>nicht sprechen</i> (not talking, P20)	Antonym/ Related category or theme
<i>nicht anrufen</i> (not calling, P20)	Antonym/ Related categories or theme
<i>2 Worte</i> (2 words, P29)	Hinting at the length of the word
* <i>Schreibtisch in einpacken</i> (to put in your desk, P21)	Social Clue
* <i>unter Schreibtisch in Schule</i> (under your desk at school, P20)	Social Clue

These three examples show how a variety of clues were used during the game to describe the word in question. In the example *Dorf* (village) six different types of clues were employed: descriptions, questions, fill-in-the-blank statements, hinting at the gender of the word, related categories or themes, and antonyms. *Geburtstag* (birthday) and *sms verschicken* (to text) show different combinations of clues. Interestingly, all three examples mentioned used six different types of clues, which was the highest amount of different clues used during this study. A total of 12 different categories of types of clues were identified as shown in table 4.1.

4.1.5. Vocabulary Learning Strategies Identified by the L2

The two games were followed by two group interviews. Students discussed additional vocabulary learning strategies that could not be observed during the game. The opening question to start a discussion was: “What tricks do you use to study vocabulary? Or what strategies?” Throughout the interviews students mentioned or described the use of different strategies. The following chart shows the strategies I identified from the transcripts of the interviews.

4.4. Representation of Learning Strategies from the Interviews

Learning Strategies	Using flashcards Repeating and memorizing Organizing and note taking Creating charts Associating by sounds and meaning Making connections/relating words to other content areas Approximating Using new words in context
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Next, I will present a discussion and quotes from the students on all of the above mentioned vocabulary learning strategies. The initial response to the questions what strategies students use was “Notecards“ (P17) followed by ”Flashcards“ from P(27), and P(22). These students also indicated that they find flashcards helpful. P(12) added: “I don’t do them a lot, but when I do them they are helpful.“ When asked how often students use their flashcards to study, P(27) responded ”At least twice a week,“ and P(5) said: “I do not do them at home.” Students indicated that time is provided during class to

review their flashcards. Interesting was the comment from P(22) who said: “Yes, well, I don’t do them because that is not how I learn.” When I followed up with the question: “So, tell me how you learn?” P(22) described a technique identical to the use of flashcards: “I just repeat them in my head a few times, the German on one side and the English on the other side. It kind of starts to stick in there.” This statement indicated P(22) still uses the concept of flashcards. On the same note P(12) made an argument that how one uses flashcards is also important: “I mean, like, if you look at the German side, and you think, oh, I know it, and then you look at the English side, and you don’t really know it. You know what I mean?” This statement showed awareness that the usefulness of flashcards depends on how they are used and the honesty of the learners when evaluating themselves.

At a later point during the interview when students were asked about memorization strategies, the use of flashcards was mentioned again by P(17): “We use notecards again, and I guess, kind of go over it.” Along the same lines students indicated that repeating and reviewing vocabulary are imperative. Back to the statement of P(12) “I just repeat them in my head a few times, [...] It kind of starts to stick in there“ indicating that repetition helps memorization. P(17) provided additional examples: “Like, vocabulary, or articles, and stuff, *der, die, das*. [...] Something that was frustrating in learning is, like, the prepositions for where you live like *in einem, in einer*, and *in*, and so on. It is so confusing. [...] You just have to memorize a few.”

At the same time P(17) expressed some hesitation as “[repeating and reviewing] is boring but it does help. People don’t wanna do it,” and P(27) added: “Well, it is hard to find a spicy way to repeat stuff.” However, P(16) concluded: ”Repetition, there is no

other way.“ Students know that memorization is crucial, that they need to memorize the vocabulary, the articles, and the prepositions and cannot bypass that step in their language development. P(3) brought up the concern that words could be forgotten when they are not reviewed and illustrated that with an example:

P(3): I think we learn different words in each chapter, and after we are done learning that chapter none of us really go back, and like, when you put *Hausaufgaben (homework)* up, I know I learned it but I can't remember it because I never went back and looked at it.

Me: Why don't you do that?

P(3): I guess. I don't know. Repetitiveness. The words that Frau repeats I remember that. We took a quiz the other day, and it was like this: during the quiz I blanked on everything, and the only thing I could remember was weather words because we do weather every single day. So I did during the entire quiz 'I like the sunny weather', 'I like the cloudy weather.'

Furthermore, students demonstrated awareness that putting words in context is a useful strategy as can be seen in the following exchange:

Me: Do you ever study the words in a sentence?

P(16): Well, when we learn new vocabulary, they have sentences.

Me: Are they helpful?

P(16): Oh yeah.

P(17): They give you an idea of the concept of how to use it in a sentence.

Me: What concepts are you talking about?

P(17): Ok, when we have, like, new vocab words, and they use them in a sentence with a verb and a noun, and they use them all.

Another strategy mentioned was combining German and English to create meaningful context. P(27) described it as “intermixing:”

I know what I do to help me study is I talk to myself or intermix German in a regular every day conversation. So something Frau said all the time last year was *Kaust du Kaugummi? Or Kaugummi weg! Was ist das? Wo ist das?* (Are you chewing gum? Take that gum out! What is it? Where is it?) I'll try to use [it] or even when is your *Geburtstag*, (birthday), and it really sinks in when I try to use them more and more.

P(29) found charts helpful: “When we tried to learn our articles, Frau would always have a chart. [...] the *du* (you), and the *ich* (I), and all these words and learn how to conjugate them. So I finally remembered them.“ The same student said the approximations are used when the English and German word do not have an identical translation P(29): „Like cozy, the best I can do is cozy.“ Me: “Yeah *bequem* (comfortable/cozy) does not really have a match. What do you do with those?“ P(29): “The closest thing most of the time.“ P(17) recommends to „write things down [...] and to use the stuff you already know. [...] Sometimes I say it, and in my mind try to remember how it sounds, and compare it to how it sounds. [...] *Wer* (who) is who in German but it sounds a little bit like where“ P(17).

P(12) tried to relate concepts to other content areas: “Like when we are done learning it you can see how much it relates to English, and we don’t really think about it on a daily basis but they kind of cross.“ P(27) gave an example: “So here is how you can apply it to English. It is just like a math problem. This is what you use, and you put this together, and this is what you are gonna get. And if you put something else together you are going to get the wrong answer, the wrong equation.“ P(3) gave a description of using associations: “I had to guess [*Computer spielen* (to play on the computer)], and they said *Video* (video), and I remember *Video spielen* (to play videos), so I got *spielen* (to play) right away, and then they were just saying thing I associate with computers, and I got it.” Listing related categories or themes was the most used strategy during the game.

Briefly revisited, students discussed these vocabulary learning strategies: (a) using flashcards; (b) repeating and memorizing; (c) organizing and note taking; (d) creating

charts; (e) associating by sounds and meaning; (f) making connections/relating words to other content areas; (g) approximating; and (h) using new words in context.

4.2. Meeting the Standard **-Knowledge and Partial Knowledge of Words**

As previously discussed, students demonstrated their word knowledge by embedding it in semantic, linguistic or social context. However, as I was analyzing the data I found it worthy of note to look at areas of yet incomplete knowledge of words. The 2002 *ACFTL Performance Guidelines* for K-12 foreign language education provide a useful framework. They set the guidelines of what a beginning language learner should know or should be able to do at different stages of language development. Looking at the 2012 *ACTFL Performance Descriptors for Language Learners*, students of German II should demonstrate skills in the following four areas:

1. Language Control (How accurate is the language learner's language?)
2. Vocabulary (How extensive and applicable is the language learner's vocabulary?)
3. Communication Strategies (How does the language learner maintain communication and make meaning?)
4. Cultural awareness (How is the language learner's cultural knowledge reflected in language use?) (*ACTFL Performance Descriptors*, 2012, p.9)

Additionally, the *ACTFL Performance Descriptors* divide the four areas into the three modes of communication: interpersonal, interpretive, and presentational. The upcoming table further describes the four domains within the interpersonal mode of communication.

Table 4.5. ACTFL Performance Descriptors

	<i>Interpersonal</i>
<i>Language Control</i>	<p>Can usually comprehend highly practiced and basic messages when supported by visual or contextual clues, redundancy, or restatement, and when the message contains familiar structures.</p> <p>Can control memorized language sufficiently to be appropriate to the context and understood by those accustomed to dealing with language learners, however at times with difficulty.</p>
<i>Vocabulary</i>	Able to understand and produce a number of high frequency words, highly practiced expressions, and formulaic questions.
<i>Communication Strategies</i>	<p>May use some or all of the following strategies to maintain communication, able to:</p> <ul style="list-style-type: none"> ● Imitate modeled words ● Use facial expressions and gestures ● Repeat words ● Resort to first language ● Ask for repetition ● Indicate lack of understanding
<i>Cultural Awareness</i>	May use culturally appropriate gestures and formulaic expressions in highly practiced applications. May show awareness of the most obvious cultural differences or prohibitions, but may often miss cues indicating miscommunication.

The following discussion will take a closer look at “how and how well is the language learner able to be understood and able to understand” (ACTFL, 2012, p.9). Each of the above mentioned categories will be analyzed within the context of the data.

4.2.1. Comprehensibility and Comprehension -Success Rate Describing and Guessing

Students demonstrated comprehension and comprehensibility during the game to a varying degree. While analyzing the data additional questions emerged: How successful were the students in explaining the word in question? Did meaningful communication take place between team members? During the two rounds of data collection, 58 words in question were presented to the students. Most of the words were played in both rounds of 'Der König'. However, due to time constraints of the classroom setting some words were only played in one class and not in the second class. The following table shows how the total number of 58 prompts was split up into successful guesses, partially successful guesses, and unsuccessful guesses of the word in question. Additionally, some of the prompts received no input from the students at all and are listed separately.

Table 4.6. Guesses of the Word in Question

Total Prompts	58
Successful guesses	30
Partially successful guesses	8
Unsuccessful guesses	10
No Input	10

Overall, all prompts considered, students successfully explained the majority of the words. Again, during the two rounds of data collection 58 words in question were played during the game 'Der König.' Students guessed and described a word successfully 30 times. Noteworthy here is on two occasions a synonymous word was used. For instance,

P(5) said “*Keller*” instead of *Erdgeschoss*. These two words are similar in meaning and were considered successful guesses for the purpose of the analysis in this study. The same holds true for the words *Kino* (movie theatre) and “*Filme*” (movies, P18). In English, both words can be translated into ‘movies.’ In German, *Kino* refers to a movie theatre, and *Filme* refers to the film played at the movies.

An additional 8 words were categorized as partially successful guesses. Even though the word in question was not guessed, meaningful communication took place between teammates. Often a word related in meaning also matching the description was guessed. These words were:

Table 4.7. Partially Successful Guesses

<i>Word in Question</i>	<i>Guess</i>
<i>Comics sammeln</i> (to collect comics)	<i>Comics lesen</i> (to read comics, P4)
<i>Dorf</i> (village)	<i>Bauerhof</i> , (farm, P7 and P9) <i>Bauernhaus</i> (farm house, P1)
<i>Einkaufszentrum</i>	* <i>Einzentrum</i> , I don’t know the beginning (P6)
<i>in die Disco gehen</i> (to go to a dance club)	<i>Konzert</i> (concert, P29)
<i>Kirche</i> (church)	church (P5)
<i>uninteressant</i> (not interesting)	boring (P13)
<i>zeichnen</i> (to draw)	* <i>zeien</i> (P14)
<i>Religion</i> (religion)	I thought I was supposed to say a church (P24)

Comics sammeln, Dorf, Einkaufszentrum, in die Disco gehen, Kirche, Religion, uninteressant, zeichnen (to collect comics, village, to go to the dance club, church, religion, uninteresting, to draw) were partially successful guesses. “*Comics lesen*” (to

read comics, P4) is not the same as *Comics sammeln* (to collect comics), however, the words are closely related, and a meaningful exchange took place. The word *Dorf* (village) was not guessed in one of the rounds of data collection but the words “*Bauernhof*” (farm, P7 and P9) and “*Bauernhaus*” (farm house, P1) were guessed instead. These places are typically in a village and closely related to the term village and were therefore considered partially successful guesses. Similarly, student P(29) guessed “*Konzert*” (concert) instead of *in die Disco gehen* (to go to a dance club). P(6) tried to guess the word *Einkaufszentrum* (shopping center) and used an approximation to do so, aware of the fact that it was not the entire word. P(6) said: “I don’t know the beginning, **Einzentrum?*” On two occasions the student guessing knew the word being described but did not know the German word for it, such as P(5), who correctly said “It’s church.” Student P(13) guessed “boring” instead of *uninteressant* (uninteresting). Also, student P(24) commented “I thought, I was supposed to say a church” when the word in question was religion. A final example for partially successful guesses is the guess for the word *zeichnen* (to draw). P(14) guessed **zeien*, which is not a word in German, however, the student correctly remembered the beginning of the word as well as the verb ending. Regular German verbs have the ending *-en*. In this case the guess was considered partially successful.

A total of 20 words were not guessed correctly. However, out of these 20 words 10 words had no meaningful input and therefore could not be guessed. Some comments were made by the students yet were not considered meaningful to describe the word in question. Table 4.8. showcases the 10 words, and the input provided that was not

considered meaningful to help guess the word in question. Note some words appear twice as they were not guessed successfully in either of the two rounds of data collection.

Table 4.8. Words with Limited Input

<i>Word in Question</i>	<i>Input</i>
<i>Ferien</i> (vacation)	none
<i>frühstücken</i> (to eat breakfast)	none
<i>Grüß dich!</i> (greetings to you)	<i>Kapitel 1</i> (Chapter 1, teacher)
<i>Grüß dich!</i> (greetings to you)	<i>zwei Worte</i> (two words, P27)
<i>Kirche</i> (church)	I don't think I know what that word is (P21) It's a new one (teacher)
<i>Müsli</i> (German type of cereal)	Nobody knows what that is (P21)
<i>Müsli</i> (German type of cereal)	none
<i>pünktlich</i> (punctual)	<i>Das ist ein Adjektiv.</i> (It is an adjective, P22)
<i>sympatisch</i> (likable)	none
<i>verbringen</i> (to spend time)	none

The phrase *Grüß dich!* (Greeting to you) was described as “*zwei Worte*” (two words) trying to provide some input. Similarly to the comment “*Das ist ein Adjektiv*” (It is an adjective) was made by P(22). These two examples show the use of linguistic hints if semantic input was unavailable.

In summary, the above-mentioned success rate indicates that students were able to understand each other to varying degrees. Briefly revisited, 30 guesses were successful and 8 partially successful. Overall 38 times out of 58 prompts meaningful conversation took place. Additionally, even though the word in question was not guessed, 10 of the 20 unsuccessful guesses received some meaningful input. Only 10 of the 58 prompts had no meaningful input at all.

4.2.2. Language Control and Accuracy

In this upcoming section, I will discuss the accuracy of the target language. All inaccurate expressions in this study were marked with an asterisk (*). An early observation was that clues and hints were contextualized in a list of words and short phrases, yet rarely in complete sentences. Overall, in both rounds of the game ‘*Der König*’ 29 grammatically incorrect statements were made by students. An error analysis showed that 15 times the mistake was related to the article of the word, six times related to the verb, six times an incorrect word was chosen, and two times the incorrect preposition. An additional four incorrect statements were found in the transcript of the interview. Interestingly, none of the mistakes seemed to hinder comprehension as students involved in the study carried on. On two occasions self-correction took place. P(22) said “*Schweiß, nein schwarz* “ (sweat, no black) noticing the use of an incorrect word. P(25) said “**ich Arbeitsheft*” (I workbook) and immediately added a verb “**ich mache Arbeitsheft*” (I do workbook). An additional student self corrected after I stated the phrase correctly.

P(3): Oh they say like *Alles Gut!* for Happy Birthday, don’t they?

Me: Keep going.

P(3): *Alles Gut!*, my German exchange student posted that on my wall on my birthday.

Me: *Alles Gute!*

P(3): Oh yeah *Alles Gute!*

Often the gender of a noun presented difficulties as well as changing the article after a preposition. When looking for the article for *Sonnenbrille* (sun glasses), the following discussion occurred:

Me: Do you know if it’s *der, die or das* (masculine, feminine or neuter)?

P(11): *der*

P(11): *das*

Me: Any other guesses?

P(3): *die*, is it *die*, guys if it ends in -e it's *die*.

This exchange shows students guessed the gender of a noun, even though one of the gender rules was known to P(3). Overall, students tended to avoid the use of the articles altogether. Nouns were used in isolation 69 times, and 65 of the 69 times they were used without an article. Students used nouns only 4 times with an article, and 2 out of the 4 times the article was not correct. The discussion about the word *Erdgeschoss* (ground floor) indicated student P(3) did not recognize it as a noun.

Me: Is it *der die or das*?

P(3): Does it, I feel like it doesn't.

Me: It does.

P(3): It does?

Me: It's a noun.

P(11): *das Erdgeschoss, die Erdgeschoss, der Erdgeschoss, der* (the ground floor).

Me: It's *das*, there is no way to guess it really.

All in all, articles presented a challenge to the students. At the same time students had no difficulties with the grammatically special phrase *Es gefällt mir* (I like it). P(9) described it as "*Ich finde es gut*" (I find it good) and "*Das finde ich sehr gut*" (I find it very good). P(11) commented: "We worked with that one. [...] *Mir* (me) isn't that me? So, their sentences are like switched around 'It is pleasing to me.'"

An additional comment needs to be made on grammatical terminology. Students knew many grammatical terms but were unsure of their exact meaning. The following conversation took place about the phrase *Griß dich!* (greetings to you), which was taught as early as the first chapter and was not guessed in either round of data collection. The

phrase uses the word *dich* (you) in the accusative case, the case of the direct object. I was trying to prompt for that knowledge:

Me: That was one you guys struggled with.

P(3): Is that like hello?

Me: Do you know the parts, *grüß* (greetings) and *dich* (to you)?

P(11): Isn't that I? Isn't that a form of you?

Me: Do you know which form? Do you know what it is called grammatically?

P(11): It starts with an -a.

Me: It does.

P(11): And it ends with a -k.

Me: No the abbreviation ends with a -k, the word actually doesn't. It's *Akkusativ* (accusative).

P(11): Oh *Akkusativ* (accusative). We learned about like *mich* (me), *dich* (you).

Me: That's right, *mich* (me) and *dich* (you) would fall into that category.

As can be seen in the example above students had a difficult time expressing their knowledge with the proper terminology.

4.2.3. Vocabulary

The domain 'Vocabulary' and the 9-10 grade range is of special interest for this study. As shown during the game, students were able to "comprehend and produce vocabulary that is related to everyday objects and actions on a limited number of familiar topics" (*ACTFL Performance Guidelines*, 2002, insert). The vocabulary items were taken from the textbook *Team Deutsch Level 1*. Students were able to give at least some input on 48 out of the 58 chosen words. The textbook does limit the vocabulary to basic topics. The topics from the textbook and chosen for this study were:

Table 4.9. Simplified Table of Content from *Team Deutsch Level 1*

Lektion 1-	“ <i>Hallo wie geht’s?</i> ” (Hi, how are you?)
Lektion 2-	“ <i>Was ist in der Schule los?</i> ” (What is happening at school?)
Lektion 3-	“ <i>Freunde und Familie</i> ” (Friends and family)
Lektion 4-	“ <i>Alles bunt!</i> ” (Everything full color!)
Lektion 5-	“ <i>Heute ist mein Tag!</i> ” (Today is my day!)
Lektion 6-	“ <i>Treffpunkte</i> ” (Meeting points)
Lektion 7-	“ <i>Hurra ein Schulfest!</i> ” (Hurray, a school party!)
Lektion 8-	“ <i>Einkaufsbummel</i> ” (Window shopping)
Lektion 9-	“ <i>Mein Zuhause</i> ” (My home)
Lektion 12-	“ <i>Ticks und Tricks</i> ” (Ticks and tricks)

As described earlier in Chapter 3, for this study words from lesson 1-9 and lesson 12 were chosen. During the game students used a variety of vocabulary but usually stayed within the topic at hand. Students “may often rely on words and phrases from their native language when attempting to communicate beyond the word and/or gestures level” (*ACTFL Performance Guidelines*, 2012). Students may rely on their native language in a variety of ways, however in this study did not use their native language much when describing words. As gestures were discouraged, students did use approximations, and made phonetic guesses. On rare occasions English was interspersed to prevent a communication breakdown. For example, when describing the word *Religion* (religion), the English word “Christianity” was used (P21). However, students communicated in the target language, German, over their native language, English, almost all the time. Only one expression was used in English to describe the word in question. P(21) used the English word ‘Christianity’ in the hope it might be a cognate, as P(21) tried to sound it out in German. Students used English occasionally when commenting on the words in

question however, not to describe or explain it. For example, P(3) said “We had this word but I don’t know what it is” or P(23) “That is when we talked about it.” Sometimes English was used to encourage the teammate to “keep going” (P17). English was used three times from the student guessing when the German word was not known: “boring” (P12), “It’s church” (P4) and “ground floor” (P9).

4.2.4. Communication Strategies

Overall, students were able to communicate in the target language about a word. At times it was more challenging, but in general meaningful communication took place during the game. Sometimes grammatically incorrect language use occurred but did not hinder comprehension. The communicative competencies presented in the *ACTFL Guidelines* were in place even for beginning learners of German as demonstrated above. Students used repetitions and repeated already stated input. Repeating a word without any additional changes or input occurred four times. It was more common to repeat and to add information to previously made statements. For example, students started listing German ice cream dishes “... *Kaffee* “ (...coffee, P21), “...*crème*“ (blank cream, P22) “*Spaghetti ...*” (spaghetti..., P20). Another example came from P(3) saying “*Hochhaus*” (high rise), P(1) said “*unter eins*” (under one), and then combined both hints “*unter eins im Hochhaus*” (under one in a high rise) when describing ground floor. Similarly, “*Kuchen*” (cake P20) as elaborated on by P(22) “*Du isst Kuchen*” (you eat cake). Another example of a combined effort can be found in the descriptions for the word *Taschenrechner* (calculator), the team provided the following input adding to each other’s hints:

P(27): *eins, zwei, drei, vier, fünf* (one, two, three, four, five)
 P(27): *Mathematik* (mathematics)
 P(24): *Computer* (computer)
 P(23): *klein Computer* (small computer)
 P(18): *kleine Mathematik* (small mathematics)
 P(17): *nicht Nummer* (no number)
 P(27): *Computernummer* (computer number)
 P(24): **in der Rucksack* (in the backpack)
 P(24): *für Mathematik* (for mathematics)

Five different students went back and forth adding additional information to describe the word in question.

Interestingly, most of the time students were adding on to their own comments such as P(3) started with “*sonnig*” (sunny) and “*das Wetter*” (the weather) and eventually combined the hints into one phrase “*das Wetter ist sonnig, so ich habe...*” (the weather is sunny, therefore I have...). P(27) listed “*Kakao*” (cocoa), “*essen*” (eat), and later added “*Kakao essen, am Morgen essen, das ist lecker*” (eat cocoa, in the morning, it is tasty). One time only a student asked for clarification. When describing the word *Hausaufgaben* (homework) one of the hints was “*Schule*” (school, P21). P(20), the student guessing, asked for clarification: “*Schuhe* or *Schule?*” (shoes or school). Overall, strategies were in place to communicate meaningfully with each other.

4.2.5. Cultural Awareness

The following section will briefly touch on the findings from this study in the area of cultural awareness. Due to the exploratory nature of this study, I was neither able to predict the outcome nor foresee students’ comments. Cultural knowledge is not the focus of this study and was not presented in the review of literature. Nevertheless, students made several comments related to their cultural knowledge or lack thereof. Some of the

examples will be illustrated below but are limited in their discussion due to a different purpose of this study.

Students did encounter all words presented in the game at some point during class. Some of the words chosen for the study have underlying cultural meanings in German, which differ from the meaning in English. This cultural knowledge of words is only partially developed. This phenomenon will be illustrated next. Students had some understanding of the underlying meanings and were aware of differences, yet were unsure what these differences really present or how to express them. Students were unsure about the concept of a village in Germany. P(3) commented: “I keep thinking of a country town, what you do see like in storybooks, old English kind of houses.” P(11) followed up: “From, like, what’s that movie with the boy and like the tiger? [...] When they go to their little village.” P(8): “Like the *Jungle Book*.” The idea of a village seems to be influenced by Disney movies and does not accurately describe a German village. Another example of partial cultural knowledge was found in the word *Ferien* (school vacation).

Me: Do you know about the German school system, and how they have *Ferien* (school vacation)?

P(8): Don’t they have year round school?

Me: The school system yeah, do you know when they have off?

P(11): The first weekend in December, it’s like a holiday. I don’t remember before Christmas, they put like stuff in socks.

Me: Yeah, you are talking about St. Nicolas Day.

P(3): Don’t they hang something on the door?

Me: That is St. Nicolas Day, do you know about school, and when they have vacation from school? Like you have 3 months off in the summer, would that be the same in Germany?

Participants: No.

P(8): Do they have like one month in July?

P(3): Yeah, I think, I had a German exchange student talking to me about it, and it was ...because I wondered if they were in school when they came, and they said:

No.

P(5): Yeah, they had like finals when they got back.

Me: When were they here?

P(3): They were here in April.

P(8): But they said they had a break. They had an Easter break like 3 weeks or something?

P(11): Would that count like Spring break, too?

Students knew the term year-round school but confused holidays with vacations and did not know what a German school year looked like. There were several inaccurate comments in the conversation above.

Another example was the word *Erdgeschoss* (ground floor). Students knew that there was something different about it, yet did not describe the cultural difference sufficiently. P(27): “When we first learned it, cause that’s the one level with the ground so we would be, like, oh that’s the first floor. And actually that is the second floor in German.” P(17): “Yeah, like earth is and the one above that.” P(27): “Yeah, you have ground floor, and then you have the one above it, which is the first floor.” P(11): “The bottom is like the second floor or something, don’t they count the basement as a floor.” P(3): “And the second floor”. Me: “And the *Erdgeschoss* (ground floor) is what?” P(11): “The ground floor, not underground.”

Another example of culturally incorrect meaning was displayed in the description of the word *Disco* (dance club) as it was explained as “**alt Musik*” (old Music, P18), which is not accurate. Negative transfer of the English meaning may have taken place. Students also indicated that they were unaware of the different breakfast foods between the two cultures and did not know the word *Müsli*, the German main form of cereal. On the other hand students knew a variety of German ice cream dishes not known in the U.S.

such as *Eiskaffee* and *Spaghettieis*. Students also knew that Germans use different hand signal when counting.

4.3. Summary of the Findings

In summary, students displayed a variety of strategies to communicate meaningfully in the target language. Students were able to utilize semantic, linguistic, and social features in the target language German. Additionally, students discussed different vocabulary learning strategies, were aware of advantages and disadvantage, as well as learner differences. Furthermore, students displayed varying degrees of knowledge terms of accurate language and the vocabulary. Nevertheless, students' comprehensibility and comprehension seemed not affected by incorrect language use.

CHAPTER V

DISCUSSION OF FINDINGS

In the following section I will review the results, revisit the study, its research questions, and methodology before summarizing and discussing the findings. I will close the chapter with implications for the classroom as well as recommendations for future research.

5.1. Summary of the Study

This research study was inspired by my personal classroom observations, discussions with students, formal and informal classroom assessments as well as my desire for new knowledge and further growth in the field of foreign language education. The ACTFL standards, performance guidelines, and performance descriptors guide and direct the field of foreign language education in American schools and universities (ACTFL, 2002 and 2012). As a classroom teacher I was especially interested in the vocabulary knowledge of L2 students and their use of vocabulary learning strategies. This research study investigated high-school aged learners who were in the beginning stages of learning German. More specifically, the study was designed qualitatively using 58 vocabulary items as prompts for a review game, exit slips, and follow-up interviews.

These tools were used to collect data trying to answer the two overarching research questions: (a) What distinct vocabulary learning strategies do high school learners of German employ? (b) How do high-school aged learners of German demonstrate their knowledge of words? The data were collected in two different sections

of German II at a public high school in the Midwest. A total of 29 students participated in the game and 13 students returned for the follow-up interview. Several hours of video and audio footage were transcribed and analyzed in regard to the research questions. A detailed description of the research methodology can be found in Chapter 3, and a detailed discussion of the results can be found in Chapter 4.

5.2. Research Results

Research Questions: (a) What distinct vocabulary learning strategies do high school learners of German employ? (b) How do high-school aged learners of German demonstrate their knowledge of words?

The research study is unique because it investigated adolescent learners of German, subjects not commonly used in language studies. The findings of this study support previous theories that describe and predict L2 learning. Further, the study supports theories of L2 teaching, which influence curriculum and materials design. Finally, the study supports theories on strategy use.

Learning strategies are defined as “the process by which information is obtained, stored, retrieved, used” (Rubin, 1987, p. 29). The high school students participating in this study displayed and discussed a variety of these processes. They were able to demonstrate their knowledge in the target language of German using semantic, linguistic, and social context clues. Semantic clues were used the most, a total of 162 times, and six subcategories were identified: (a) naming categories and themes; (b) describing; (c) creating fill-in-the-blank statements; (d) giving examples; (e) using synonyms and antonyms; (f) asking questions. Besides semantic clues, students also used linguistic

clues, a total of 25 times. More specifically students used clues such as: (a) hinting at the gender of the word; (b) hinting at the length of the word; (c) hinting at the form of the word; or (d) using the word as part of a compound. Finally, social clues were used 18 times and related to social settings students had experienced together. Students by far favored semantic context, supporting teaching theories stating new vocabulary should be contextualized.

On occasion, different types of clues merged or were used in a variety of combinations. An example of a merging clue was using the word as part of a compound like *Hoch[haus]* (skyscraper) to hint at *Hausaufgaben* (homework). In this compound noun students were able to isolate the individual meanings, as they did in a few other instances. Depending on the word in question the number of clues needed to guess a word varied. Interestingly, 10 words were guessed after one hint only, 11 after two or three hints, and 17 words received more than four different hints indicating that some words were easier for the students to guess and needed less input than others.

Furthermore, students used direct strategies like memory, cognitive, and compensation strategies (Oxford 1990). During the game students were able to understand and produce new language. They were also aware of the need to memorize vocabulary, articles, and prepositions. Students knew, they cannot bypass that step in their language development. Interestingly enough, as articles were an area of difficulty students tried to avoid them. Out of 69 clues using nouns only four included an article. Nevertheless, students were able to explain the use of strategies with examples or by describing them. They named the following learning strategies: (a) flashcards; (b) repeating and memorizing; (c) organizing and note taking; (d) creating charts; (e)

associating by sounds and meaning; (f) making connections and relating to other content areas; (g) approximating; and (h) using new words in context. This shows students also used indirect strategies and are developing metacognitive strategies to support their learning (Oxford 1990).

The initial response to the questions what strategies students use to study vocabulary was “Notecards“ (P17) followed by ”Flashcards“ from P(27) and P(22). The same students indicated they find flashcards helpful. P(12) made an argument for self-evaluation while using flashcards: “I mean, like, if you look at the German side, and you think, oh I know it, and then you look at the English side, and you don’t really know it.“ This statement shows awareness that the usefulness of flashcards depends on how they are used and the honesty of the learner when evaluating themselves. P(16) summed up learning vocabulary as: ”Repetition, there is no other way.“

Students knew the importance of repeating and memorizing, similar to the belief “practice makes perfect” (Mitchell & Myles, 2004, p.31). They used memorization strategies as described by Arabski (2002) such as: (a) using the keyword methods; (b) using imagery; (c) representing sounds in memory; and (d) placing new words in context. P(27) described it as “intermixing”. P(12) tried to relate concepts to other content areas: “Like when we are done learning it you can see how much it relates to English, and we don’t really think about it on a daily basis but they kind of cross.“ P(17) recommends “to use the stuff you already know. [...] Sometimes I say it, and in my mind try to remember how it sounds, and compare it to how it sounds.” All these examples illustrate the use of strategies without naming them, an area worthy of further investigation in the classroom and in research.

Overall, students demonstrated different learning strategies and agreed that they could utilize them more on their own and outside of class. Not surprisingly, different students preferred different strategies. Acknowledging learners' preferences and providing the freedom to choose among learning styles will lead to better results. Oxford (1990) encourages a variety of methods and techniques to support learning.

As mentioned in the Literature Review applied linguists identified vocabulary knowledge and processes as: (a) vocabulary size; (b) knowledge of word characteristics; (c) organization; and (d) access (Chapelle, 1994, p.157 ff.). Especially interesting for this study was word knowledge. Students expressed their knowledge in phonemic, graphemic, syntactic, and semantic features, which are in alignment with Chapelle.

Students in this study followed L1 concepts (e.g. Brown, 1973; Klima & Bellugi, 1966; Mitchell & Myles, 2004, Slobin, 1970) to organize vocabulary. Students labeled concepts, grouped them, and tried to make connections between them (Aitchinson, 1987). Grouping of the words occurred by 'likeness' (Miller & Gildea, 1987; Schmitt, 2000). Prototype theory was applied by the students when comparing the word in question to other known vocabulary.

Graves (1987, p. 166) argues the goal of vocabulary instruction is "[...] learning words, learning to learn words, and learning about words." Generally, students were able to communicate in the target language, German, despite gaps in their knowledge.

Henriksen (1999) argues that L2 learners' knowledge of words ranges from no knowledge to partial knowledge to precise knowledge. This study showcased examples from students in each of these categories, which are supported by comments like "I don't think I know what that is" (P21), or "we had this word but I don't know what it is" (P3).

These comments also support findings the vocabulary knowledge scales from Dale (1965), Curtis (1987), and Paribakht and Wesche (1997).

Students also showed a range of how well they know a word as can be seen in the amount of successful guesses, partially successful guesses, and unsuccessful guesses of the word in question. A total of 30 guesses were successful and eight partially successful. Overall 38 times out of 58 prompts meaningful conversation took place. Additionally, even though the word in question was not guessed, 10 of the 20 unsuccessful guesses received some meaningful input. In total, only 10 of the 58 prompts had no meaningful input at all.

As beginning learners of German, students only have partial knowledge of words. Linguistic and cultural knowledge were the two areas where students displayed uncertainties, incomplete and thus far incorrect knowledge. Students knew the features of German nouns, verbs, and adjectives. They were able to identify the form of a word. “All German nouns are capitalized. And, I guess, [Frau] drilled into us what is a verb, what is an adjective, and what is a noun” (P27). This quote supports findings by Schmitt (2000) and Wode (1989) who argue categories for nouns, verbs, adjectives, prepositions, auxiliaries, pronouns, articles, and conjunctions already exist and can be utilized.

Nevertheless, students displayed difficulties with accurate grammatical terminology. Students used examples to explain their thoughts and described concepts without being able to name them directly; indicating their awareness even though it was difficult for them to express it. It was challenging for them to talk about language. Especially challenging was the German case system and terminology like nominative, dative, accusative, subject and object, declension, and conjugation. Not just the

terminology of the German case system but the case system itself presented a challenge such as the articles for masculine, feminine, and neuter nouns. However students are sensitized that distinctions exist.

Furthermore, language control and accuracy were high. Overall, in both rounds of the game *'Der König'* 29 grammatically incorrect statements were made by students. An error analysis shows that 15 times the mistake was related to the article of the word, six times related to the verb, six times an incorrect word was chosen, and two times the incorrect preposition. An additional four incorrect statements were found in the transcript of the interview. Interestingly, none of the mistakes seemed to hinder comprehension as students involved in the study carried on.

Students' word knowledge is certainly still 'fuzzy' (Gnoinska, 2002) and so is their manner of expressing their word knowledge. Nevertheless, the examples and comments provided by the students support schema theory. They are developing concepts to organize information, they are aware of the attributes of language, words, concept formation. Students did group vocabulary by likeness and by positive and negative attributes, by what things are and what they are not. They also framed words within their own lives such as descriptions of the words birthday or cell phone. Students have varying degrees of vocabulary knowledge, which is in accordance with Laufer (1998).

5.3. Theoretical and Pedagogical Implications

The study gave a voice to high school students. Their responses and interactions are validating previous research conducted in L1 and L2 learning. The findings show the process of learning German matches the ACTFL guidelines and descriptors indicating

ACTLF theories match the data.

Students had expressed some frustration learning German due to the limitations of memory and information overload. Teachers need to be aware of that threshold, and students would benefit from direct instruction of vocabulary learning strategies. The repertoire of strategies could possibly be expanded by adding a variety of note taking strategies, memorization techniques, time management suggestions, and organizational strategies. Students described and employed many strategies, seemingly unaware of the fact that they were using a strategy. Often words were learned in phrases or by categories or themes. Students should be exposed to and experiment with a variety of strategies to find out what suits them.

Classroom teachers should be aware of their students' preferences, model more techniques, and revisit strategies regularly. Oxford 1990, argues for a variety of strategies. I would also argue that vocabulary learning is closely related to reading, and today many schools focus on improving reading test scores. Vocabulary learning techniques could be added to the school improvement plans and could be taught to all faculty members.

Meaningful communication took place most of the time even though students used fragments and inaccurate language at times. The function of language was more important than its form. Again, teachers teach language. They teach how to read and speak. Vocabulary and grammar are part of learning a language but no longer isolated units and should always be embedded in meaningful context. Materials need to be chosen carefully. Current textbook and material design should follow how students learn language.

Finally, this study invigorated my passion for teaching, working on implementing current research throughout my curriculum, continuing to teach language and culture embedding vocabulary, and modeling learning strategies. I have a heightened awareness how misinterpretations of words can lead to big misconceptions for the learner.

5.4. Limitations of the Study

Caution is necessary not to generalize findings from this study to other settings, even though similarities may exist. “By nature, qualitative research findings are highly context and case dependent” (Patton, 1999, p. 1197). Secondly, the time spent collecting data and the sampling procedures are limitations to any study. The present study depended on the willingness of the participants. Since interviews were used for parts of the data collection, I relied on honest answers of the learners.

An additional limitation of this study was the small sample size of 29 students for the game and 13 for the follow-up interviews, which also caused a significant shift in the gender of the participants. Furthermore, the geographic location, the amount of exposure to German, and the word selection are limitations and raise caution not to generalize findings to other settings. Additionally, this study did not consider passive vocabulary knowledge of the students. As mentioned in the results, cultural awareness was not the focus of the study and was therefore not discussed sufficiently, yet resurfaced during the study.

5.5. Recommendations for Future Research

The foci of this study were word knowledge and vocabulary learning strategies.

This study included all learners and did not separate successful from unsuccessful learners. A study with this distinction could change the data analysis. It would also be beneficial to follow the students for a longer period of time and to revisit the classroom at a later point in the students' language development. A follow-up study discussing the learning process, the planning, monitoring, reflecting, and evaluating according to Oxford's learning strategies (1990) could be of interest. Since the study only looked at German language learners a similar study in another language would be interesting. In general, more qualitative studies are needed to investigate the question how learners acquire words.

5.6. Conclusion

The purpose of this study was to add to current research by looking at word knowledge and strategy use of beginning learners of German. Furthermore, this study focused on high-school aged students and took a qualitative approach. The study revealed that students can describe words in the target language, German. They prefer semantic context, followed by linguistic and social context. The word knowledge is partially developed. L2 learners in this study employed a variety of learning strategies. This study supported previous findings with a new population of participants.

APPENDIX

Appendix A: Exit Slip

Please take a moment and answer the following questions as truthfully and as detailed as you can.

- 1.) What was the word you had to guess?
- 2.) Were you able to guess the word?
- 3.) What hints or clues from your classmates helped you guess the word?
- 4.) What additional hints would have been helpful to guess the word?
- 5.) What hints or clues from your classmates were confusing?
- 6.) Can you think of anything else that was either helpful or not helpful at all when you were playing the game?

Appendix B: Student Interview Guide

- I. Interview Questions: Word Knowledge
 - a. How did you like the game? Why was it hard, what was helpful, what was good or bad about it? What would you say?
 - b. What was hard/easy for you when you were describing? Did you listen to other people's description also?
 - c. Do you know any synonyms for... or antonyms or similar words that you could substitute... with? Anything in the...category? What else goes with...?
 - d. Can you think of any other words for...? What else could you use? What else do you think of when you hear...?
 - e. Do you know any other words in that word family or any other compound nouns with... in it?
 - f. Can you use...in a sentence?
 - g. Do you know how to answer the questions...?
 - h. Do you remember how you explained ... and why?
 - i. What do you know about ...? What parts do you recognize?
 - j. Do you know how to spell it? Do you know the plural? Do you know how to conjugate it? Do you know if it is *der*, *die*, or *das*?
 - k. You had Do you remember what was going through your mind? Tell me how you guessed What did you think?
 - l. So what were you thinking when you explained ... the way you did.
 - m. What was so hard about... ?

- n. What does it mean when you say: It didn't sound right to you. What is it supposed to sound like?
- o. What would have been other hints to help you guess the word...?

II. Interview Questions: Learning Strategies

- a. Tell me how you learn?
- b. What tricks do you use to study vocabulary? Or what strategies?
- c. Do you work with a partner some times?
- d. What do you do at home outside of class to learn vocabulary?
- e. What strategies do you use when you read a text or listen?
- f. Anything else you can think of for strategies?
- g. Do you use any strategies to help you memorize? How do you memorize words?
- h. Can you give me an example when you say...?
- i. How could you use any of the words more?
- j. How do you use flashcards? And are they helpful to you? How often do you do them? Do you use pictures at all or with you flashcards?
- k. Have you tried any vocabulary learning strategies that didn't work, that some classmates use but didn't work for you?
- l. What would you recommend to someone who is just starting to learn a foreign language?
- m. What else can you think of in terms of grammar and vocabulary?
- n. Why is it hard? Why is it easy? Why is it frustrating? Any thoughts?
- o. Anything else you can think of about the game, the words or studying German?

III. Follow-up

- a. May I get back in touch with you should I have additional questions or need clarification?

IV. Thank you

- a. Thank you for your willingness and time to participate in this study
- b. Your comments about have helped to better understand this issue from a student's perspective.
- c. Your ideas on..... have contributed to my data collection.

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