# THE GERMAN PREPOSITIONAL PHRASE:

# A PILOT CALL MODULE

Dedicated to my fiancé, Mr. Dale W. Coulson, who helped keep me sane through every stage of this thesis.

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# THE GERMAN PREPOSITIONAL PHRASE:

A PILOT CALL MODULE

Ву

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#### ABSTRACT

As an instructor of beginners' German, the author of this thesis was introduced to the computer as a medium to teach foreign/second languages and wished to discover how effective the computer is as an aid to language learning.

In order to look at the effectiveness of computer assisted language learning, the author of this thesis looked into the history and development of computer assisted language instruction and summarized the research in Part 1 of this thesis.

To give the author first-hand experience with computer assisted language instruction, some computer exercises were prepared by her to be used in a pilot study conducted during the academic year 1989-90. A discussion of effective topics taught by computers as well as the set-up and results of this pilot study are given in Part 2 of this thesis.

Finally, Part 3 of this thesis contains some general conclusions about computers as a medium in the language classroom. The most interesting conclusion, the computer's affect on student motivation, is drawn directly from the comments of the students involved in the pilot study as well as the author's own experience with language students using the computer as a learning tool.

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#### PART 1: A HISTORICAL PERSPECTIVE

## 1.1 INTRODUCTION

In this part of the thesis, a definition of computer assisted language learning (1.2) will precede a discussion of the developments that affected computer assisted instruction in the field of language learning (1.3). Then, a description of a predecessor of computer assisted language teaching, programmed instruction, will be provided (1.4) followed by an introduction to artificial intelligence (1.5) which, as we shall see, has greatly affected the development of computer assisted language learning. Some examples of early work done on computer assisted language learning will also be given (1.6), followed in the final section by some examples of work on present-day computer assisted language learning (1.7). 1.2 CALL/CALI: A DEFINITION

People learn foreign languages with a variety of goals in mind (e.g. career) and consequently by a variety of methods. Thus, the syllabus is designed to meet the needs and goals of the students. Different learning aids, such as video cassettes and tape recorders, textbooks, blackboards or exercise books, projectors and even computers are used in language courses. The use of any of these aids, as well as

different teaching methodologies, has to be evaluated with respect to the objective of the course<sup>1</sup>.

In the literature, the two terms, computer assisted language learning and computer assisted language instruction<sup>2</sup>. are often distinguished. In Computer-Aided Language <u>Instruction</u> (further abbreviated as CALI), the computer usually takes the place of the human teacher. Thus, CALI is often a self-instructional method for learning either a first, foreign language, found for second or example in correspondence-type courses, or in remedial courses where the student needs a lot of extra practice.

In contrast, in <u>Computer-Aided Language Learning</u> (further abbreviated as CALL), the computer lessons are only one aspect of language instruction. The human teacher is still a key part of the instructional environment, and the computer is often used in conjunction with other instructional media such as textbooks, videos and/or overhead projectors.

<sup>&</sup>lt;sup>1</sup> For a discussion of the aspects of language teaching that should be considered before a course can be effectively designed, see Jack C. Richards, and Theodore S. Rodgers, <u>Approaches and Methods in Language Teaching: A</u> <u>Description and Analysis</u> (Cambridge; New York: Cambridge University Press, 1986) 14-30.

<sup>&</sup>lt;sup>2</sup> See Vittorina Cecchetto and Magda Stroinska, "CALL? CALI? Can They Be All Things to All People?" <u>CALL: Papers</u> <u>and Reports</u> (La Jolla, California: Athelstan Publications, 1990) 23.

This thesis will describe in detail a pilot CALL-type module developed and tested for first-year German instruction at McMaster University.

1.3 DEVELOPMENTS THAT AFFECTED CALL

It should be noted, at this point, that computer scientists usually distinguish between four generations of computers<sup>3</sup> and state that the development of a fifth generation of computers<sup>4</sup> is now in progress. Neither the first- nor second-generation computers were actually used to implement CALL, but subsequent developments in hardware and software (e.g. minicomputers, programmed instruction, the beginning of artificial intelligence research and others) during this period later influenced CALL.

The application of computers to language teaching was begun using third-generation computers  $(1965-1971)^5$ . At this

<sup>&</sup>lt;sup>3</sup> For a description of the four generations of computers, see <u>Dictionary of Computing</u>, 2d ed. (Oxford; New York; Tokyo: Oxford University Press, 1986) 146 (fifth), 150 (first), 156 (fourth), 161 (generation), 334 (second) and 384 (third).

<sup>&</sup>lt;sup>4</sup> The fifth generation of computers, although still in its infancy, will apparently result in technological advances that will improve the field of artificial intelligence which, in turn, has affected CALL over the years (see Sections 1.5 and 1.7).

<sup>&</sup>lt;sup>5</sup> Walter Burke, <u>Computers in the Classroom...What Shall</u> <u>I Do?</u> (New York: Garland Publications, 1986) 6. According to Burke, the use of computers became more widespread in universities and colleges, particularly for math and the applied sciences, since the integrated circuit printed on a silicon chip became available to the computer industry.

point, a number of CALL exercises were developed on mainframe computers<sup>©</sup> at some larger universities (e.g. Stanford, Berkeley, University of Illonois, etc.) but, for the most part, the use of the computer was limited to math and the applied sciences. During the period of third-generation computers (the late 1960's), a technological breakthrough that has strongly influenced CALL occurred at Dartmouth College in New Hamshire. A new programming language, the Beginners All Purpose Symbolic Instruction Code (BASIC) was developed for Because of this advance, language beginning programmers. teachers were provided with the means to create their own computer language instruction program rather than relying on technicians who did not always understand all the complexities involved in teaching a second or foreign language. At present, BASIC is still widely used, although specialized software<sup>1</sup> has been developed in order to facilitate the writing of computer exercises by language instructors.

Fourth-generation computers (1972 on) improved the likelihood of computers being used in the humanities and, consequently, language departments, because of the development

<sup>&</sup>lt;sup>6</sup> See M. J. Kenning and M.-M. Kenning, <u>Introduction to</u> <u>Computer Assisted Language Teaching</u> (Oxford: Oxford University Press, 1983). It is stated that a mainframe needs a controlled environment and numerous technicians to maintain operations. It is thus costly to use.

<sup>&</sup>lt;sup>1</sup> This software is the *authoring system* which is described in more detail in Section 2.5.

of the microprocessor<sup>8</sup> and the now common personal computer. Also during this period, time-sharing facilities<sup>9</sup> were implemented. Thus, there was a possibility of computers being accessible for projects outside the mathematics and science departments. Even universities and colleges without computers on site were finally able to incorporate CALL into the curricula.

The remainder of Part 1 will present an overview of the history of CALL, starting with a description of CALL's predecessor, programmed instruction.

1.4 PROGRAMMED INSTRUCTION

From the methodological point of view, CALL and CALI may be treated as direct descendants<sup>10</sup> of the programmed instruction movement based on behaviourist psychology, popular

<sup>8</sup> See Walter Burke, <u>Computers in the Classroom...What</u> <u>Shall I Do?</u> (New York: Garland Publications, 1986) 8. According to Burke, a microprocessor is a powerful central processing unit (CPU), or simply stated, the brains of a microcomputer.

<sup>9</sup> Ibid 7. As Burke states, time-sharing refers to a computer networking system which enables keyboards and/or video terminals to be hooked up to a main computer. This allows individuals to work on different projects at the same time. The time-sharing facility was created by Dr. John Kemeny and Dr. Thomas Kurtz of Dartmouth College.

<sup>10</sup> See Rex Last, <u>Artificial Techniques in Language</u> <u>Learning</u> (Chichester: Ellis Horwood Limited, 1989) 34. According to Last, programmed instruction is referred to as CALL's predecessor because early examples of CALL were similar to Skinner's linear programming since the student was required to complete each question in the order given from beginning to end.

during the 1950's and the 1960's. The term, programmed instruction, can refer to any teaching method that fulfills the following functions:

- Allows each student to work individually at his/her own pace thus allowing for differences in learning abilities.
- b) Presents a relatively small unit of information (called a stimulus) to the student at one time.
- c) Requires the student to answer a question or make a statement (called a response) about the stimulus.
- d) Informs the student immediately if the response is correct or not. This feedback is called reinforcement.
- e) Presents the next unit of information to the student and the cycle repeats itself until all necessary information is presented. Provisions are made for review and practice of each unit of information.

(see Hughes [1962] 2-3)

B. F. Skinner's 1954 article, "The Science of Learning and the Art of Teaching", was a foundation of the programmed instruction learning method. Skinner's conclusions about learning processes pertaining to first language acquisition, stem from experiments he carried out by examining the behaviour of animals. Although there are obvious differences between first language acquisition and second language learning<sup>11</sup>, two observations made by Skinner were important to the development of the programmed method of instruction for second language learning. In order to establish a desired behaviour, it is necessary to have:

- a) reinforcement of the desired behaviour, and
- b) immediate feedback.

In programmed instruction, a sequence of frames is used to instill the behaviour to be acquired, requiring an active response from each student for each frame. There are three key principles of programmed instruction that could also be applied to CALL:

- a) minimal steps (i.e. small portions of information to be learned slowly),
- b) an individual learning pace and
- c) immediate reinforcement.

<sup>&</sup>lt;sup>11</sup> See S. Pit Corder, <u>Error Analysis and Interlanguage</u> (Oxford: Oxford University Press, 1981) 5-13. According to Corder, the most obvious difference between learning a first or a second language is of course motivation. It is inevitable that a baby will learn the language being spoken around him/her, whereas learning a second language often occurs later in life and requires another motivation. In addition, the learning of a second language will inevitably be influenced by the knowledge of the first language.

The first principle, that of minimal steps, poses obvious difficulties since the exercise could quickly become boring for the learner if steps are artificially small.<sup>12</sup>

The role traditionally assigned to the teacher changed in the programmed instruction methodology. Rather than drilling the student on the behaviour to be acquired, the teacher not only corrects the student, but also helps and motivates the student. The classroom became a learner-centred rather than a traditional teacher-centred environment.

The advantages and disadvantages of programmed instruction were discussed for more than two decades. As with any new methodology, some instructors refused to consider programmed learning because it was different.<sup>13</sup> Others, like Clark [1975], attacked the behaviourist foundations of the programmed instruction methodology. The detractors argued that this approach worked for teaching some language skills (e.g. isolated points of grammar such as verb formation, etc.), but failed to teach other skills, most obviously the

<sup>&</sup>lt;sup>12</sup> It should be noted that this problem was solved by the *branching-type* exercises in which the student was told to proceed to a more-advanced question after answering a couple of the simpler questions correctly.

<sup>&</sup>lt;sup>13</sup> In the literature, it is apparent that a feeling of isolation from colleagues often exists for an instructor who wishes to incorporate a new methodology. See Holmes [1990], Davies [1982], Burns [1985].

communicative skills.<sup>14</sup> A more detailed analysis of the various aspects of programmed instruction cannot be given here, but it is worth noting that the programmed instruction movement did lay the groundwork for later arguments about the benefits of CALL such as active participation, individualized instruction, pace and immediate feedback. 1.5 THE BEGINNINGS OF ARTIFICIAL INTELLIGENCE RESEARCH

It was at the 1956 Dartmouth Conference that artificial intelligence researchers met for the first time to discuss their research. <u>Artificial Intelligence</u> (further abbreviated as AI) was given its name by John McCarthy, one of several researchers interested in answering the question: "'Can machines think?'"<sup>15</sup>

Prior to the 1956 Dartmouth Conference, one area of AI research that influenced CALL was <u>Machine Translation (MT)</u>.

<sup>&</sup>lt;sup>14</sup> "Although strictly behaviouristic approaches to language teaching are being abandoned in large scale,...some aspects of behaviouristic learning theory should be retained if they are shown suitable to some specific learning task....The teacher should select a teaching strategy on the basis of a particular learning situation." See Renzo Titone, and Marcel Danesi, <u>Applied Psycholinguistics: An Introduction</u> to the Psychology of Language Learning and Teaching (Toronto: University of Toronto Press, 1985) 57.

<sup>&</sup>lt;sup>15</sup> This question was originally proposed by Alan M. Turing in his 1950 article "Computing Machinery and Intelligence." See Henry C. Mishkoff, <u>Understanding</u> <u>Artificial Intelligence</u> (Dallas, Texas: Texas Instruments Incorporated, 1985) 26.

In a memorandum circulated in 1949<sup>16</sup>, Warren Weaver suggested that a machine could be programmed to translate languages in a manner similar to deciphering military codes. Thus, during the 1950's, millions were spent in order to fund MT with the hope that scientific documents written in foreign languages available, but b[uow be made the results were not encouraging.<sup>17</sup> Even though the early attempts of MT failed, an important discovery about language was made: the machine must first be able to understand<sup>18</sup> a word/phrase/sentence, then it could be programmed to generate it, and only then to translate it (Mishkoff 98). This discovery was important to later descendants of MT such as computational linguistics and natural language processing which have both affected CALL (see Section 1.7).

<sup>17</sup> See George Johnson, <u>Machinery of the Mind: Inside the</u> <u>New Science of Artificial Intelligence</u> (USA: Time Books, 1986) 103. Johnson gives a typical example of early MT to show its inadequacies. The phrase "Out of sight, out of mind" was first translated mechanically into Russian and then translated back into English as "Blind and insane" or "Invisible idiot."

<sup>18</sup> Note that "understand" means here that a machine is able to assign a correct syntactic structure to the input text, and consequently it may assign an appropriate semantic interpretation to the text.

<sup>&</sup>lt;sup>16</sup> See Rex Last, <u>Artificial Intelligence Techniques in</u> <u>Language Learning</u> (Chichester: Ellis Horwood Limited, 1989) 29.

Although John McCarthy gave AI its name at the 1956 Dartmouth Conference, it is Alan Turing who is generally considered as the "father" of AI (See Mishkoff 26). In Turing's 1950 article "Computing Machinery and Intelligence," he suggests a test, which is an imitation game, that could determine if a machine is intelligent. This test, now called the "Turing Test," originally had two steps: In the first step, an interviewer questions two people in order to discover which one is male and which one is female. One person tries to trick the interviewer, whereas the other person must answer truthfully. In the second step, a computer is substituted for one of the people. Now the computer tries to trick the interviewer, whereas the person must tell the truth. The "Turing Test" has been reduced to the second step, but Last ([1989] 100), for example, questions the validity of an imitation game being used as a test of a machine's intelligence.

To illustrate AI's attempts to create an intelligent program, Eliza<sup>19</sup>, developed about 1965 by Joseph Weizenbaum at MIT, will be described. Eliza imitates "the noncommittal style of questioning of a Rogerian psychoanalyst (Johnson 51)"

<sup>&</sup>lt;sup>19</sup> According to Last [1989], the name Eliza was taken from the character Eliza Dolittle in Shaw's play <u>Pygmalion</u> because Miss Dolittle appeared to have successfully adjusted to high society from her life in the gutters without having bettered herself intellectually. She was only playing a role (97).

without understanding the comments of a "patient". The following dialogue illustrates some of the clever programming techniques that the Eliza program uses to simulate "intelligence". Eliza's responses are in italics:

> I need some help, that much seems certain. What would it mean to you if you got some help Perhaps I could learn to get along with my mother. Tell me more about your family My mother takes care of me. Who else in your family takes care of you My father. Your father<sup>20</sup>

Johnson (52) notes that Eliza has built-in questions that are triggered by key words such as "help" or "mother". The program is also capable of rearranging a patient's comments into responses, and it even has a list of noncommittal comments like "Can you think of a specific example?", but it is easy to make Eliza fail the "Turing Test" since Eliza indiscriminantly accepts what has been said.<sup>21</sup>

The beginnings of AI research are important to consider when discussing CALL because early AI research led to the recognition of some of the limitations of computers, particularly the enormous task of programming the computer to process and generate natural language. This limitation cannot

<sup>&</sup>lt;sup>20</sup> See D. Partridge, <u>Artificial Intelligence</u>: <u>Applications in the Future of Software Engineering</u> (Chichester: Ellis Horwood, 1986) 57.

<sup>&</sup>lt;sup>21</sup> As Johnson states (52), "if the patient had said 'My wxyz has az37,' Eliza would have been unfazed, mindlessly recycling the nonsense."

be discussed in further detail in this thesis but it is important to keep it in mind particularly when the topic of natural language parsers is discussed in Section 1.7. We shall now provide the reader with a couple of examples of early work in CALL.

1.6 EARLY WORK IN CALL

The development of computer technology and the application of computers in linguistics (natural language processing, machine translation, etc.) eventually led to the introduction of computers in language teaching. In the late 1960's and early 1970's, a CALL project carried out at Stanford University (henceforth called the Stanford Project), for example, resulted in a computer-based introductory Russian course that was set up like a conventional Russian course except that it was self-instructional for the most part. The student was asked to answer questions in Russian, inflect words and perform various types of transformational exercises. There were remedial branching exercises<sup>22</sup> (where the feedback was dependent on the individual errors), both Roman and Cyrillic script type fonts, and progress reports were stored in the computer's memory. According to Ahmad [1985], Van Campen, the supervisor of the Stanford Project, believes that computers can improve the effectiveness of beginning language

<sup>&</sup>lt;sup>22</sup> See Section 1.4, footnote 10.

courses that emphasize the written language. This project led to the development of numerous other CALL projects at Stanford.

At the University of Illinois, the Programmed Logic for Automated Teaching Operations System (PLATO) was developed with the aid of the Control Data Corporation "with a view to servicing the needs of computer-based education across the range of disciplines taught at a conventional university.<sup>23</sup>" Curtin et al. [1972] were among the first instructors to take advantage of the PLATO system for language teaching. They wanted to teach the student how to translate written Russian<sup>24</sup> into English. Curtin's course had three sections: vocabulary drill, brief grammar explanations and drills, and translation tests upon completion of a section. The program incorporated a 'Sentence Judger' that looked for synonyms, misspellings and variable word order. Although the PLATO system still exists and has kept up with technological advances (such as hypertext and videodisc), it is expensive to use.

<sup>&</sup>lt;sup>23</sup> Khurshid Ahmad, Greville Corbett, Margaret Rogers and Roland Sussex, <u>Language Learning and Language Teaching</u> (Cambridge; New York: Cambridge University Press, 1985) 30.

<sup>&</sup>lt;sup>24</sup> Both the Stanford Project and Curtin's program have been chosen as early examples of CALL to show that thirdgeneration computers already had the capacity to deal with such language specific problems as different alphabets and foreign accents.

It is worth noting that most of the CALL programs developed during the late 1960's and the early 1970's (i.e. the period of third-generation computers) were directed to the needs of the beginning foreign language student. These programs were examples of computerized workbooks (i.e. they contained drill and practice exercises), and therefore concentrated on the written language, failing to deal with

other communicative skills.

Before concluding Part 1 of this thesis with an overview of present-day CALL, it should be noted that the following problems<sup>25</sup> (among others) played a role in deterring instructors from introducing CALL:

- a) the cost of time-sharing systems,
- b) the limited availability of terminals,
- c) the lack of peer support, and
- d) the expense of renting/repairing terminals designed to handle non-Western alphabets.

1.7 RECENT DEVELOPMENTS IN CALL

CALL is no longer a term that refers only to simple tutorial and/or drill and practice exercises. As of the late 1970's and the early 1980's, CALL exercises also began to focus on the communicative skills, instruction at the sentence

<sup>&</sup>lt;sup>25</sup> See Solveig Olsen, "Foreign Language Departments and Computer-Assisted Instruction: A Survey" <u>Modern Language</u> <u>Journal</u> 64:341-9, 1980. According to Olsen's survey, these problems had recently begun to dissipate.

level (rather than individual words), and interactive learning.<sup>26</sup>

An example of an early form of 'new generation'  $CALL^{21}$ is TICCIT (<u>I</u>ime-Shared <u>I</u>nteractive <u>C</u>omputer-<u>C</u>ontrolled <u>I</u>nformation <u>T</u>elevision) developed in the late 1970's at Brigham Young University with the specific aim of providing interactive instruction<sup>28</sup> (Jones 13). TICCIT was used from 1979 onwards to develop CALL exercises for German courses. As is the case with many CALL programs available today, TICCIT is a learner-controlled system: the student can run any one of several parts of a lesson, move from screen to screen, and/or leave the lesson to return to the main menu<sup>29</sup> at any time. There are four parts in a TICCIT lesson: Objective, Rule, Example and Practice. Once again, the student controls where he/she wishes to start after having determined what the

<sup>26</sup> See Last [1989] 139, Jones [1985] 13-26.

<sup>27</sup> See Rex Last, <u>Artificial Intelligent Techniques in</u> <u>Language Learning</u> (Chichester: Ellis Horwood Limited, 1989) 139. 'New generation' CALL is a term taken from Last.

<sup>28</sup> Although there is no definition of *interactive instruction* given, it should be noted that the term refers to the interaction that occurs between the computer and the student. When the student answers a question, the computer responds by stating that the student's answer is correct or by incorporating error analysis (called 'The Advisor' in the TICCIT system) if the answer is incorrect.

<sup>29</sup> A menu is a list, usually by theme, of the lessons which the student can opt to try.

objective of the lesson is. In conclusion, it should be stressed that the TICCIT system incorporates the following important features that are commonly available in 'new generation' CALL programs:

- a) it is learner-controlled, and
- b) it provides error analysis.<sup>30</sup>

To look at the focus of 'new generation' CALL (i.e. communicative skills, sentence level instruction), it is important to note that its roots come from AI research. <u>Intelligent Computer-Assisted Language Instruction (ICALI)</u>, or 'new generation' CALL divides the role of the computer into four segments<sup>31</sup>, the first two interrelated:

- a) the role of tutor (<u>Intelligent Tutoring Systems</u> [ITS]),
- b) the role of corrector (error analysis),
- c) the role of creating hypothetical situations(microworlds), and

<sup>31</sup> See Alan Bailin, "CALI, Artificial Intelligence, and the Representation of Social Roles" <u>CALL: Papers and Reports</u> (La Jolla, California: Athelstan Publications, 1990) 175.

<sup>&</sup>lt;sup>30</sup> See S. Pit Corder, <u>Error Analysis and Interlanguage</u> (Oxford: Oxford University Press, 1981) 35. According to Corder, "the diagnosis and treatment of errors is one of the fundamental skills of the teacher." This function is also an important part of a CALL program since one of the strongest benefits of CALL is immediate feedback which a program cannot give without at least determining if an error has been made.

d) the role of responding to questions (expert system<sup>32</sup>).

The first two roles, that of tutor and corrector, are handled differently in 'new generation' CALL programs that incorporate natural language parsers. These parsers are programmed with a 'start-up' knowledge and learn from experience<sup>33</sup> (Last [1986]). An example of a natural language parser used to help the student of German is NACH-HILFE.<sup>34</sup> This particular parser is used to help the student of German write compositions. In brief, the NACH-HILFE parser accepts the student's input, analyses single words to determine the syntactic function of each word, and even decides if the word

<sup>&</sup>lt;sup>32</sup> See Gerald Gazdar, and Chris Mellish, <u>Natural</u> <u>Language Processing in LISP: An Introduction to Computational</u> <u>Linguistics</u> (Wokingham, England; Reading, Massachusetts: Addison-Wesley Publications, 1989) 16-17. "An expert system is a computer program that offers advice. It may assist or even replace a human expert." Newer expert systems, however, are also expected to be able to explain how they arrived at the advice given. These explanations may have a great educational value.

<sup>&</sup>lt;sup>33</sup> By 'learn from experience', we mean that the computer program remembers, for example, new vocabulary that the student uses and errors made by the student using grammatical constructions that the computer program was not originally programmed to handle.

<sup>&</sup>lt;sup>34</sup> For a description of NACH-HILFE, see Timothy Pope, "Language Parsing with Special Reference to German" <u>CALL:</u> <u>Papers and Reports</u> (La Jolla, California: Athelstan Publications, 1990) 175.

order is correct<sup>35</sup>. It would be impossible to determine the weaknesses of the NACH-HILFE parser without dealing with it personally, but NACH-HILFE does serve as a CALL example of AI's intelligent tutoring systems which had originally been seen as aids in areas outside of language learning<sup>36</sup>.

The third role of 'new generation' CALL programs, that of creator of hypothetical situations, is quite common at the present time. Hypothetical situations are used to create programs that simulate visits to foreign countries,<sup>37</sup> or are simple adventure games, sometimes called "interactive fiction"<sup>38</sup>. Within the microworld created by the author, the computer can guide the student through the language learning process on a small scale. An example of a type of microworld used to teach German is Johnson's GIBBER (<u>German Interactive</u>

 $<sup>^{35}</sup>$  For some examples of errors that NACH-HILFE is programmed to correct, see ibid, 195-7.

<sup>&</sup>lt;sup>36</sup> See Henry C. Mishkoff, <u>Understanding Artificial</u> <u>Intelligence</u> (Dallas, Texas: Texas Instruments Incorporated, 1985). Some well-known examples of intelligent tutoring systems are: BUDDY (math), GUIDON (medical diagnosis), SCHOLAR (South American geography), and SOPHIE (electronics lab simulator).

<sup>&</sup>lt;sup>37</sup> Examples: *Montevidisco* (Brigham Young University) or *Ville Allegne* (University of Nebraska).

<sup>&</sup>lt;sup>38</sup> Some commercial examples are: OZ, Talespin, Mystery House, Deadline, La Banquière...

<u>Binding Based Enquiry and Research</u>)<sup>39</sup>. GIBBER is programmed to cope with a restricted subset of utterances and is capable of dealing with both the syntactic correctness and the semantic plausibility of a student's response.

Finally, the fourth role of 'new generation' CALL programs, that of the expert, is similar to the third role just discussed since the computer program is an expert in the small microworld that the author creates. An example of a 'new generation' CALL program that is an expert is Last's ([1989] 93-4) own German Strong Verbs Program, or The German Sentence Builder program (ibid, 48). The latter program works at the sentence level but disregards typing mistakes since its objective is to make the student create syntactically correct sentences by arranging words that are given to him/her.

In summary, it can be stated that CALL programs developed at present are no longer restricted to the earlier examples of computerized workbooks. Instructors are learning how to use the computer's special features (such as hypertext and colour) to create a new tool to be used in the first and second/foreign language classroom. AI research has increased the versatility of the application of the computer as a learning/teaching aid and, as a final note, the development of

<sup>&</sup>lt;sup>39</sup> See Rex Last, <u>Artificial Intelligence Techniques in</u> <u>Language Learning</u> (Chichester: Ellis Horwood Limited, 1989) 134.

computer-controlled cassette recorders (e.g. TCCR by Tandberg) has opened the door to the student being exposed to authentic samples of the language being learned while working on a computer exercise<sup>40</sup>.

<sup>&</sup>lt;sup>40</sup> See Bernard Rochet, "Training Non-Native Speech Contrasts on the Macintosh" <u>CALL: Papers and Reports</u> (La Jolla, California: Athelstan Publications, 1990) 119-26.

#### PART 2: THE PILOT STUDY

## 2.1 INTRODUCTION

In this section an attempt will be made to deal with the main reasons for choosing CALL (2.2) and choosing an area of language learning appropriate for the introduction of a CALL module (2.3). Following an analysis of how computer programs deal with grammar problems (2.4), there will be an explanation of why, for the purpose of this project, McMaster's authoring system, mcBOOKmaster, was selected (2.5). At this point, the reasons for choosing German prepositional phrases as the grammatical topic to be used for the pilot study (2.6a) will be given, followed by a brief analysis of two textbook presentations that influenced the pilot study's computer presentation of this grammatical topic (2.6b). In conclusion, an interpretation of the results of the pilot study (2.8) will follow an overview of the preparations for the pilot study (2.7).

2.2 REASONS FOR CONSIDERING CALL

As noted before (see Section 1.2), people learn foreign languages by a variety of methods (e.g. visual, audio) and for a variety of purposes (e.g. integrative,

instrumental<sup>41</sup>). Computers, as teaching/learning aids, may thus have various individual applications depending on individual needs and there can, therefore, be no one simple answer to the question about reasons for considering CALL. However, an attempt will be made to analyse reasons for integrating CALL into a course syllabus by looking specifically at foreign language courses for beginners at the university level.

There are three major reasons, the first two interrelated, for introducing computers to language instruction at the university level:

a) Upon entering a beginners' foreign language course, students have various levels of language/linguistic knowledge. Some students have been exposed to the linguistic terminology (e.g. terms such as *subject*, *direct object*) they need in order to be able to efficiently follow the language instruction as opposed to others who have little or no linguistic background. There is also a vast difference in prior language knowledge. Some students have already taken courses in the foreign language or have already been to a foreign country where

<sup>&</sup>lt;sup>41</sup> William Littlewood, <u>Foreign and Second Language</u> <u>Learning</u> (Great Britain: Cambridge University Press, 1984) 57. According to Littlewood, *integrative motivation* refers to a learner who is interested in the second language community, whereas *instrumental motivation* implies that the learner can use the language to further other goals (e.g. career).

the language is spoken, in contrast to others who have never dealt with the language in communication. The introduction of CALL can assist the instructor in meeting individual needs by providing each student with the opportunity for the practice he/she needs with unfamiliar linguistic concepts and with the language itself without frustrating a more knowledgeable student who can begin with more advanced concepts.

- In the majority of beginners' foreign language classes, b) the class size is too large to focus adequately on individual needs. In larger groups, it is impossible to give each student the desired practice time on specific topics. CALL, incorporated correctly, is one of the ways the instructor can split a large group into smaller sections based on individual strengths and weaknesses. This should of course lead to a general improvement in the language abilities of each student. In addition, the introduction of CALL also increases the number of contact hours that the student has with the foreign language resulting in a better opportunity to improve vocabulary acquisition, grammatical knowledge, etc.
- c) According to Last [1984], the focus of language learning in the classroom is usually on communicative competence and role playing rather than grammar and compositional

skills. As seen in Part 1, CALL has been used effectively for years for simple grammar and vocabulary drills. The instructor can comfortably spend less and less time on formal language instruction and thus devote more time to actual conversational activities. If used properly, CALL also gives the instructor detailed information on each student's strengths and weaknesses. According to Kenning [1983], this information should help determine weaknesses and strengths of the overall method of instruction. CALL can thus be an invaluable aid both to the instructor and the student alike. However, to use it efficiently, it is important to choose the types of skills that are most effectively taught with CALL.

2.3 PROBLEMS TAUGHT WITH CALL

There are four types of language skills that are usually taught in foreign language classes<sup>42</sup>:

- a) oral competence
- b) aural comprehension
- c) reading comprehension, and
- d) written competence.

To date, the first two areas are taught most effectively in the classroom/language lab environment simply because it

<sup>&</sup>lt;sup>42</sup> In some cases, the foreign language is being taught for specific purposes and thus the courses concentrate on selected skills (e.g. "Reading Scientific German", "Conversational German").

provides an atmosphere that is closer to a natural communicative situation. In addition, it is normally not financially feasible for most universities to acquire the advanced technologies available, although recent developments in AI show that it is possible to programme computers to simulate conversations, etc. (see ELIZA, Section 1.5).

Thus, reading comprehension and written competence are the areas to be considered as possibly well-suited for CALL at the present time, especially for anyone with modest financial resources at his/her disposal. However, not all aspects of reading and writing a foreign language are equally suitable for CALL. General reading comprehension should improve from day one since most computer exercises must be understood to be completed. If the student does not understand the exercises, he/she will be unable to execute them correctly and the program will immediately indicate this. Also, longer texts may be integrated into CALL programs accompanied by various comprehension exercises, but the student will need more reading practice than the computer exercises can provide.<sup>43</sup>

For the beginning language student, the emphasis in written communication is usually on grammatically correct

<sup>&</sup>lt;sup>43</sup> See Glyn Holmes, "CCALL: Will It Survive?", <u>CALL:</u> <u>Papers and Reports</u> (La Jolla, California: Athelstan Publications, 1990) 1-8. Holmes suggests that the role of CALL will always be limited since *personal interaction* in the classroom is more important than any teaching/learning medium that is used.

script and proper spelling although the student is strongly encouraged to develop a style appropriate for the language in which he/she is writing. For a computer program to teach the student style, it would have to be equipped with an almost infinite list of stylistic and pragmatic rules explaining how sentences are structured to relate different meanings to To accomplish this, the instructor different situations. would have to use an expert system (c.f. Section 1.7) but, is not financially feasible for once again, it most universities to obtain an expert system for language learning.

Therefore, we consider grammatical competence in general and an overall improvement in reading comprehension as the aspects of language learning best suited for CALL at the present time. However, rapid technological developments in computer software and hardware will probably change the situation in the near future. As soon as the combination of video films and computer aided instruction becomes available for language teaching purposes, it may become possible to simulate communicative situations in the computer lab and thus integrate the teaching of communicative skills into CALL. For the purpose of this thesis, it was not possible to explore this type of instructional media and, consequently, we had to concentrate on grammatical competence.

We shall now discuss the methods for selecting grammatical problems to be covered by the CALL module. The following two general criteria should be considered:

- a) Because of the amount of time involved in the preparation of computer-aided course material, the grammar points to be taught should be those that usually pose a problem for many or possibly most students. In German courses for beginners, this includes inflection of nouns, pronouns, adjectives and articles for case, number and gender; choice of case in prepositional phrases, word order in subordinate clauses, etc.
- b) The exercises should deal with problematic points where there would be a limited number of possible correct answers, and it is easier to foresee errors (i.e. provide appropriate feedback by error analysis). This means that grammar problems in general, particularly those that involve function<sup>44</sup> words are the most obvious target for a computer exercise because computer programs lose much

<sup>&</sup>lt;sup>44</sup> See Adrian Akmajian, Richard A. Demers, and Robert M. Harnish, <u>Linguistics: An Introduction to Language and</u> <u>Communication</u> (Cambridge, Massachusetts: The MIT Press, 1985) 522. A function word is "a member of a small class of words that does not easily permit new items to be added" (e.g. articles, prepositions, conjunctions, auxiliary verbs). They usually "indicate some grammatical relation rather than referring to something outside of language."
of their potential as teaching/learning aids if error analysis is not incorporated.<sup>45</sup>

2.4 THE WAYS COMPUTER PROGRAMS DEAL WITH GRAMMAR

As it was already suggested in the programmed learning methodology, the computer program, like any material designed entirely or partially for self-instruction, should be prepared in such a way that it fulfils some of the basic functions of the instructor in the classroom. These would include:

- a) presenting the material,
- b) checking the student's understanding by evaluating his/her answers,
- c) providing the correct answer when requested,
- d) giving the student feedback to errors; and
- e) evaluating the student's progress.

In a CALL module, any new grammatical material could be presented in full detail if it is a topic not covered in the classroom, or at least summarized if it is a topic that the student has been taught. A CALL program may allow the instructor to present and/or summarize a grammatical topic in, for example, the form of the so-called "tutorial screens" and/or readily available flash cards and/or reference grammar file. Even if the instructor does not wish to present or

<sup>&</sup>lt;sup>45</sup> See Glyn Holmes, "From There to Here: Seven Years of Computer-Assisted Language Learning" <u>Computer-Aided</u> <u>Instruction in the Humanities</u> (New York: The Modern Language Association of America, 1985) 33.

summarize a grammatical topic, a reference grammar file should be available for the student to consult if he/she is having difficulties with something other than the topic of the current lesson. To avoid lexical comprehension problems, there should also be a bilingual dictionary available where the students could find all words used in the exercises. Hints and correct answers should be on hand in order to prevent the student from becoming frustrated with the exercise. The program should be able to evaluate the student's answers and provide feedback that ideally would be individualized as it was for example in the branching type of exercises of the programmed instruction methodology (see Section 1.4). The program should even be able to give the student, as well as the instructor, an evaluation of the student's progress (i.e. a summary of the number of questions attempted, the number of correct responses given, etc.).

Keeping these criteria in mind, we shall now explain the choice of the mcBOOKmaster authoring system to create the computer exercises used for the pilot study discussed in this thesis.

#### 2.5 THE CHOICE OF mcBOOKmaster

McBOOKmaster, the authoring system most widely used at McMaster for second/foreign language instruction, was developed by Joanna M. Johnson and Samuel D. Cioran for the purpose of introducing and promoting CALL at this university.

It has been used in language classes at McMaster University since September 1987. At the present time, computer workbooks written with the mcBOOKmaster authoring system are being used in second/foreign-language instruction by about 700 students. There are computer workbooks available for first-year beginning students learning French, German, Italian, Russian and Spanish. There are also workbooks for intermediate students learning French (workbooks for both first-year and above courses) and Russian (a workbook used in the second-year course which is a continuation of the first-year beginners' course). Work is also being done on computer workbooks for both the first-year intermediate German course and an upperyear German translation course.

The pilot study was a 'cross-sectional' study<sup>46</sup> that would involve one class of first-year intermediate German students, and the time available for the creation of CALL exercises was extremely limited. Thus, it was necessary to find the most efficient and economical way to create computer lessons, a way that did not involve learning a complex code or buying an expensive authoring system. Because of the lack of time and programming experience, it was decided that it would

<sup>&</sup>lt;sup>46</sup> See William Littlewood, <u>Foreign and Second Language</u> <u>Learning</u> (Great Britain: Cambridge University Press, 1984) 10. A 'cross-sectional' study is done at one point in time, in contrast to a 'longitudinal' study which is done over a period of time.

be counterproductive to make use of a general purpose language like BASIC or Pascal, or an educational programming language like PILOT or EnBASIC. Consequently, an authoring system<sup>47</sup> was the best choice possible.

There are numerous authoring systems<sup>48</sup> for creating computer exercises for second/foreign language courses available on the market. McBOOKmaster, supported by McMaster University Humanities Computational Centre, was an obvious choice for the creation of computer exercises for the pilot study since it was readily available at no extra cost, as well as the fact that both students' and instructors' reactions to mcBOOKmaster had already been seen as positive in general. In addition, the author of this thesis had had adequate experience with the mcBOOKmaster authoring system, both as a beginning Russian student working through computer exercises and as a teaching assistant of first-year beginners' German viewing the benefits of CALL. Finally, the authors of

<sup>&</sup>lt;sup>47</sup> See Gerald R. Culley, "From Mainframes to Micros: Developing Courseware" <u>Computer-Aided Instruction in the</u> <u>Humanities</u> (New York: The Modern Language Association of America, 1985) 136-7: An authoring system is the easiest approach to use for creating computer exercises since the author needs no programming knowledge. An authoring system is the least time-consuming yet least flexible approach for creating computer exercises.

<sup>&</sup>lt;sup>48</sup> Examples: GERAD (<u>GER</u>man <u>AD</u>jective [Surrey; Ahmad]), TES/T [Dundee; R. Last], GAPFIL [East Anglia, M. Carr], Callgen [Calgary], CLEF [Calgary, Guelph and Western], MEG, PROMPT, COMET, MacLang and many others.

mcBOOKmaster were readily available to answer any questions or solve any problems that might develop.

Although this thesis does not attempt to compare mcBOOKmaster to any other commercially available authoring system, it should be noted that it proved to be an excellent tool for the creation of computer-assisted language exercises for the pilot study presented in this thesis.

2.6 THE GRAMMATICAL PROBLEM CHOSEN

After careful consultation, it was decided that the German prepositional phrase would be the grammatical topic to be used in the pilot study to test the advantages of CALL. The reasons for this choice are given in the following sections:

- a) In the first section, a linguistic interpretation of the difficulties surrounding the German prepositional phrase is provided. This interpretation is given from the English speaker's point of view.
- b) In the second section, a comparison of the computer and a more-traditional medium of instruction will be provided. For this purpose, it will be shown how two textbook presentations of the German prepositional phrase influenced the computer-assisted presentation prepared for the pilot study.

#### 2.6a A LINGUISTIC INTERPRETATION

A comparative linguistic analysis of the German prepositional phrase may be useful in order to supply a broader understanding of the elements that create difficulties for the English speaking student. As a point of departure, a comparison of the elements that make up a German and an English prepositional phrase will be given. Let us compare the following examples:

The ball flew:	Der Ball flog:
through the red door.	durch <i>die</i> rot <i>e</i> Tür.
through the window.	durch <i>das</i> Fenster.
into the kitchen.	in <i>die</i> Küche.
out of the room.	aus <i>dem</i> Zimmer.

Both the English and the German prepositional phrases consist of preposition + modifiers (i.e. articles, adjectives, pronouns), + noun, but the similarities end there. The modifiers in an English prepositional phrase are invariable. In contrast, the modifiers in a German prepositional phrase change morphologically according to:

- a) the number of the noun they modify,
- b) the gender of the noun they modify, and
- c) the case that the preposition governs. $^{49}$

<sup>&</sup>lt;sup>49</sup> See Anthony Fox, <u>The Structure of German</u> (Oxford: Clarendon Press, 1990) 118. Both the number and the case of a noun is variable whereas it should be noted that the gender of a noun is intrinsic to the noun itself.

In English and German, there are two grammatical numbers: singular and plural. Both languages show a morphological change in the noun form when it is plural. English nouns usually add the suffix -(e)s in the plural. In contrast German nouns can show any one of the following morphological changes when the noun is plural:

- a) no suffix, but umlaut where possible (all genders):
   die Mutter die Mütter
   der Lehrer die Lehrer (umlaut not possible on the vowels e or i.)
   das Mädchen die Mädchen (the vowel is already umlauted.)
- b) Suffix -e, often with umlaut (all genders):
   die Not die N<u>öte</u>
   der Grund die Gr<u><u>u</u>nd<u>e</u>
   das Haar die Haar<u>e</u>
  </u>
- c) suffix -n or -en without umlaut (all genders):
   die Seite die Seiten
   der Staat die Staaten
   das Auge die Augen
- d) suffix -*er* often with umlaut (masculine or neuter nouns): der Wald - die W<u>ä</u>ld<u>er</u> das Lamm - die L<u>ä</u>mm<u>er</u>
- e) suffix -s, especially on loan words (masculine or neuter nouns): der Balkon - die Balkon<u>s</u> das Radio - die Radio<u>s</u>

<u>Note:</u> These are the five major groups, but there are nouns that do not belong to any of these groups (see Jung 281).

Of course, the problem of determining exactly how a specific noun is morphologically altered when it is made plural is not a problem that exists only in the German prepositional phrase, but it is still a major concern of the student when he/she deals with the German prepositional phrase. It should also be noted that most plural nouns also add an -n suffix when used in the dative case unless the plural form already ends in -n.

In German, the number of a noun is also reflected by the form of its modifiers (adjectives, articles, etc.). This is illustrated in the following example:

The ball flew: Der Ball flog:

(a) through the open window. durch das offene Fenster.

(b) through the open windows. durch *die* offen*en* Fenster. Note that in the German examples, the form of the noun "Fenster" remains the same in the singular and plural (see Group a) of the above table). Consequently, it is the form of the adjective and the article<sup>50</sup> that shows that the noun is plural in sentence (b). In the English phrase, on the other hand, only the noun shows any morphological change. There are only two modifiers left in the English language that still show a change in the number of the noun. These are the demonstrative pronouns: *that, those; this, these*.

<sup>&</sup>lt;sup>50</sup> See Anthony Fox, <u>The Structure of German</u> (Oxford: Clarendon Press, 1990) 114. Fox discusses the ambiguities of the German declension system. At this point, the example "der" is given as a form of the definite article that represents a masculine, nominative, singular noun, but it could also represent a feminine, singular, dative or genitive noun or a plural, genitive noun. There are 24 possible variations of modifiers, but only 6 distinct forms of the definite article. The same problem exists for all modifiers of nouns.

deal with student is prepared to Once the morphological changes to show the number of the noun, he/she must cope with morphological changes to show the gender of the The English language follows a 'natural gender rule' noun. which means that male, living beings are usually masculine; female, living beings are usually feminine; and inanimate objects are usually neuter. However, gender is only shown by pronouns that refer back to nouns (e.g. "John ran because he was late."). The theory of three genders for English nouns is hard to defend morphologically. In reality, only semantic gender exists in the English language. Thus, the boy is masculine, the girl is feminine, while the pen, the book, or the paper must be neuter once you are aware of the fact that each of these nouns refers to inanimate objects.

In German, on the other hand, the existence of grammatical gender is obvious (on the distinction between grammatical and semantic gender, see Curme [1935], Mills [1986], Rogers [1987]). The idea of 'grammatical gender' is troublesome for the majority of English students of German because quite a few nouns are masculine, feminine or neuter for no apparent reason. It is easy for an English student to understand why der Mann is masculine and die Frau is feminine, but the gender category becomes difficult to comprehend when the masculine or feminine gender is assigned to a noun that refers to an inanimate object that has no "inherent" sex.

The 'grammatical gender' problem becomes easier to understand when the student acquires a feel for the morphological and semantic reasons for the assignment of gender. The following 'rules of thumb' are usually listed in German reference grammars to help the student remember why certain German nouns are masculine:

- A. Semantic Reasons:
- a) Male persons: der Mann, der Vater, der Onkel.
- b) Male animals: der Bulle, der Kater, der Löwe.
- c) Days of the week, months, seasons: der Montag, der August, der Sommer.
- d) Points of the compass: der Norden, der Osten, der Westen.
- e) Weather features: der Wind, der Regen.
- f) Types of rocks and soils: der Sand, der Granit, der Basalt.
- B. Morphological Reasons:
- a) nouns ending in -ig, -ling, -ich, -s, -en, and --er: der Pfennig, der Lehrling, der Teppich, der Schnaps, der Garten, der Läufer.
- b) foreign nouns ending in -and, -ant, -är, -ast, -eur, -ent, -ier, -iker, -ismus, -ist, and -or: der Doktorand, der Fabrikant, der Legionär, der Cineast, der Friseur, der Student, der Bankier, der Techniker, der Konservatismus, der Sozialist, der Moderator.

(Hammond 125-6)

There are similar rules for feminine and neuter nouns, but there are exceptions to most of these rules. It is obvious that the above rules for predicting gender are not always useful, but an instructor can use them to promote learning. However, caution is needed in providing the student with semantic or morphological reasons for the assignment of gender because a student must cope with enough problems when learning a new language without being presented problematic supplementary concepts. Lists like those shown above are not suitable for pedagogical grammars<sup>51</sup> and are more often used by the student of linguistics rather that the student of the language itself.

Finally, if the student manages to grasp the idea that number and gender are shown morphologically, and he/she also manages to comprehend the idea of grammatical gender, the problem of case must still be faced. In Modern English, only two out of the four cases of Old English have remained (Wrenn 135). Wrenn calls the nominative, accusative and dative cases the 'common case', and the genitive case is the second case.

The English genitive case, also called the possessive case, can be expressed in two different ways:

- a) the -'s suffix added to an animate or personal noun, or
- b) the use of a prepositional phrase (of + noun).

<sup>&</sup>lt;sup>51</sup> It is interesting to note, however, that pedagogical grammars do often present a simplified version of the morphological/semantic reasons for the assignment of gender: e.g. Charles M. Barrack, and Horst M. Rabura, <u>MOSAIK: Deutsche</u> <u>Grammatik</u>, 2d ed. (New York: Random House, Inc., 1986) 97-102.

Examples:

The boy <i>'s</i> dog.	The roof of the house.
Tanja <i>'s</i> purse.	The size <i>of the box</i> .
Rita <i>'s</i> father.	Parts <i>of speech</i> .
The lion <i>'s</i> cub.	The end <i>of the line</i> .

The -'s of the genitive case is the only morphological sign of the case system left in the English language except for the morphological changes for personal pronouns (e.g. he, him, his). Thus, it is seen once again that German is a problem for an English-speaking student because all four cases are morphologically shown by the modifiers and even by the endings on the noun itself, although the inflection of nouns has been reduced to a difference between the plural and the singular, the -(e)n suffix in the dative plural, and the -(e)s suffix of masculine and neuter nouns in the genitive. In addition there is even a group of nouns called 'N-Nouns' that add an -(e)nsuffix in all cases except the nominative singular (e.g. der Student {Nom., Sing.}, den Student*en* {Acc., Sing.}).

In addition to the regular use of the cases (i.e. to indicate the syntactic function of the noun: accusative = direct object, etc.), each preposition governs either the accusative (bis, durch, für, gegen, ohne, um), dative (aus, außer, bei, mit, nach, seit, von, zu, gegenüber), or genitive case ([an]statt, trotz, während, wegen). Some prepositions (an, auf, hinter, in, neben, über, unter, vor, zwischen) govern both the dative and accusative cases depending on the

environment and function of the prepositional phrase. These dative/accusative prepositions. prepositions. the pose particular problems for the English-speaking student studying German. Although there is a 'rule' that states that the nine dative/accusative prepositions are followed by: a) the dative if there is no change of location; or b) the accusative if there is a change of location, the student still has to deal with numerous idioms that break this 'rule' (e.g. "Ich warte seit zwei Stunden *auf ihn*" = I have been waiting for him for two hours<sup>52</sup>. There is no change of location but warten  $auf^{53}$  is followed by the accusative case.). The English speaking student usually struggles with the concept of prepositions governing case for a long time because the concept of case is foreign to him/her. It seems that the only way he/she can cope with case is to memorize the numerous idioms, and to get a feel for the language.

<sup>&</sup>lt;sup>52</sup> It is worth noting here that there is also a vast lexical difference between German verb/preposition combinations and English ones (e.g. sich interessieren  $f\ddot{u}r$  = to be interested *in*). This contrast may be difficult for a student to comprehend and such difficulties could be the focus of a separate computer lesson file.

<sup>&</sup>lt;sup>53</sup> This expression should not be confused with the separable-prefix verb *aufwarten* (to serve). See Anthony Fox, <u>The Structure of German</u> (Oxford: Clarendon Press, 1990) 162. Fox discusses briefly the origins of German prepositions, thereby suggesting a new way to deal with the use of prepositions by comparing it to that of verbal prefixes.

Modern German did not break from its morphological history as drastically as modern English did since case, number and gender are still shown morphologically. The morphology of modern German is actually closer to that of Old English. This is partly due to the fact that the word order of noun phrases is not as fixed in modern German as it is in modern English, where the position of a nominal phrase clearly indicates its syntactic function (i.e. subject, direct object, etc.) thus making the inflectional endings redundant.

Having provided a comparative linguistic interpretation of the difficulties surrounding the German prepositional phrase, a glimpse of a computer-aided presentation of the problems will be compared to the textbook presentation of the problem.

#### 2.6b INFLUENCES ON THE CREATION OF THE COMPUTER-ASSISTED EXERCISES FOR THE PILOT STUDY

Two textbooks were consulted in the preparation of the computer-aided language explanations used for the pilot study described in this thesis. <u>Mosaik: Deutsche Grammatik<sup>54</sup></u> was chosen because it is one of the most frequently used textbooks for intermediate German courses at the Canadian

<sup>&</sup>lt;sup>54</sup> Charles M. Barrack, and Horst M. Rabura, <u>Mosaik:</u> <u>Deutsche Grammatik</u>, 2d ed. (New York: Random House, Inc., 1986).

college/university level<sup>55</sup>, and <u>A Practical Review of German</u> <u>Grammar<sup>56</sup></u> was chosen because it is the textbook currently being used at McMaster University in a first-year intermediate German language course.<sup>57</sup>

In the first textbook, Mosaik: Deutsche Grammatik, one complete chapter is devoted to a discussion of German prepositional phrases (116-150). First of all, the student is introduced to the prepositions governing the dative and their common contractions (i.e. *zum* = zu dem, *zur* = zu der), concluding the section with four simple exercises (119-25). It takes three pages to introduce these prepositions and a fourth page to introduce the concept of contractions. Then the whole process is repeated for prepositions that govern the accusative (explanations reduced to pages), two and prepositions that govern the dative or accusative (once again three pages including two columns of examples each). Finally, after a brief look at prepositions used in time expressions and prepositions used figuratively (138-40), the student is

<sup>&</sup>lt;sup>55</sup> See Thomas Samulets, and Joan Drabek, "Survey of First- and Second-Year German Language Instruction Textbooks Used at Canadian Universities and Colleges in 1987/88" <u>Canadian Modern Language Review</u> 46:1990, 312-16.

<sup>&</sup>lt;sup>56</sup> Gerda Dippmann, <u>A Practical Review of German Grammar</u> (New York: Macmillan Publishing Company, 1987).

 $<sup>^{57}</sup>$  In fact, the students who participated in the pilot study were using the Dippmann textbook.

introduced to the last group of prepositions, those governing the genitive case.

Although the authors of Mosaik: Deutsche Grammatik tried to give the student a concise explanation of German prepositional phrases (i.e. devoting just one chapter to prepositional phrases), they fail to provide a clear picture of how many groups of prepositions exist since there is no summary page and/or exercise dealing with all four groups of prepositions. In fact, the authors of this textbook assume that the student understands what a preposition and a prepositional phrase is since the introductory statement is: "When using prepositions in German, two things must be taken into account: (1) the proper case to use with the object of the preposition and (2) the proper preposition to use in a given situation (119)."<sup>58</sup> The authors compound the problems seen in the introductory statement by stating: "The dative case is used in most prepositional phrases.(119)" This generalization, although possibly defendable, could provoke the student of German to guess that the dative case follows für, for example, without trying to learn that für is followed by the accusative case. Finally, there is a problem in the

<sup>&</sup>lt;sup>58</sup> Besides not explaining what a preposition is, the authors assume that the student is already familiar with the term object of the preposition. This assumption could lead to complications for the instructor who might have to explain the term to some but not necessarily all of the students in a beginners' first-year course (see Section 2.2).

physical layout of the explanations/examples used in <u>Mosaik</u>: <u>Deutsche Grammatik</u> because it is difficult for the student to look up a specific preposition and its examples since the authors chose to use *italics* rather than **bold** and/or CAPITALS and/or <u>underlining</u> to emphasize the prepositions or prepositional phrases.

In the second textbook, A Practical Review of German Grammar (Dippmann), some of the problems seen in the presentation used in Mosaik: Deutsche Grammatik have been solved. The student is immediately informed that four groups of prepositions exist (121), and he/she is thankfully given a summary of the common prepositions and their basic meanings (136). The physical presentation used in this textbook is also better since bold is used to emphasize the preposition and the prepositional phrase in each example. The pages dealing with German prepositions do not look overpacked. As for the introductory explanation, the author actually acknowledges the fact that the student may not know what a preposition or a prepositional phrase is. Thus, the student is given English examples of prepositional phrases before being introduced to German prepositional phrases.

In order to prepare the explanations given in the computer-aided tutorials used for the pilot study, consideration was given to the benefits and limitations of the presentations given in both of these textbooks. First of all,

the student is given a definition of prepositions and prepositional phrases (see Screen 1, Appendix 1). Then, he/she is introduced to the concept of prepositions being followed by a specific case (Screen 2, Appendix 1). Finally, the student is introduced to three of the four groups of prepositions (using <u>colour</u> as well as capital letters and underlining to emphasize the prepositional phrases). To avoid compressing information too much, a second computer lesson file was created in order to introduce prepositions that govern both the dative and accusative case.

It is hoped that the description and brief analysis of the presentation used in <u>Mosaik: Deutsche Grammatik</u> and <u>A</u> <u>Practical Review of German Grammar</u> will help to explain why the two computer lesson files used in the pilot study were set up as seen in Appendix 1 and 2.

2.7 PREPARATIONS FOR THE PILOT STUDY:

2.7a GENERAL SET-UP

For the purpose of the pilot study, one first-year class of students learning German was split up into halves:

one half represents the control<sup>59</sup> group (9 students) and the other half is the experimental group (9 students).

To start the pilot study, the experimental group was asked to complete the two computer lesson files that deal with German prepositional phrases during a one-hour class, whereas the control group was asked to independently complete two written workbooks which were identical to the computer lesson files (excluding the hints, available answers, reference grammar and dictionary) during the same one-hour class. In order to be fair to the control group, the students in the control group were allowed to use any reference grammar or dictionary while completing the written workbooks. Thus, the variable factors between the two groups were reduced to the availability of hints, answers and immediate feedback for the experimental group. Both groups were told that they would be asked to complete a test based on the work done during the one-hour period, as well as an evaluation of the work done. A more detailed description of the work required by both groups of students follows.

<sup>&</sup>lt;sup>59</sup> For a definition of control and experimental groups, see Renzo Titone, and Marcel Danesi, <u>Applied</u> <u>Psycholinguistics: An Introduction to the Psychology of</u> <u>Language Learning</u> (Toronto: University of Toronto Press, 1985) 163. For the purpose of this pilot study, the *control* group refers to the students working in the classroom and the *experimental* group refers to those who worked in the computer lab.

2.7b PREPARATION OF THE CALL MATERIALS

As it was noted above, two lesson files have been prepared. At the beginning of the first lesson file, entitled PREP1, a brief definition of prepositions is given, followed by examples, provided in English and translated into German, of the use of prepositional phrases. Then, the computer lesson file is divided into three sections:

- a) prepositions that govern the accusative case,
- b) prepositions that govern the dative case, and
- c) prepositions that govern the genitive case.

In order to get a clearer image of the steps the student is required to follow, let us consider the following pages of the lesson file that deal with prepositions that govern the accusative case:

#### ILLUSTRATION 1

Screen GERMAN	3 GRAMMAR	REVIEW	PAGE 3
	A. PREPOSITIONS WITH	THE ACCUSAT	IVE
The fo accusa	llowing prepositions are tive case:	always foll	owed by the
bis	(to, until, up to)	ohne	(without)
durch	(through, by means of)	um	(about, around)
für	(for)	wider	(against)
gegen	(against)		

.

Screen 4 GERMAN	GRAMMAR F	REVIEW	PAGE 4
EXAMPLES:			
BIS: There after	usually isn't bis:	an article (e.g.	der, ein)
Er hat bis o gewartet.	drei Uhr	He waited unti o'clock.	1 three
Bis is oft determines	en used with a the case of the	another preposi following noun (	tion which or pronoun:
Sie ging nu	r bis zur Tür.	She walked onl as the door.	y as far
DURCH: Not def	e that durch ca inite article d	n be contracted as.	with the
Er ist sch (durchs) Ziı	nell durch das mmer gelaufen.	s He ran quick the room.	ly through
Du kannst d meinen Brude	ie Karten durch er bekommen.	You can get th through my bro	e tickets ther.

Screen 5 GERMAN GRAMMAR REVIEW PAGE 5 \_\_\_\_\_ FÜR: Note that für can be contracted with the definite article das as seen in the example below. Ich kaufe ein Hemd für das I am buying a shirt (fürs) arme Kind. for the poor child. Diese Rosen sind für These roses are for my husband. meinen Mann. GEGEN: Was hast du gegen deinen What do you have against neuen Professor? your new professor? Warum bist du gegen diese Why are you against this Idee? idea? **ILLUSTRATION 4** Screen 6 GERMAN GRAMMAR REVIEW PAGE 6 OHNE : Ohne Brille kann ich I can't read without nicht lesen. glasses. Gehst du ohne deinen Are you going to the show Bruder ins Kino? without your brother? UM: Er läuft jeden Tag zehnmal He runs around the um den Block. ten times every day. Um wieviel Uhr beginnt At what time does the diese Vorlesung? Class begin? WIDER: Wider appears mostly in certain idiomatic expressions. Er tat es wider seinen Willen. He did it against his wi11.

Scr GER	een 7 MAN		GRAMMAF	REVIE	EW		PAG	E 7
Übu	ing 1:	Ergän durch Ergän	zen Sie di , für, geg zen Sie a	e rich Jen, ol Juch di	ntige P nne, um e richt	räposit oder w tigen Er	ion: vider. ndunge	bis, m.
1.	Die H	(inder	gehen sam spazierer	nstags ).	<u></u>	_ d W	ald	
2.	——"Gü nicht	inther ts	ist ein E ihn."	sel!"	"Wi	rklich?	Ich	habe
3.	Ich j	ogge j	eden Morg	en zeh	nmal	d_	в1	ock.
4.	Freur	<u>    w_   </u> nd?	kaufst di	u dies	e Rosen	?	dei	in
5.	"Is sind	st Clau	ıdia mit e _ sie auss	uch au Jegango	sgegang en."	gen?" '	'Nein,	wir
6.	"На "Ја,	t Mart aber	in sein Re er hat es	ferat	fertig _ sein_	geschri Will	eben?' en ge	" tan.
7.	Er bl will	eibt _ er	näcł d	nst Schwa	Woche rzwald	in Münc wanderr	hen. ).	Dann
							_	

(See Appendix 1 and 2 for a complete listing of both computer lesson files.)

As shown above, the student is introduced to the prepositions, given German examples (translated) of the use of each preposition, and asked to complete an exercise by filling in the appropriate preposition and the correct case endings. The same procedure is followed to introduce the student to the dative and then the genitive prepositions. Finally, the student is asked to do a more difficult exercise that combines all three groups of prepositions.

In the second computer lesson file, entitled PREP2, the student is introduced to the prepositions that govern both the dative and the accusative cases. The following "screens" of the computer lesson file will provide an overview:

#### **ILLUSTRATION 6**

Scre GERN	een 1 MAN	GRAMMAI	R REVIEW	PAGE 1
Α.	PREPOSITIONS N	WITH THE	DATIVE OR A	CCUSATIVE
The	following prep	ositions	pose a part	icular challenge
beca	ause they may b	e followe	d by either	the accusative
ort	the dative case	e:		

an	(at, on, to)	neben	(beside)
auf	(on)	über	(over, about)
hinter	(behind)	unter	(under)
in	(in, into)	vor	(before, in front of)

zwischen (between, amongst)

Screen 2

GERMAN	GRAMMAR	REVIEW	PAGE 2

These prepositions are followed by the accusative case if the verb indicates change from one place or situation to another. The accusative answers the question WOHIN? - Where? To what place?

These prepositions are followed by the dative case if the verb does NOT indicate change from one place or situation to another. The dative answers the question WO? -Where? In what place?

Note the difference between the use of the accusative and the dative case in the following examples:

Screen 3 GERMAN	GRAMMAR REV	IEW PAGE 3
ACCUSATIVE:		DATIVE: <sup>60</sup>
AN: Notice contra	that an das contra cts to am.	cts to ans and an dem
Er geht ans He is going	Fenster. to the window.	Er steht am Fenster. He is standing at the window.
AUF:		
Sie legt das Tisch. She puts the	s Buch auf den e book on the desk.	Das Buch liegt auf dem Tisch. The book is on the desk.
HINTER:		
Stell den Pa den Tisch! Put the was	apierkorb hinter te basket	Der Papierkorb steht hinter dem Tisch. The waste basket is

.

behind the desk.

behind the desk.

<sup>&</sup>lt;sup>60</sup> This shows how all the dative/accusative prepositions are introduced.

Scr GER	een 6 MAN	GRAMMAR	REVIEW	PAGE 6
Übu	ing 1: <sup>61</sup> Erg aut od ri	jänzen Sie die f, hinter, in, er zwischen. chtigen Endung	richtige P neben, üb Ergänzen S gen.	räposition: an, er, unter, vor ie auch die
1.	Ich setzt	ce mich	d S <sup>.</sup>	tuhl.
2.	Das Buch	liegt	d Ti:	sch.
3.	Jeden Sam bleiben b	stag gehen wir Dis zwei Uhr mo	rgens	d Disco. Wir d Disco.
4. ILLUSTRATIO	Während o und mein <u>DN 10</u>	des Films hat Schwester	mein Freun gesessen.	d mir
Scr GER	een 8 RMAN	GRAMMAR	REVIEW	PAGE 8
UDU Be Kä Kä	ing 2:55 B E eispiel: onnen/du/de annst du d	llden Sie Satz lementen. er Teppich/vor en Teppich vor	e aus den /die Couch, ~ die Couch	gegebenen /legen? legen?
1.	Die Serv <sup>.</sup> Tisch.	iette/fallen (	perfect te	nse)/unter/der
2.	Neben/da	s Bett/stehen/	ein Nachtt	isch.
3.	Viele Le	ute/stehen/vor	/das Haus.	
4.	Mein Brud Biologie	er/studieren/a	an∕die Uni∨	ersität Tübingen
61	This exer	cise is contin	nued: see	Appendix 2.
62	The exerc	ise is continu	ued: see A	ppendix 2.

Screen	10			
GERMAN	GRAMMAR	REVIEW	PAGE	10
	·			

Übung 3:<sup>63</sup> A. Ergänzen Sie die Endungen oder den bestimmten Artikel.

Situation: Claudia und Martin haben neue Möbel für ihr Wohnzimmer gekauft. Die Möbel sind gerade angekommen, und Claudia will sie ins Wohnzimmer stellen, aber heute ist Samstag und Martin hat keine Lust, ihr zu helfen.

# Claudia: Hilf mir, Martin. Ich will die Couch neben dies\_\_\_ Fenster stellen.

- Martin: Muß das gerade jetzt sein? Ich lese doch einen interessanten Artikel in \_\_\_\_\_ Zeitung.
- Claudia: Du liest ihn seit einer Stunde, und ich habe schon alle Bilder an dies\_\_\_\_ Wand gehängt.

 $<sup>^{63}</sup>$  The exercise is continued: see Appendix 2.

GER	RMAN GRAMMAR REVIEW PAGE
Übu	ang 3: <sup>64</sup> B. Beantworten Sie die folgenden Fragen.
	Note: The answers can be found in the precedi exercise.
1.	Wohin will Claudia die Couch stellen?
	Sie will die Couch
2.	Was macht Martin?
	Er liest einen interessanten Artikel
2	We staht die Couch?
з.	No stent die couch:
4.	Wohin soll Martin den Teppich legen?
	Er soll ihn
5.	Martin kann den Teppich nicht finden. Wo ist d
	Teppich?
	Er ist

 $^{\rm 64}$  This exercise is also continued: see Appendix 2.

Since the prepositions that govern both the dative and the accusative cases are difficult to master, the student is asked to complete a variety of exercises dealing with these prepositions:

- a) one in which he/she has to fill in the appropriate prepositions and correct case endings on the following nouns and modifiers (see Screen 6),
- b) one in which he/she has to create German sentences using the elements given (see Screen 8),
- c) one in which he/she has to complete a dialogue with the correct case endings on the nouns and modifiers governed by these prepositions (see Screen 10), and
  - d) one in which he/she is asked to answer questions using prepositional phrases based on the preceding dialogue (see Screen 13).

The day after completing the computer lesson files or written workbooks, both groups were given the following achievement test:<sup>65</sup>

<sup>&</sup>lt;sup>65</sup> See Renzo Titone and Marcel Danesi, <u>Applied</u> <u>Psycholinguistics: An Introduction to the Psychology of</u> <u>Language Learning</u> (Toronto: University of Toronto Press, 1985) 157. The authors distinguish between four types of language tests: aptitude, diagnostic, achievement and proficiency. Achievement tests "aim to measure how much a learner has learned from a given curriculum (157)."

- Fill in the correct preposition and the correct endings:
- OHNE: 1. Gehst du \_\_\_\_\_ dein\_\_\_\_ Bruder ins Kino?
- AUS: 2. Sie kommt \_\_\_\_\_ d\_\_\_ Schweiz?
- WÄHREND: 3. \_\_\_\_\_ d\_\_\_\_ Mittagspause trinke ich eine Tasse Kaffee.
- SEIT: 4. Meine Eltern wohnen \_\_\_\_\_ ein\_\_\_ Jahr in Wien.
- TROTZ: 5. Ich habe \_\_\_\_\_ d\_\_\_ groß\_\_\_ Essen\_\_\_ wieder Hunger.
- MIT: 6. Ich fahre \_\_\_\_\_ d\_\_\_ Zug nach Toronto.
- GEGEN: 7. Was hast du \_\_\_\_\_ dein\_\_\_ neu\_\_\_ Professor?
- UM: 8. Die Bank liegt gleich \_\_\_\_\_ d\_\_\_ nächst\_\_\_\_ Ecke.
- BEI: 9. Tanja wohnt \_\_\_\_\_ ihr\_\_\_ Brüder\_\_\_.
- STATT: 10. \_\_\_\_\_ ein\_\_\_ Film\_\_\_ sehen wir heute Dias.

Build sentences using the elements given.

- 1. Wie/weit/sein/es/zu/der Bahnhof?
- 2. Außer/meine Tochter/sein (past tense)/alle da.
- 3. Für/wer/sein/diese Rosen? Für/deine Freundin?
- 4. Wegen/seine Erkältung/sein (past tense)/er/nicht/in der Vorlesung.

\_?

To conclude the pilot study, both the control group and the experimental group were given an evaluation form to fill out (see Appendix 3).

2.8 RESULTS OF THE PILOT STUDY

The results of this pilot study do not allow for generalized conclusions because of the following factors:

- a) There were only 18 students involved.
- b) There were noticeable differences in the experience that the students had with German prepositional phrases.
- c) There were differences in the knowledge the students in the computer lab had with regard to the operating of mcBOOKmaster and word processors.
- d) The pilot study was conducted only once during a one-hour period.

The following table shows the results (in percentages) of both the students in the computer lab (experimental group) and the students in the classroom lab (control group) for both workbooks, PREP1 and then PREP2:

Students:	1	2	3	4	5	6	7	8	9
PREP1	91	94	97	83	99	81	97	50	87
PREP2	87	90	93	89	89	73	95	41	75
Control gr.									
PREP1	91	87	89	95	92	91	97	88	94
PREP2	n/a	n/a	90	90	89	85	86	90	96
Exper. group									

Notes: a) The above percentages are based on the number of questions that the student attempted.

b) The **n/a** for the two students in the computer lab exist because neither student was able to even start PREP2 because of the shortness of time.

c)	<u>AVERAGE:</u>	PREP1:	87	for	control group and
			92	for	experimental group
		PREP2:	81	for	control group and
			89	for	experimental group

Because the group of students used for this pilot study had already had some classroom instruction on the German prepositional phrase, it was expected that the students would do fairly well on the exercises prepared for the pilot study. It is, however, interesting to note that the students working in the computer lab did receive a slightly higher average than those who worked independently in the classroom. Although the vocabulary used in the exercises was carefully chosen for the beginning student, at least two of the students in the classroom lab felt that not knowing the gender of a noun put them at a disadvantage<sup>66</sup> even though they had been instructed to use dictionaries and grammar textbooks for extra help. Unfortunately, a detailed analysis of the types of errors made by both groups cannot be provided since the errors made by the students in the computer lab are unavailable. It will have to suffice to state that the slight difference in the averages attained by the experimental and the control group could be explained by the fact that the experimental group had an advantage since a dictionary, reference grammar and hints were readily available whereas the control group had to look elsewhere for additional help.

The test (see Section 2.7b) given to evaluate the student's acquisition of the material was based solely on the first workbook, PREP1, since two students in the experimental group did not have time to even begin PREP2, and the majority of the students in both groups did not have enough time to complete PREP2. The table below shows the averages attained by both groups:

CLASSROOM	93	53	99	85	91	91	99	94	97	89
COMPUTER	84	90	90	100	99	74	97	94	100	92

 $^{66}$  See students' comments listed in Appendix 3.

Note: The percentages in the final column represent the average attained by the nine students.

Once again, it is interesting to note that the average mark attained by the group that worked on the computer lesson files was slightly higher than that of the control group. In fact, the two students who managed to complete perfect quizzes both worked on the computer lesson files.

Only 15 out of 18 students completed the evaluation form (See Appendix 3). The seven forms filled out for the classroom lab show that the students were not completely satisfied with the pilot study. The two reasons most often given were:

- a) there was not enough time to complete both
   workbooks, and
- b) they were not sure of the gender of some of the nouns used.

In contrast, the eight evaluation forms filled out by the students from the computer lab show that the students enjoyed participating in the pilot study because:

- a) they worked at their own pace,
- b) they received immediate feedback,
- c) it was easy to refer back to the tutorial screens,
- d) the hints helped them when they did not know the gender of a noun, and
- e) it was a new experience.

(See Appendix 3 for students' comments)

One student from the computer lab did comment that it is frustrating to work with computers because of typing errors, and another student wanted a written evaluation upon completion of the computer lesson files.

As stated earlier, this pilot study cannot lead to any general conclusions such as that students learn more if they work on computer exercises rather than written exercises. There does however seem to be some evidence that computer exercises increase a student's motivation to learn. We shall examine the motivation factor in Part 3.
## PART 3: CONCLUSIONS

## 3.1 INTRODUCTION

In this part of the thesis, some conclusions will be made based on the pilot study presented (see Part 2) and the knowledge obtained from the research done to complete Part 1 of this thesis. We will discuss how to improve the material used for the pilot study as well as how to obtain more valid results if a follow-up study were to be done (3.2). Finally, we will discuss how CALL can affect student motivation. 3.2 IMPROVING THE MATERIALS USED FOR THE PILOT STUDY

In this section we will concentrate on some specific functions of mcBOOKmaster. Due to time constraints, certain features of mcBOOKmaster were not fully utilized in the pilot study and it could be beneficial to include them in a followup study. These features include:

a) numbered hints,

b) flash card hints,

c) annotated screens, and

d) a print-out summary of students' results.

The above-mentioned features of mcBOOKmaster could have been used effectively if time had permitted.

a) Each question prepared for the pilot study was accompanied by the correct answer(s) and at least one hint.

Since the same hint was used for a number of questions (e.g. "This noun is masculine"), it would have been advantageous, from the instructor's point of view, to have used numbered hints<sup>67</sup> so that the time needed to prepare the lesson files could have been used more efficiently.

b) The mcBOOKmaster authoring system allows the author to create another type of hint that would have been useful for the students involved in the pilot study. This other type of hint, called a "flash card hint", simply shows the student one of the reference flash cards that the author has created in order to help the student answer questions. It is time-saving to prepare this type of hint for the student so that he/she does not have to search for the appropriate flash card in one of the reference grammar files which can contain up to forty flash cards each. For this pilot study, it was not necessary to create more than four flash cards, but the student still lost valuable time looking up the appropriate flash card since flash card hints were not prepared.

c) Another feature of mcBOOKmaster that could be useful in a revised and expanded version of the lesson files prepared for the pilot study is the "hypertext facility for creating annotated screens with unlimited number of background

<sup>&</sup>lt;sup>67</sup> A "numbered hint" is a hint that is programmed once in order to be used for a number of questions. The author of the exercises simply has to type in the number of the hint that he/she would like the student to see.

notes [Johnson and Cioran 63]." The instructor has the option of creating hidden notes for both tutorial and exercise This feature of mcBOOKmaster gives the instructor screens. the option of providing the student with additional background information about the topic of the lesson file. This information does not even have to be immediately related to the exercises that the student is completing. The instructor can also use this feature of mcBOOKmaster to create hidden notes about exercise instructions, a particular exercise question or even an annotated story for the students to read. Because of the lack of time available for the pilot study, this feature of mcBOOKmaster was simply used to provide the student with a hidden translation of instructions for the exercises.

d) As a final note about mcBOOKmaster itself, the students suggested that it would be beneficial to have a printed-out summary of the results they attained on each lesson file. The mcBOOKmaster authoring system does allow the students to print out their results but the facilities used for the pilot study did not have a printer.

The CALL material presented in appendices 1 and 2 (i.e. PREP1 and PREP2) represent a typical example of tutorial and drill and practice CALL exercises. If a follow-up study were to be done, it would be advisable to prepare enough material for the students to use for an extended period of

time or else it would be advisable to be prepared to have different groups of students work with the same CALL materials in order to obtain more substantial results. If a 'longitudinal' (see Section 2.5) follow-up study were done, it would also be advisable to consider a wider variety of exercises than those prepared for this pilot study (e.g. fillin-the-blank, question and answer, reading comprehension, etc.).

3.3 CALL AND STUDENT'S MOTIVATION

According to the comments made by the experimental group involved in this pilot study, CALL is a welcome addition to the language learning environment (see Appendix 3), partly because working with the computer itself increases student motivation (at least temporarily). There are a number of reasons why CALL can improve student motivation.

According to Kenning [3], the computer itself has had a beneficial effect on learner motivation because of the "unique combination of tutorial, interactive and visual capabilities." The student gets to interact with a computer rather than passively reading information from a textbook in order to complete written exercises that will not be corrected until later.

According to Last [1989 38], one of the most substantial objections to CALL in its earlier manifestations is the fact that the computer is silent. Thus, it cannot

motivate the students to speak like the human instructor can. However, the students do communicate (i.e. interact) with the computer in 'new generation' CALL programs. For example, the computer often explains why an error has been made and the exercises created often involve a communicative element. It should be remembered that the focus of 'new generation' CALL (see Section 1.7) is on the active participation of the student.

In addition, CALL is less stressful for a student as it provides an environment to learn individually at his/her own pace (see Students' Comments, Appendix 3). Although most computer programs do keep a running score of the student's progress, the student is not embarrassed in front of the whole class if he/she makes a mistake since only the computer and possibly the instructor knows how well/poorly the student has performed. Thus, the student is encouraged to attempt to answer the questions in a computer exercise. In fact, computer programs often encourage the student to better his/her score on exercises.

There are many reasons for CALL to be integrated into a second/foreign language program. From the student's point of view, CALL will provide him/her with individualized instruction and pace, a less stressful environment and unlimited practice time. In addition, for students born in the technological age, CALL is becoming a familiar and

therefore stimulating environment. Finally, from the instructor's point of view, CALL allows for the effective and efficient use of time and facilities as any teaching medium should.

#### APPENDIX 1: PREP1

Screen 1
GERMAN GRAMMAR REVIEW PAGE 1
PAGE 1

## PREPOSITIONS

A preposition is a word that links a noun or a pronoun to a verb, another noun or an adjective. A preposition normally precedes a noun (e.g. table, car) or pronoun (e.g. him, her). Look at the following examples of prepositional phrases:

The book is on the table. (Links the verb liegt to the noun Tisch.) The book on the table belongs to Das Buch auf dem Tisch you. (Links the noun Buch to the noun Tisch.) This book is not good for you. (Links the adjective gut to the pronoun dich.)

# Screen 2 GERMAN GRAMMAR REVIEW PAGE 2

In German, prepositions require the following noun/pronoun to appear in the dative, accusative or genitive case. In the above examples, it is clear that auf is followed by the dative case because of the ending on the definite article (dem), but für is followed by the accusative case because of the form of the personal pronoun (dich). You may already know that auf can also be followed by the accusative case in certain circumstances.

Screen 3 GERMAN		GRAMMAR REVIEW			PAGE	3	
	Α.	PRÉPOSITIONS	WITH	THE	ACCUSATIVE	 	

The following prepositions are always followed by the accusative case:

bis (to, until, up to...) ohne (without)

durch (through, by means of) um (about, around...)

für (for) wider (against)

gegen (against)

Screen 4

GRAMMAR REVIEW PAGE 4 GERMAN EXAMPLES: BIS: There usually isn't an article (e.g. der, ein) after bis: Er hat bis drei Uhr gewartet. He waited until three o'clock. Bis is often used with another preposition which determines the case of the following noun or pronoun: Sie ging nur bis zur Tür. She walked only as far as the door. DURCH: Note that durch can be contracted with the definite article das. Er ist schnell durch das He ran quickly through the (durchs) Zimmer gelaufen. room. Du kannst die Karten durch You can get the tickets meinen Bruder bekommen. through my brother.

Screen 5 GRAMMAR REVIEW GERMAN PAGE 5 \_\_\_\_\_ FÜR: Note that für can be contracted with the definite article das as seen in the example below. Ich kaufe ein Hemd für das I am buying a shirt for (fürs) arme Kind. the poor child. Diese Rosen sind für meinen These roses are for my husband. Mann. GEGEN: Was hast du gegen deinen What do you have against neuen Professor? your new professor? Warum bist du gegen diese Why are you against this Idee? idea? Screen 6 GERMAN GRAMMAR REVIEW PAGE 6 -----OHNE: I can't read without Ohne Brille kann ich nicht lesen. glasses. Gehst du ohne deinen Are you going to the show Bruder ins Kino? without your brother? UM: Er läuft jeden Tag zehnmal um He runs around the block den Block. ten times every day. Um wieviel Uhr beginnt diese At what time does the Vorlesung? class begin? WIDER: Wider appears mostly in certain idiomatic expressions. Er tat es wider seinen Willen. He did it against his will.

Scr GER	een 7 MAN	GRAMMAR REVIEW	PAGE	7
Übu für ric	ng 1: , gege htigen	Ergänzen Sie die richtige Präposition: bi en, ohne, um oder wider. Ergänzen Sie Endungen.	s, dur auch	ch, die
1.	Die K	inder gehen samstags d Wald spaz	ieren.	
2.	"Gü	nther ist ein Esel!""Wirklich? Ich ha _ ihn."	be nic	hts
з.	Ich j	ogge jeden Morgen zehnmal d Bloc	k.	
4.		_w kaufst du diese Rosen? dein	_ Freu	nd?
5.	"Is 	t Claudia mit euch ausgegangen?""Nein, _ sie ausgegangen."	wir s	ind
6.	"Ha aber	t Martin sein Referat fertiggeschrieben?" er hat es sein Willen getan.	"Ja	3
7.	Er ble	eibt nächst Woche in München. Dar d Schwarzwald wandern.	nn will	er
Scr GER	een 8 MAN 	GRAMMAR REVIEW	PAG	E 8
		B. PREPOSITIONS WITH THE DATIVE		

The following prepositions are always followed by the dative case:

aus(out of, from)nach<br/>(to, toward,<br/>after...)außer(except)seitbei(near, at...)vonmit(with)zuzu(to, at)

gegenüber (opposite, across from)

Screen 9 PAGE 9 GERMAN GRAMMAR REVIEW \_\_\_\_\_ \_\_\_\_\_ EXAMPLES: AUS: Sie kommt aus der Schweiz. She is from Switzerland. Nehmen Sie bitte die Milch aus Please take the milk out dem Kühlschrank. of the refrigerator. AUBER: Außer Paul war die ganze Klasse da. The whole class was there except for Paul. BEI: The preposition bei contracts with dem to beim. Er wohnt bei seinen Eltern. He lives at his parents. Ist Sabine immer noch beim Arzt? Is Sabine still at the doctor's? Screen 10 GERMAN GRAMMAR REVIEW PAGE 10 \_\_\_\_\_ \_\_\_\_\_ MIT: Ich fahre mit dem Zug nach Toronto. I am going by train to Toronto. Mit wem gehst du heute abend aus? With whom are you going out tonight? NACH: Nach dieser Vorlesung habe ich Zeit. I am free after this lecture. Wann fliegst du nach Deutschland? When are you flying to Germany?

Screen 11 GERMAN	GRAMMAR REVIEW	PAGE 11
SEIT: Note that seit	is used with the	present tense.
Seit einer Woche stud <sup>.</sup> Hans Englisch.	iert Hans Engl	s has been studying ish for a week.
Meine Eltern wohnen s einem Jahr in Wien.	eit My Vien	parents have lived in na for a year.
VON: The preposition	von contracts wit	ch dem to vom.
Ich komme vom Zahnarzt	z. I'm dent	coming from the cist's.
Der Bus fährt von Torc Calgary.	nto nach The to C	bus goes from Toronto Calgary.
Screen 12 GERMAN	GRAMMAR REVIEW	PAGE 12
ZU: The preposition zu dem becomes z	zu contracts with zum, and zu der be	the definite article: ecomes zur.
Wir fahren zum Bahnhot	•. We are static	e going to the train
Heute abend gehen wir unserer Professorin.	zu We're profes	going to our sor's place tonight.
GEGENÜBER: Gegenüber seen in th	is usually preced ne following examp	ded by its object as ples.
Er saß mir gegenüber.	He sat	copposite me.
Die Kirche liegt dem gegenüber.	Park The cl the pa	hurch is across from ark.

Screen 13 GERMAN	GRAMMAR REVIEW	PAGE 13
Übung 2: E bei, mit, rictigen Er	rgänzen Sie die richtige Präposition: nach, seit, von oder zu. Ergänzen ndungen.	: aus, außer, Sie auch die
1. Ich hab jetzt v	e viele Jahren mein Eltern wohne ich mein Freund zusam	gewohnt, aber mmen.
2. Ich wan ich	rte auf eine Antwort mein E ein Party eingeladen habe.	Brüder, die
3. Profes	Paul gehen alle Studenten uns sor, der ein Glas Wein uns tr	ser inken möchte.
4 Anita :	d Vorlesung will Professor Braun sprechen, denn sie kommen immer zu sp	Paul und pät.
5. Meine E gar ke	in Deutsch Deutschland, abei in Deutsch mir.	r sie sprechen
6. Ich möd	chte Jahre Deutschla	and fliegen.
Screen 14 GERMAN	GRAMMAR REVIEW	PAGE 14
	C. PREPOSITIONS WITH THE GENITIVE	<b></b>

Many prepositions are followed by the genitive case. The following are the most common:

(an)statt	(instead of)
trotz	(in spite of)
während	(during)
wegen	(because of, on account of, due to)

.

Screen 15 GERMAN GRAMMAR REVIEW PAGE 15 \_\_\_\_\_\_ EXAMPLES: Notice that an -(e)s suffix is added to most masculine and neuter nouns used in the genitive case. STATT: Instead of a film, we're Statt eines Filmes sehen wir heute Dias. going to see slides today. Möchten Sie lieber Salat statt Would you prefer salad instead of the soup? der Suppe? TROTZ: Er trägt trotz des warmen He is wearing a sweater in Wetters einen Pulli. spite of the warm weather. Ich habe trotz des großen I'm hungry again in spite Essens wieder Hunger. of the large meal. Screen 16 GRAMMAR REVIEW PAGE 16 GERMAN WÄHREND: Während der Mittagspause trinke During the lunch break, ich eine Tasse Kaffee. I'll have a cup of coffee. Während der Arbeitszeit ist Smoking is prohibited das Rauchen verboten. during working hours. WEGEN: Ich bleibe wegen des Schneesturms zu Hause. I'm staying home because of the snowstorm. Wegen meiner Erkältung war I wasn't in class because ich nicht in der Vorlesung. of my cold.

Scre GERM	en 17 IAN	GRAMMAR REVIEW	PAGE	17
Übun trot Endu	ig 3: z, wäl ingen.	Ergänzen Sie die richtige Präposition: ( nrend oder wegen. Ergänzen Sie auch die	an)stat richtig	:t, jen
1.	Meine Vater	Mutter arbeitet d Tag, abe arbeitet d Nacht.	r mein	
2.	schwi	d schlecht Wetter sind wir ni mmen gegangen. Wir sind zu Hause gebliebe	cht n.	
3.	Wir s gegan	ind d kalt Wetter schwim gen.	men	
4.	<u> </u>	d Sommermonate hatten wir Ferien.		
5.	Ich b gebli	in d Gefahr bis Mitternacht hi eben.	er	
6.	gekau	drotPulloverhabe ich den bla ft.	uen Pul	111
7.	Uni g	d Schneesturm bin ich heute mit de efahren.	em Bus z	zur
Scre GERM	en 18 1AN	GRAMMAR REVIEW	PAGE	18
Übur	ng 4:	Bilden Sie Sätze aus den gegebenen Elemen Beispiel: Ich/wohnen/bei/mein/Eltern. Ich wohne bei meinen Eltern.	ten.	
1.	Er/la	ufen (past tense)/um/die Ecke.		·
2.	Wie/k	ommen/man/zu/der Bahnhof?		?
3.	Du/dü	rfen/nicht/ohne/dein Mantel/ausgehen.	<u></u>	!
4.	Währe	nd/der Regen/bleiben (simple past)/wir/zu	Hause.	•
5.	Wolle Straß	n/Sie (formal)/mit/der Wagen/oder/mit/die enbahn/fahren?		2

Scree GERMA	en 19 AN	GRAMMAR REVIEW	PAGE 19
6.	Trotz/das	s Regenwetter/wollen/ich/zu/mein/F	reund/fahren.
7.	Für/wer/s	sein/diese Rosen?	?
8.	Sie (sing	g.)/wohnen/bei/ihre Eltern.	
9.	Hören (pe	erfect tense)/du/nichts/von/dein/F	reund??
10.	Trotz/der	Schneesturm/werden/ich/spazieren	gehen.
11.	Außer/mei	in/Schwester/sein (simple past)/al	le da.
Scree GERMA	en 20 N	GRAMMAR REVIEW	PAGE 20
12.	Er/laufen	(past tense)/durch/der Park.	
13.	Nach/die	Arbeit/gehen/sie (sing.)/zu/der A	rzt
14.	Ich/haben	n/nichts/gegen/dein/Bruder.	
15.			······································
	Kommen/er	/aus/die Schweiz?	·································
16.	Kommen/er Statt/mei	/aus/die Schweiz? n/Bruder/kommen (simple past)/mei	n/Schwester.
16. 17.	Kommen/er Statt/mei Sie (sing	/aus/die Schweiz? n/Bruder/kommen (simple past)/mei g.)/wohnen/seit/eine Woche/in Hamb	n/Schwester. urg.

{ENDE}

## APPENDIX 2: PREP2

Screen 1 GERMAN

## GRAMMAR REVIEW

#### PAGE 1

## A. PREPOSITIONS WITH DATIVE OR ACCUSATIVE

The following prepositions pose a particular challenge because they may be followed by either the accusative or the dative case:

	an	(at, on, to)	neben	(beside)
	auf	(on)	über	(over, about)
	hinter	(behind)	unter	(under)
	in	(in, into)	vor	(before, in front of)
		zwischen	(between, amo	ongst)
Screen GERMAN	2	GRAMMAR REV	'IEW	PAGE 2

These prepositions are followed by the accusative case if the verb indicates change from one place or situation to another. The accusative answers the question WOHIN? - Where? To what place?

These prepositions are followed by the dative case if the verb does NOT indicate change from one place or situation to another. The dative answers the question WO? - Where? In what place?

Note the difference between the use of the accusative case and the dative case in the following examples.

Screen 3 GERMAN GRAMMAR REVIEW PAGE 3 \_\_\_\_\_ DATIVE: ACCUSATIVE: AN: Notice that an das contracts to ans and an dem contracts to am. Er geht ans Fenster. He is going to the window. He is standing at the window. AUF: Sie legt das Buch auf den Tisch. Das Buch liegt auf dem Tisch. She put the book on the desk. The book is on the desk. HINTER: Stell den PapierkorbDer Papierkorb stehthinter den Tisch!hinter dem Tisch. The waste basket is behind the desk. Put the waste basket behind the desk! Screen 4 GERMAN GRAMMAR REVIEW PAGE 4 ACCUSATIVE: DATIVE: IN: Notice that in das contracts to ins and in dem contracts to im. Sie gehen ins Kino. Sie sind im Kino. They are going to the show. They are at the show. NEBEN: Setzen Sie sich bitte neben mich! Ich sitze neben ihr. Please sit down beside me. I am sitting beside her. ÜBER: Ich hänge das Bild über den Tisch. Das Bild hängt über I'm hanging the picture above dem Tisch. The picture is hanging the desk. above the desk.

GERI	en 5 1AN	GRAMMAR	REVIEW	PAGE 5
ACCI	JSATIVE:		DATIV	E:
UNT	ER:			
Der Wag The	Ball rollte en. ball rolled	unter den under the car.	Der Ball ist un The ball is un	ter dem Wagen. der the car.
VOR	:			
Ich I'i froi	lege das Bu m putting th nt of you.	ch vor dich. e book in	Das Buch liegt The book is in	vor dir. front of you.
ZWI	SCHEN:			
Er « mic He « you Scr GER	setzte sich n und dich. sat down bet een 6 MAN	zwischen ween me and GRAMMAR	Er saß zwische He was sitting and you. REVIEW	n mir und dir. g between me PAGE 6
Übu	ng 1: Ergänz hinter Ergänz	en Sie die richt , in, neben, übe en Sie auch die	ige Präposition er, unter, vor o richtigen Endun	: an, auf, der zwischen. gen.
1.	Ich setzte	mich c	1 Stuhl.	
2.	Das Buch li	egt d_	Tisch.	
3.	Jeden Samsta bis zwei Uh	ag gehen wir r morgens	d Disco d Disco.	o. Wir bleiben
4.	Während des mein Sch	Films hat mein wester gesessen.	Freund	_ mir und
5.	Sie stellte Fenster.	den Sessel	d Tür	und d
6.	Am Freitag und mein Re	muß ich ferat vorlesen.	d ganz	Klasse stehen
7.	"Ich kann Wachtmeiste	meinen schwarze r." "Ich habe großLast	en Pudel nirgend e ihn gerade ges wagen dort drüb	s finden, Herr ehen. Er ist en gelaufen."

Scre GERM	en 7 AN	GRAMMAR R	EVIEW	PAGE 7
8.	Könr Welt	nen wir heute nochmal tkrieg sprechen, Herr Br	d zweit aun?	_
9.	Die hat	Antworten stehen sie d Tafe	dTafel. Her 1 geschrieben.	r Braun
10.	Deir	ne Tasche steht dort	d Ecke.	
11.	Der	Ball rollte d	Wagen.	
12.	geso	dies groß B chlafen.	aum habe ich oft als	Kind
13.	Jede ble	en Sonntag geht mein Vate ibt bis ein oder zwei Uh	er d Kir or d Kir	che. Er che.
14.	Stel Stul	llen Sie bitte die Lampe hl.	d Sofa	und d
15.	Wege	en des warmen Wetters tr d Arm.	age ich meinen Mante	ר <sub>י</sub>
Scre GERM	en 8 AN	GRAMMAR RI	EVIEW	PAGE 8
Übun	g 2:	Bilden Sie Sätze aus d Beispiel: Können/du/ Couch/lege Kannst du legen?	en gegebenen Element der Teppich/vor/die n? den Teppich vor die	en. Couch
1.	Die S	Serviette/fallen (perfec	t tense)/unter/der T	isch.
2.	Neber	n/das Bett/stehen/ein Na	chttisch.	•
3.	Viele	e Leute/stehen/vor/das H	aus.	
4.	Mein Biolo	Bruder/studieren/an/die ogie.	Universität Tübinge	n

.

Screen GERMAN	9	GRAMMAR REVIEW	PAGE 9
5. Wi	r/wollen/heute	abend/in/das Theater/g	ehen.
6. Di	e Garage/sein/g	leich/hinter/das Haus.	
7. Er	/setzen/sich/an	/der Tisch.	
8. Da	as Buch/liegen/u	nter/die Zeitung/auf/de	er Schreibtisch
9. Hä	ingen/Sie/bitte/	'die Lampe/über/der Fer	nseher!
10. Du Ti	/sollen/der Stu sch/stellen.	ıhl/zwischen/der Sofa/uı	nd/der
Screen GERMAN	10	GRAMMAR REVIEW	PAGE 10
Ubung 3 Situati Wohnzin Claudia Samstag	: A. Ergänzen Artikel. on: Claudia mmer gekauft. will sie ins und Martin hat	Sie die Endungen oder und Martin haben neue Die Möbel sind gerade Wohnzimmer stellen, keine Lust, ihr zu he	den bestimmter Möbel für if angekommen, ur aber heute is lfen.
Claudia			
	i: Hilf mir, Mar	tin. Ich will die Couc	h neben dies
	: Hilf mir, Mar Fenster stel	tin. Ich will die Couc len.	h neben dies
Martin:	: Hilf mir, Mar Fenster stel Muß das gera	rtin. Ich will die Couc len. de jetzt sein? Ich le:	h neben dies se doch einen
Martin:	i: Hilf mir, Mar Fenster stel Muß das gera interessante	rtin. Ich will die Couc llen. de jetzt sein? Ich le: n Artikel in Zeit	h neben dies se doch einen ung.
Martin: Claudia	i: Hilf mir, Mar Fenster stel Μuß das gera interessante : Du liest ihn	rtin. Ich will die Couc len. de jetzt sein? Ich le n Artikel in Zeite seit einer Stunde, und	h neben dies se doch einen ung. d ich habe scho
Martin: Claudia	<ul> <li>a: Hilf mir, Mar</li> <li>Fenster stel</li> <li>Muß das gera</li> <li>interessante</li> <li>alle Bilder</li> </ul>	rtin. Ich will die Couc len. nde jetzt sein? Ich lea en Artikel in Zeita seit einer Stunde, und an dies Wand gehäng	h neben dies se doch einen ung. d ich habe scho gt.
Martin: Claudia Martin:	<ul> <li>a: Hilf mir, Mar</li> <li>Fenster stel</li> <li>Muß das gera</li> <li>interessante</li> <li>alle Bilder</li> <li>Ich bin gleid</li> </ul>	rtin. Ich will die Couc len. de jetzt sein? Ich le n Artikel in Zeit seit einer Stunde, und an dies Wand gehän ch fertig. Wohin möcht	h neben dies se doch einen ung. d ich habe scho gt. est du die Couc
Martin: Claudia Martin:	<ul> <li>a: Hilf mir, Mar</li> <li>Fenster stel</li> <li>Muß das gera</li> <li>interessante</li> <li>a: Du liest ihn</li> <li>alle Bilder</li> <li>Ich bin gleid</li> <li>stellen?</li> </ul>	rtin. Ich will die Couc len. de jetzt sein? Ich les en Artikel in Zeits seit einer Stunde, und an dies Wand gehäns ch fertig. Wohin möchts	h neben dies se doch einen ung. d ich habe scho gt. est du die Couo

•

Screen 11 GERMAN	GRAMMAR REVIEW	PAGE 11
Martin:	Gut! Jetzt steht sie neben Fenster u	and unter
	Bild von Picasso.	
Claudia:	Leg den Teppich vor Couch, bitte.	
Martin:	Ich kann ihn nicht finden.	
Claudia:	Er ist hinter Tür.	
Martin:	Gut! Aber jetzt muß ich zu Günther gehen.	
Claudia:	Nein, Martin. Du stellst jetzt den Tisch	auf
	Teppich, und dann stellst du den Stuhl in _	Ecke.
Martin:	Jetzt bin ich fertig. Der Stuhl steht in _	Ecke,
	und der Tisch steht auf Teppich, der	vor
	Couch liegt.	
Screen 12 GERMAN	GRAMMAR REVIEW	PAGE 12
Claudia:	Moment mal, Martin. Stell den Fernseher an	dies
	Wand. Dann steht er zwischen dies Bi	lder ar
	Wand.	
Martin:	Kann ich jetzt ausgehen?	
Claudia:	Nein, Martin. Diese Lampe soll hinter	
	Fernseher stehen. Gut! Du kannst dich je	etzt auf
	Couch setzen und fernsehen, denn Günt	ther muß
	heute Anita beim Aufräumen helfen!	
Martin:	Endlich kann ich mir das Fußballspiel anso	chauen.

Claudia: Und ich kann in aller Ruhe aufräumen!

Screen 13 GERMAN		GRAMMAR REVIEW		AGE 13		
Übun	g 3:	B. Beantworten Sie die folgenden Fragen. Note: The answers can be found in the pre exercise.	ceding	I		
1.	Wohin Sie wi	will Claudia die Couch stellen? 11 die Couch				
2.	Was macht Martin? Er liest einen interessanten Artikel					
3.	Wo steht die Couch? Sie steht					
4.	4. Wohin soll Martin den Teppich legen? Er soll ihn					
5. I	Martir Er ist	kann den Teppich nicht finden. Wo ist der	Терріс	:h? •		
Scre GERM	en 14 AN	GRAMMAR REVIEW	PAGE	14		
6.	Wohi Er sc	n soll Martin den Tisch stellen?		•		
7.	Wohi Er so	n soll er den Stuhl stellen? 011 ihn				
8.	Wo s Er st	teht der Tisch? .eht				
9.	Was Der _	steht zwischen den Bildern?				
10.	Wohi Er so	n soll Martin die Lampe stellen? 11 sie				
11.	Wohi Er se	n setzt er sich? tzt sich	<u></u>	·		

{ENDE}

APPENDIX	3:	TEST, EVALUATION FORMS AND STUDENT COMMENTS				
A. TEST						
Fill in the correct prepositions and the correct endings:						
OHNE:	1.	Gehst du dein Bruder ins Kino?				
AUS:	2.	Sie kommt d Schweiz?				
WÄHREND:	3.	d Mittagspause trinke ich eine Tasse Kaffee.				
SEIT:	4.	Meine Eltern wohnen ein Jahr in Wien.				
TROTZ:	5.	Ich habe d groß Essen wieder Hunger.				
MIT:	6.	Ich fahre d Zug nach Toronto.				
GEGEN:	7.	Was hast du dein neu Professor?				
UM:	8.	Die Bank liegt gleich d nächst Ecke.				
BEI:	9.	Tanja wohnt ihr Brüder				
STATT:	10.	ein Film sehen wir heute Dias.				
Build sentences using the elements given.						
1. Wie/weit/sein/es/zu/der Bahnhof?						

2. Außer/mein Tochter/sein (past tense)/alle da.

?

\_ •

3. Für/wer/sein/diese Rosen? Für/deine Freundin?

- Wegen/seine Erkältung/sein (past tense)/er/ nicht/in der Vorlesung.
- B. EVALUATION FORM A: COMPUTER LAB: 8 COMPLETED
  - 1. How would you evaluate the effectiveness of the exercises? (Circle one)

EXCELLENT GOOD FAIR POOR

- RESULTS: 4 EXCELLENT; 4 GOOD
  - 2. Did you have enough time to complete the exercises?
- RESULTS: 6 YES; 2 NO
  - 3. Did the exercises get more difficult as you progressed?
- RESULTS: 4 YES; 4 NO
  - 4. Did you make use of (circle): the hints?

the answers? the dictionary?

the grammar reference cards?

Any comments?

RESULTS: 8 HINTS; 2 ANSWERS; 2 REFERENCE CARDS; 2 DICTIONARY

RESPONSE:

"Hints were great when I didn't know the gender of a word or when I was unsure when movement was implied, etc."

\_?

- 5. How helpful were the hints?
  - VERY SOMEWHAT NOT AT ALL
- RESULTS: 7 VERY; 1 SOMEWHAT
  - 6. How helpful was the computer evaluation of your progress?

VERY SOMEWHAT NOT AT ALL

RESULTS: 7 VERY; 1 SOMEWHAT

7. How clearly is the material presented?

VERY SOMEWHAT NOT AT ALL

- RESULTS: 7 VERY; 1 SOMEWHAT
  - 8. Did the computer exercises improve your understanding of German prepositions?

RESULTS: 7 YES; 1 NO

9. Would you prefer doing review exercises individually on the computer, or would you prefer doing review exercises in the classroom? Why?

#### **RESPONSES:**

"On a computer because I can go at my own pace."

"I prefer doing review exercises on the computer. We could move at our own pace and there were more questions to work on."

"On the computer. Instant feedback whether doing right or wrong and easy reference to grammar rules and examples in computer back-up information."

"Rather on the computer--you do it at your own pace. If you don't understand the first time, there are instructions you can refer back to."

"Perhaps easier in the classroom--don't have to worry about 'typos'; but it's nice to be able to correct mistakes as they come up." "On the computer because it caters to the individual better than a piece of paper or a busy T.A."

"Computer; I prefer to work at my own pace."

"Better to do it in class. Otherwise there is no one to ask for help should a problem arise."

10. Do you feel that you learned more doing review exercises on the computer? Why or why not?

RESULTS: 6 YES; 1 MAYBE; 1 NO

#### **RESPONSES:**

"The student is left with no written summary, etc."

"Not necessarily, though the novelty of working on the computer peaked my interest."

"You find out immediately if you are making mistakes and can then go back and find out why."

"It was easier to understand and move around in the program according to your own wishes."

"Because the computer exercise seemed to give more reinforcement. It helps to write down the answers and then get immediate feedback, whether right or wrong."

"The explanations are more clear."

"In a way--it gives you extra practice."

11. What would you like changed/improved?

#### **RESPONSES:**

"The program is excellent!"

"I'd rather do computer labs sometimes instead of straight labs."

"Instead of doing German labs and <u>singing</u>--more <u>beneficial</u> to work on computers!" "More opportunities to work on computer."

"Nothing yet."

"Can't think of anything."

- C. EVALUATION FORM B: CLASSROOM LAB: 7 COMPLETED
  - 1. How would you evaluate the effectiveness of the exercises? (Circle one)

EXCELLENT GOOD FAIR POOR

RESULTS: 1 EXCELLENT; 5 GOOD; 1 POOR

2. Did you have enough time to complete the exercises?

RESULTS: 4 YES; 3 NO

3. How unsure did you feel about the answers for the written exercises?

VERY SOMEWHAT NOT AT ALL

RESULTS: 5 SOMEWHAT; 2 NOT AT ALL

4. Did the exercises get more difficult as you progressed?

RESULTS: 1 YES; 6 NO

5. How clearly is the material presented?

VERY SOMEWHAT NOT AT ALL

RESULTS: 6 VERY; 1 SOMEWHAT

6. Did doing the written exercises improve your understanding of German prepositional phrases? Why or why not?

RESULTS: 4 YES; 3 NO

#### **RESPONSES:**

"Because there wasn't enough time to read through the material properly. I was more concerned about finishing in time." "I understood them already."

"It was a good review."

7. Did you make use of (circle): supervising T.A.?

dictionary? grammar text?

RESULTS: 1 SUPERVISING T.A.; 2 DICTIONARY; 1 GRAMMAR TEXT

8. Are you satisfied with the evaluation of your progress in the written exercises?

RESULTS: 2 YES; 5 NO

9. Any comments about your evaluation?

## **RESPONSES:**

"It's hard to remember little words like 'Zug' because we never use them anymore. Therefore it's hard to figure out what endings they take."

"What evaluation?? I never got one!"

"The evaluation presupposes that one knows the gender of the nouns, and knowing gender is very crutial in getting the right answer even though one knows the cases."

"I didn't have enough time to complete them and I had no time to check my answers over."

10. What would you like changed/improved?

#### **RESPONSES:**

"More exercises should point out idiomatic phrases that are exceptions to the rule."

"Make it something that we've never seen before. I could have done those prepositions in my sleep!"

"The gender of all the important nouns should have been included."

"More time for each answer booklet."

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