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# THE EFFECT OF COMPUTER ASSISTED TEACHING METHODS ON STUDENT SUCCESS WHEN TEACHING GRAMMAR IN GERMAN LESSONS 

ALMANCA DERSLERİNDE DİLBİLGİSİ KONULARININ ÖĞRENIMİNDE BİLGİSAYAR DESTEKLİ ÖĞRETİMİN ÖĞRENCİ BAŞARISINA ETKİSI

Yrd. Doç. Dr. Bülent KIRMIZI<br>Fırat Üniversitesi, Batı Dilleri ve Edebiyatları, Almanca Bölümü


#### Abstract

The purpose of this study is to compare the effect of Computer assisted education on the students following first grade students of Çukurova University, Department of Turizm İşletmeciliği ve Otelcilik in "Deklination von Adjektiven" with the students learning the same unit with classical teaching method. In this study was an experimental design implemented and performed during 20092010 educational year fall semester. There were 63 students in the control group and 68 students in the experimental group. The application period of the research lasted for 4 weeks. Classical teaching method was carried on in the control group class and in the class of experimental group grammatical education based on Computer-based instruction with the software "Tell Me More". When the study came to an end, both groups were given the above mentioned 55-question test and told to answer the questions. While the questions were being prepared, the unity of the subject was taken into consideration. The research has revealed that the computer supported teaching is more effective on the student success in the grammatical subjects than the traditional teaching methods. It is such a way that it enlivens the learning medium with audio and visual materials. Thuscourses become more enjoyable and fun, making the student interest, motivation andparticipation rise. Besides, it helps lessen the individual differences and accelerate the learning process according to the cognitive characteristics of the student.


Keywords: Computer Assisted Instruction, German Teaching, Instructional Software.

## $\ddot{O}_{z}$

Bu çalışmanın amacı, bilgisayar destekli öğretimin Çukurova Üniversitesi Turizm İşletmeciliği ve Otelcilik bölümü 1. sınıf öğrencilerinin "Deklination von Adjektiven" konusunu öğrenmeleri üzerine olan etkisini klasik öğretim yöntemleriyle karşılaştırmaktır. Bu çalışmada deneysel çalışma modeli kullanılmıştır ve 2009-2010 eğitim-öğretim yılı güz döneminde gerçekleştirilmiştir. Kontrol grubunda 63, deney grubunda ise 68 öğrenci bulunmaktadır. Çalışma 4 haftalık bir süreyi kapsamaktadır. Kontrol grubunda gramer öğretimi klasik öğretim yöntemleri ile yapılırken, deney grubunda "Tell Me More" adlı yazılımla bilgisayar destekli öğretim yapılmıştır. Çalışma sona erdiğinde her iki gruba da 55 soruluk çoktan seçmeli test ve boşluk doldurma verilerek yanıtlamaları istenmiştir. Sorular hazırlanırken konunun bütününü kapsamasına dikkat edilmiştir. Araştırma sonunda bilgisayar destekli öğretimin geleneksel öğretim yöntemine göre işlenen dilbilgisi konularında öğrenci başarısı üzerinde daha etkili olduğu belirlenmiştir. Bilgisayar Destekli Eğitim, eğitim-öğretim ortamına renk katan, görsel ve işitsel unsurlarla bireysel farklılıkları en aza indirgememizi sağlayan bir modeldir. Bu yöntem hem dersin işlenmesini zevkli hale getirerek öğrenci katılımını artırmakta hem de öğrencilerin motivasyonunu artırmaktadır. Bunun yanında öğrencilerin algılama düzeylerine göre öğrenme sürecini hızlandırabilmektedir.

Anahtar Kelimeler: Bilgisayar Destekli Öğretim, Almanca Öğretimi, Öğretim Yazılımı.

## Introduction

The use of the computer in the field of education in Turkey started in 1980s and thus the world of education met such a term as "Computer Assisted Teaching". Research shows that, in the field of education, the computer was first used in the USA, first appearing in universities in 1970s. (Keser, 1988:135; Uslu, 1990:20).

Earliest studies on how to benefit from the computer directly when determining the learning tendencies of students and more effective teaching methods were started at Stanford University.(Şeniş,1993:8; Orhun and Manas, 1886:116). The increasing number of computer producing companies being parallel with reduced prizes has given way almost every school or even almost all classes in a school to use computers. This simply electronic brain, able to conduct different tasks at a time, saves time and money, which boasts productivity dramatically. "In a technologically well-equipped environment, both students and teachers go through dynamic and more efficient learning experiences." (Saban 2007:24) At times when computers were not in use at schools, old projectors were generally used in order to solve more problems and do more practice; however, materials prepared with tracing paper proved not only time consuming but also expensive. Productivity is aimed in the field of education like in all others and if it is to be reached, time and cost must be taken into consideration. "Productivity is one of the most crucial points in the process of education." (Arıcı and Dalkılıç, 2006:421) Such problems have been surmounted with computers.Besides, as Aktümen and Kaçar (2003:52) expressed, "It has been proven that students provided with computer assisted teahing methods are far more successful than those taught by traditional methods. "Thus teachers have been provided with computing courses enabling them to learn how to prepare teaching materials."

Today, when it comes to materials needed for education, we don't take them as course books, notebooks, blackboards, pencils, which are already known, but we take them as materials that accelerate the learning process, enliven the senses and thus enable us to save
time. Çıkla (2008:8) puts forward the benefits of education materials other than course books as stated below:

- Courses become enjoyable rather than monotonous
- Teachers do their best to improve their skills
- Students feel the need to listen to the course more carefully
- A more efficient and permanent learning can be attained
- Student interest and attention to the course rise

The use of the computer in the field of education takes shape in two ways. The first is the "Computer Assisted Teaching" and the second is the "Computer Based Teaching". In the former way the computer is the completing aspect. According to Filiz and Dereli, "The computer should be taken as an instrument making both teachers' and students' job easier rather than something adding a burden to their already existing workload. (Filiz and Dereli:149) In the latter way, the computer is the main teaching material. "The computer can be used as the only teaching source which is independent from any other equipment" (Cooper, 1988:207). In Turkey the former way, computer assisted teaching, is more common.

Uşun (2004:38) points out that the computer proves to be great help when managing an educational programme, doing a research and guiding the learners. Uşun states the importance of the use of the computer saying "The computer meets individual needs of the learner in the process of education and helps to create a contemporary atmosphere for it."

When the relevant literature to the subject is looked into, different results can be seen. In the study, carried out by Yumuşak and Aycan (2002), it was aimed to determine whether there was a striking difference in success between primary school students who were taught the subject "Simple Machines" in science class with traditional teaching methods those who were taught the same subject with computer assisted teaching methods. According to the pretest results, applied before the study started, there was no significant difference between the two groups. However, the results of the study showed that the group of students taught with computer assisted teaching methods were far more successful than the other group.

In the questionnaire, made by Uşun in 2003, it was aimed to determine the benefits of using the computer in the field of education. Uşun got his 156 students, studying at Çanakkale Onsekiz Mart University Educational Faculty, to take part in the questionnaire so as to determine the general idea of future teachers on the matter. The results of the above mentioned questionnaire showed that accessing information quickly and easily were the primary benefit of the use of the computer. According to the students, the other benefits of it are making classes more colourful and interesting and cutting the learning time down respectively.

Baştuğ and Akın's studies (2005), aiming to determine the level of the capacity of using the computer and Internet technologies in teacher training schools is of two parts as theoretical and practical. The above named study was carried out with the students at Erzincan Educational Faculty, Department of Primary School Teaching. At the end of the study it was seen that boy students use the computer and Internet technologies more often. However, girl students were seen to have more tendencies to use the mentioned technologies because of educational purposes than boys do.

Ateş and his friends (2006) conducted a study on 30 prep class students at a "Super Lycee", aiming to determine the effects of computer assisted English teaching and the attitude of the students towards the computer and English. "The result of the study showed that the level of student interest towards the computer and English increased dramatically through computer assisted English teaching" (Ateş, Altunay and Altun 2006:99). The study carried out by Pektaş and his friends (2006) along with the 43 third grade students at Kastamonu Educational Faculty, Department of Science Teaching showed that students who were taught Science through computer assisted teaching methods proved far more successful than those who were taught through classical teacher centred methods. Güzeller and Korkmaz (2007) aimed to evaluate a lesson plan in their study which they carried out among the teachers at Private Antalya Mahmut Celal Ünal High School. At the end of the study the lesson plan handled for the study proved insufficient in such criteria as the lesson scheme, significance level, guiding the students, consistency with the teacher's style, the unity of the subject and social conformity, being developable, the length of the work period, the procedure of the use of the documents, work speed, cognition and flashback, perspective, animations and the density of the work scene.

The purpose of the study which Karadağ and colleagues (2008) carried out was to determine the attitude of primary school directors towards computer assisted teaching, aiming to contribute to making it more common. The result of the study revealed the fact that the majority of the primary school directors have a negative attitude towards computer assisted teaching.

In another study carried out by Pektaş and colleagues (2009), the effects of computer assisted teaching on student success in teaching fifth grade students the Science subject "Sound and Light" was to be determined. The result of the study, carried out at a primary school in Kirıkale, showed that computer assisted methods proved more effective on student success than traditional methods in teaching the above mentioned subject. As for the main objective of the study carried out by Mercan and colleagues (2009), the outcome of using computer assisted teaching and training methods in Maths lesson was to be determined. The results of the study reflect the fact that using the computer in Maths lesson has a positive effect on the teaching-learning process in that lessons become more enjoyable for both the students and teachers and the exam grades of the students rise dramatically.

## The Objective of the Study

The aim of this study is to compare computer assisted teaching techniques with classical teaching methods in German lessons when teaching the subject "Deklination von Adjectiven" to the students following the first grade at Tourism and Hospitality Management Academy.

## The Questions of the Study

The questions below are to be answered so as to make the study reach its objective.

1. Is there a dramatic difference between the use of traditional teaching methods and computer assisted teaching techniques on student success when teaching the subject "Deklination von Adjectiven"?
2. Does the use of traditional teaching methods or computer assisted teaching techniques in teaching German grammar make any difference on student success according to the gender?

## The Restrictive Aspects of the Study

This is an experimental study and the findings and results are limited to the control and experimental groups formed from students following the first grade at Çukurova University, Tourism and Hospitality Management Academy.

## Materials and Methods

The paradigm of this study, in which experimental techniques are used, is formed from 131 students following the first grade at Çukurova University, Tourism and Hospitality Management Academy. As it was the first time the students in both groups of the paradigm had ever taken the German Language Grammar course, the level of their knowledge and skill pertaining to it was equal. Thus, a pre-test was not needed to be conducted. In this paradigm there are 68 students in the experimental group and 63 in the control group.

It was not possible to evaluate the information level of the students on the named subject since they did not know anything about it before the study was put into practice. As the data collecting tool a 55 -question gap-filling and multiple-choice test on the subject "Deklination von Adjectiven" was used. While the named subject was taught to the experimental group by the researcher using the instructional software "Tell Me More" for six months, the same subject was taught to the control group using traditional teaching methods such as verbal -question lecture and question-answer drills. When the study came to an end, both groups were given the above mentioned 55 -question test and told to answer the questions. While the questions were being prepared, the unity of the subject was taken into consideration.

## Findings and Comments

In this part of the study, in which students following the first grade at Çukurova University, Tourism and Hospitality Management Academy took part, the findings gained from the study aiming to determine the effects of two teaching principles-namely the computer assisted way and traditional way- when teaching the subject "Deklination von Adjectiven" are evaluated. The above named findings are shown in the table below.

Table 1. The success rates of the experimental and control group students in answering gap-filling questions.

| Gap－Filling Questions |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| S | Boys |  |  |  |  |  | Girls |  |  |  |  |  | Correct Answer （G＋B） |  |
|  | 怱 | 而 | 部合 |  | 㟧 | 其 | 䨤 | 其 $\frac{1}{6}$ | 令 | 其 | 葛 | H |  |  |
|  | 승 |  | 込 |  | 붕 |  | ， 1 |  |  |  | 40 |  | E\％ | C\％ |
| 1 | neuen |  | neua |  | never |  | nauen |  | naua |  | never |  | 100 | 90.4 |
|  | 100 | 90.7 | － | 7 | － | 2.3 | 100 | 90 | － | 10 | － | － |  |  |
| 2 | roten |  | Rote |  | roter |  | roten |  | rote |  | roter |  | 95.6 | 83.2 |
|  | 91.1 | 81.4 | 8.9 | 11.6 | － | 7 | 100 | 85 | － | 10 | － | 5 |  |  |
| 3 | Reichen |  | Reiche |  | Reicher |  | reichen |  | reiche |  | reicher |  | 68 | 89.6 |
|  | 100 | 79.1 | － | 14 | － | 7 | 100 | 100 | － | － | － | － |  |  |
| 4 | Ammen |  | Arme |  | Armer |  | armen |  | arme |  | armer |  | 100 | 94 |
|  | 100 | 93 | － | 4.7 | － | 2.3 | 100 | 95 | － | 5 | － | － |  |  |
| 5 | Grine |  | Grinen |  | griner |  | grine |  | grinen |  | griner |  | 100 | 94.2 |
|  | 100 | 88.4 | － | 7 | － | 4.7 | 100 | 100 | － | － | － | － |  |  |
| 6 | Schmutzige |  | achmutzigen |  | schmutziger |  | achmutzige |  | achmutzigen |  | schmutziger |  | 100 | 92.9 |
|  | 100 | 90.7 | $\cdot$ | 7 | $\cdot{ }^{-}$ | 2.3 | 100 | 95 | － | 5 | － | － |  |  |
| 7 | Kleine |  | Kleinen |  | kleiner |  | kleine |  | kleinen |  | kleiner |  | 98.9 | 91.5 |
|  | 97.8 | 93 | 2.2 | 4.7 | － | 2.3 | 100 | 90 | － | 10 | － | － |  |  |
| 8 | Gute |  | Guten |  | guter |  | gute |  | guten |  | guter |  | 85.7 | 70.1 |
|  | 80 | 65.1 | 20 | 34.9 | $\cdots$ | 4.7 | 91.3 | 75 | 8.7 | 15 | $\cdot$ | 10 |  |  |
| 9 | Fremden |  | Fremde |  | frender |  | frenden |  | fremde |  | fremder |  | 83.5 | 53.5 |
|  | 80 | 41.9 | 15.6 | 32.6 | 4.4 | 25.6 | 87 | 65 | 8.7 | 30 | 4.3 | 5 |  |  |
| 10 | Altan |  | alte |  | alter |  | alten |  | alte |  | alter |  | 98.9 | 97.7 |
|  | 97.8 | 95.3 | － | 4.7 | 2.2 | － | 100 | 100 | － | － | $\cdot$ | － |  |  |
| 11 | Altas |  | alte |  | alter |  | altas |  | alte |  | alter |  | 81.3 | 77.4 |
|  | 75.6 | 69.8 | 15.6 | 20.9 | 8.9 | 9.3 | 87 | 85 | 13 | 10 | － | 5 |  |  |
| 12 | Wichtiges |  | wichtige |  | wichtigen |  | wichtiges |  | wichtige |  | wichtigen |  | 80.1 | 71.4 |
|  | 64.4 | 62.8 | 20 | 32.6 | 15.6 | 4.7 | 95.7 | 80 | 4.3 | 15 | － | 5 |  |  |
| 13 | Hochen |  | hoche |  | hocher |  | hochen |  | hoche |  | hocher |  | 100 | 95.4 |
|  | 100 | 90.7 | － | 7 | － | 2.3 | 100 | 100 | － | － | $\bullet$ | － |  |  |
| 14 | seinemjungen |  | seinejungen |  | seine junger |  | seinemjungen |  | Seine jungen |  | Seinejunger |  | 81.4 | 69.1 |
|  | 80 | 58.1 | 6.7 | 14 | 13.3 | 27.9 | 82.7 | 80 | 8.7 | 5 | 8.7 | 15 |  |  |
| 15 | Neue |  | Necon |  | neves |  | neve |  | nuten |  | newas |  | 93.4 | 68.1 |
|  | 86.7 | 51.2 | 13. 3 | 41.9 | $\cdot{ }^{-}$ | 7 | 100 | 85 | － | 10 | － | 5 |  |  |
| The average success rate of the experimental and control group students per question |  |  |  |  |  |  |  |  |  |  |  |  | $\begin{gathered} \% \\ 91.1 \end{gathered}$ | $\begin{array}{c\|} \hline \% \\ 82.5 \end{array}$ |

The success rates of the answers given to the gap－filling questions by experimental and control group students are shown in Table 1．When the average success rate for each question is evaluated，an 8.6 －percent difference is observed in countenance of the experimental group．While the experimental group shows full success in answering several questions，the control group has their best result in answering question number 13 with a success rate of $95.4 \%$ ．When the gap－filling questions in the exam are grouped，it is seen that questions number 8,9 and 15 are the ones that are formed without an article．While the success rate of experimental group in these three questions is $87.5 \%$ ，the control group has a success rate of $63.9 \%$ in answering the same questions．There is a 23.6 －percent difference in countenance of the experimental group．Consequently，it is seen that the control group cannot maintain their general success rate difference in these three questions．

Questions number 1 and 4 contains adjective phrases and are formed using definite articles．When the answers given to these questions are checked，it is seen that the experimental group has a success rate of $100 \%$ and the control group has it $92.2 \%$ ．According to questions number 1 and 4 the success rate difference between the two groups is $7.8 \%$ ．As for questions number 2 and 7 ，they contain adjective phrases and are formed with definite articles， too．According to the answers given to these two questions the experimental group has a 97．3－ percent success rate and the control group has an 87．4－percent success rate and the success rate difference between the two groups is $9.9 \%$ ．

Gap－filling questions number $3,5,6,10,11,12,13$ and 14 are the ones formed with indefinite articles．According to the answers given to the above mentioned eight questions，the experimental group has a 88.7 －percent success rate and the control group has a 86 －percent
success rate. The success rate difference between the two groups is $2.7 \%$. The hitherto stated statistics makes it possible to compare the success of the groups according to the question type. Accordingly, questions to which both groups gave answers most successfully were the ones formed with definite articles. Questions in which both groups had the lowest success rate are questions number 8,9 and 15 , which are formed without articles or with adjective phrases preceding a plural noun.

Table 2. The average success rates of the girl and boy students in the experimental and control groups in answering gap-filling questions

| The veryge nucas sit of by studits |  | The verysumcas rate of girl thidmit |  |
| :---: | :---: | :---: | :---: |
| Exprimural Gow | Control Grup | Exprimanitl Grup | Comtral Grow |
| 969.2 | 966.7 | 9196.2 | \%88.3 |

When the answers given to the gap-filling questions by the experimental and control group students are looked into and the success rates according to the gender are evaluated, it is seen that the girls performed a better success than the boys in the group they belong to did. As seen in Table 2, the girls in the experimental group answered the questions six-percent more successfully than boys did, and the girls in the control group had it 11.6 -percent better than boys did. The girls in the experimental group showed $100 \%$ success in answering ten questions while boys in the same group had it in six questions. When Table 1 is examined, it can be seen that girls failed to answer two of the questions formed without an article but with an adjective phrase preceding a plural noun and three of the questions with an indefinite article. While girls made mistakes in five questions, boys made mistakes in nine questions.

Two of them are questions number 2 and 7 , formed with a singular noun and a definite article, the other three are questions number 8,9 and 15 , formed with a plural noun without an article. The questions in which an indefinite article is used are the ones number 10, 11, 12 and 14. As a consequence, it is possible to say that the girls in the experimental group are more successful than the boys in the same group.

When the answers given by the students in the control group are examined, it is seen that boys did not have $100 \%$ success in any of the questions; however, girls had $100 \%$ success in answering questions number $3,5,10$ and 13 , which are formed with and adjective phrase and an indefinite article. Like in the experimental group, girls are more successful than boys in the control group, too.

Table 3. The success rate of the students in the Experimental group in answering multiple-choice questions

| Multiple - Choice Questions |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Boys |  |  |  |  |  | Girls |  |  |  |  |  |
| S | $\begin{gathered} a \\ (\%) \end{gathered}$ | $\begin{gathered} \mathrm{b} \\ (\%) \end{gathered}$ | $\begin{gathered} c \\ (\%) \end{gathered}$ | $\begin{gathered} \mathrm{d} \\ (\%) \end{gathered}$ | $\begin{gathered} e \\ (\%) \end{gathered}$ | $\begin{gathered} a \\ (\%) \end{gathered}$ | $\begin{gathered} b \\ (\%) \end{gathered}$ | $\begin{gathered} c \\ (\%) \end{gathered}$ | $\begin{gathered} \mathrm{d} \\ (\%) \end{gathered}$ | $\begin{gathered} e \\ (\%) \end{gathered}$ | Comect Answer $\%$ $(\mathrm{G}+\mathrm{B})$ |
| 16 | - | - | $\checkmark$ | 133 | 86.7 | - | - | - | 8.7 | 91.3 | 89 |
| 17 | - | 2.2 | 97.8 | - | - | - | - | 100 | - | - | 98.9 |
| 18 | 100 | - | - | - | - | 100 | - | - | - | - | 100 |
| 19 | - | - | - | 97.8 | 22 | - | - | - | 100 | - | 98.9 |
| 20 | 22 | 84.4 | 13.3 | - | - | - | 87 | 13 | - | - | 85.7 |
| 21 | - | - | - | - | 100 | - | - | - | - | 100 | 100 |
| 22 | - | - | 100 | - | - | - | - | 100 | - | - | 100 |
| 23 | 100 | - | - | - | - | 100 | - | - | - | - | 100 |
| 24 | - | - | - | 100 | - | - | - | - | 100 | - | 100 |
| 25 | - | 91.1 | 4.4 | - | 4.4 | - | 87 | 8.7 | - | 43 | 89.05 |
| 26 | 100 | - | - | - | - | 100 | - | - | $\checkmark$ | - | 100 |
| 27 | 4.4 | - | 80 | 15.5 | - | 43 | - | 78.2 | 17.4 | - | 79.1 |
| 28 | 4.4 | - | 95.5 | - | - | - | $\checkmark$ | 100 | - |  | 97.75 |
| 29 | 97.7 | 2.2 | - | - | - | 95.7 | 43 | - | - | - | 96.7 |
| 30 | $\checkmark$ | 100 | - | $\checkmark$ | - | - | 100 | - | - | - | 100 |
| 31 | 6.6 | - | - | 22 | 91.1 | 43 | - | - | $\checkmark$ | 95.7 | 93.4 |
| 32 | 8.8 | - | - | 88.8 | 2.2 | 43 | - | $\checkmark$ | 91.3 | 43 | 90.5 |
| 33 | - | 8.8 | 91.1 | - | - | - | 8.7 | 913 | - | - | 912 |
| 34 | 100 | - | - | - | - | 100 | - | - | - | - | 100 |
| 35 | - | - | - | 100 | - | - | - | - | 100 | - | 100 |
| 36 | - | - | - | - | 100 | - | - | - | - | 100 | 100 |
| 37 | - | 93.3 | 4.4 | 2.2 | - | - | 87 | 13 | - | - | 90.15 |
| 38 | - | - | 8.8 | - | 91.1 | - | - | 43 | - | 95.7 | 93.4 |
| 39 | - | - | 100 | - | - | - | $\checkmark$ | 100 | - | - | 100 |
| 40 | 4.4 | 86.7 | - | - | 8.8 | $\checkmark$ | 913 | - | - | 8.7 | 89 |
| 41 | $\checkmark$ |  | - | 100 | - | - | - | - | 100 | - | 100 |
| 42 | 4.4 | 77.7 | - | - | 17.7 | 43 | 78.2 | - | - | 17.4 | 77.95 |
| 43 | - | 91.1 | - | - | 8.8 | - | 913 | - | - | 8.7 | 91.2 |
| 44 | - | - | - | - | 100 | - | - | - | - | 100 | 100 |
| 45 | - | - | $\checkmark$ | 100 | - | - | $\checkmark$ | - | 100 | - | 100 |
| 46 | - | - | 100 | - | - | $\cdots$ | - | 100 | - | - | 100 |
| 47 | 100 | - | - | - | - | 100 | - | - | - | - | 100 |
| 48 | - | 100 | - | - | $\checkmark$ | - | 100 | $\checkmark$ | $\checkmark$ | $\checkmark$ | 100 |
| 49 | - | - | - | 15.5 | 84.4 | - | - | - | 13 | 87 | 85.7 |
| 50 | $\bullet$ | 11.1 | - | 84.4 | 4.4 | - | 13 | - | 87 | - | 85.7 |
| 51 | 91.1 | - | - | - | 8.8 | 95.7 | - | - | - | 43 | 93.4 |
| 52 | - | - | 100 | - | - | - | - | 100 | $\cdots$ | - | 100 |
| 53 | - | 97.8 | 22 | - | - | - | 100 | - | - | - | 98.9 |
| 54 | $\checkmark$ | - | - | 100 | - | - | - | - | 100 | - | 100 |
| 55 | 86.7 | 13.3 | - | - | $\cdots$ | 95.7 | 43 | - | - | - | 91.2 |
|  |  |  |  |  |  |  | erage | 25s ra | the 5 |  | \%95.2 |

When the answers to the multiple-choice questions are examined, it is seen that $95.2 \%$ of the boys and girls in the experimental group answered the questions correctly.

The boys in the experimental group answered 19 and the girls in the same group answered 23 multiple-choice questions out of 40 with $100 \%$ success. While the entire girl and boy students answered all of the questions formed with a definite article and an adjective phrase preceding a plural noun correctly, they did not have $100 \%$ success in any of the questions with a plural noun but without an article. Boys succeeded in answering five of the questions formed with an adjective phrase, a singular noun and a definite article, and girls succeeded in answering seven of the mentioned questions. Boys answered four and girls answered six out of ten questions with an indefinite article fully successfully. The data in the table below show that girls are more successful than boys are.

Table 4. The success rate of the students in the Control group in answering multiplechoice questions

| Multiple - Choice Test Questions |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Boys |  |  |  |  |  | Girls |  |  |  |  |  |
| S | $\begin{gathered} \mathrm{a} \\ (\%) \end{gathered}$ | $\begin{gathered} \mathrm{b} \\ (\%) \end{gathered}$ | $\begin{gathered} c \\ (\%) \end{gathered}$ | $\underset{(\%)}{d}$ | $\underset{(\%)}{e}$ | $\begin{gathered} \mathrm{a} \\ (\%) \end{gathered}$ | $\begin{gathered} \mathrm{b} \\ (\%) \end{gathered}$ | $\begin{gathered} c \\ (\%) \end{gathered}$ | $\underset{(\%)}{d}$ | $\stackrel{e}{(\%)}$ | Correct Answer (G+B) |
| 16 | 93 | 163 | 69 | 233 | 44.2 | - | 5 | - | 20 | 75 | 59.6 |
| 17 | - | 14 | 86 | - | - | - | 5 | 95 | - | - | 90.5 |
| 18 | 88.4 | - | 11.6 | - | - | 80 | - | 20 | - | - | 842 |
| 19 | - | - | 69 | 55.8 | 372 | - | - | - | 85 | 15 | 70.4 |
| 20 | 11.6 | 48.8 | 20.9 | 23 | 163 | - | 70 | 15 | - | 15 | 59.4 |
| 21 | - | - | 69 | 93 | 83.7 | - | - | 5 | 5 | 90 | 86.9 |
| 22 | - | 93 | 90.7 | - | - | $\cdot$ | 15 | 85 | - | - | 87.9 |
| 23 | 83.7 | 163 | - | - | - | 80 | 15 | - | 5 | - | 81.9 |
| 24 | - | 23 | - | 97.7 | - | - | - | - | 100 | - | 98.9 |
| 25 | - | 88.4 | - | 11.6 | - | 10 | 70 | 10 | 5 | 5 | 79.2 |
| 26 | 93 | - | 69 | - | - | 90 | - | 10 | - | - | 91.5 |
| 27 | 163 | 4.7 | 41.9 | 372 | - | 15 | - | 65 | 20 | - | 53.5 |
| 28 | 6.9 | 2.3 | 81.4 | - | 93 | 5 | - | 75 | - | 20 | 78.2 |
| 29 | 90.7 | - | - | - | 93 | 95 | - | - | - | 5 | 92.9 |
| 30 | 4.7 | 79 | - | - | 163 | 10 | 80 | - | - | 10 | 79.5 |
| 31 | 28 | - | 163 | 2.3 | 53.5 | 25 | - | 5 | $\cdot$ | 70 | 61.8 |
| 32 | 23 | - | - | 97.7 | - | 10 | - | - | 90 | - | 93.9 |
| 33 | 23 | 14 | 79 | - | 4.7 | - | 15 | 65 | - | 20 | 72 |
| 34 | 86 | 6.9 | - | 6.9 | - | 90 | 10 | - | - | - | 88 |
| 35 | 4.7 | - | - | 95.3 | - | - | - | - | 100 | - | 97.7 |
| 36 | 4.7 | - | - | 6.9 | 88.4 | 5 | - | - | 10 | 85 | 86.7 |
| 37 | - | 83.7 | - | 93 | 6.9 | - | 85 | - | 15 | - | 84.4 |
| 38 | - | - | 32.6 | 93 | 58.1 | - | - | 15 | 5 | 80 | 69.1 |
| 39 | - | 4.7 | 93 | 23 | - | - | 5 | 95 | - | - | 94 |
| 40 | 93 | 51.1 | 93 | - | 302 | 10 | 80 | - | $\cdot$ | 10 | 65.6 |
| 41 | 23 | 11.6 | 4.7 | 81.4 | - | 5 | 15 | 10 | 70 | - | 75.7 |
| 42 | 93 | 41.9 | 4.7 | - | 44.2 | 5 | 65 | - | - | 30 | 53.5 |
| 43 | - | 97.7 | - | 23 | - | - | 100 | - | - | - | 98.9 |
| 44 | - | 2.3 | - | 23 | 95.3 | - | - | - | 10 | 90 | 92.7 |
| 45 | 4.7 | - | 11.6 | 83.7 | - | - | - | 20 | 80 | - | 81.9 |
| 46 | - | - | 88.4 | - | 11.6 | - | - | 90 | - | 10 | 89.2 |
| 47 | 93 | - | - | 6.9 | - | 80 | - | - | 15 | 5 | 865 |
| 48 | 93 | 86 | 23 | 23 | $\cdot$ | 10 | 70 | 15 | 5 | - | 78 |
| 49 | 6.9 | 23 | - | 25.6 | 65.1 | 5 | - | - | 20 | 75 | 70.1 |
| 50 | - | 93 | - | 83.7 | 6.9 | - | 20 | - | 80 | - | 81.9 |
| 51 | 60.5 | - | 9.3 | 23 | 28 | 70 | - | 10 | - | 20 | 65.3 |
| 52 | 69 | 93 | 83.7 | - | - | 5 | 20 | 75 | - | - | 79.4 |
| 53 | 14 | 79 | 69 | - | - | 20 | 80 | - | - | - | 79.5 |
| 54 | - | 4.7 | 7 | 88.4 | - | - | - | 10 | 90 | - | 892 |
| 55 | 60.5 | 302 | 6.9 | - | 23 | 65 | 30 | 5 | - | - | 62.8 |
|  |  |  |  |  |  |  | rage | ess fa | the st |  | 79.8 |

When the table showing the success standing of the control group students in answering the multiple-choice questions is looked into, the success rate for each question is seen to be $79.8 \%$. While none of the boys in the control group achieved $100 \%$ success in answering any of the questions, girls had $100 \%$ success in answering two of the questions formed with an adjective phrase and a definite article and one of questions formed with a definite article and an adjective phrase preceding a plural noun.

Table 5. The average success rates of the girl and boy students in the experimental and control groups in answering multiple-choice questions.

| Tha syugge mucas nate of by students |  | Tha averga mucas rate of git studits |  |
| :---: | :---: | :---: | :---: |
| Exprimamital Grup | Control Crup | Exprimantal Croup | Cortrol Cioup |
| 94.7 | 78.2 | 95.7 | 81.4 |

The answers given to the multiple choice questions were examined according to the gender of the two groups singly. The result of the examen showed that girls are more successful than boys in both groups. Besides this, the boys in the experimental group are more successful than those in the control group with a success rate of $16.5 \%$ and the girls in the experimental group are more successful than those in the control group having a success rate of $14.3 \%$.

## Conclusion

The results of the analysis show that in German classes in which computer assisted teaching techniques are used a higher rate of success rate can be attained than in those in which other traditional or classical methods are used. Today, so many linguists trying to find an answer to the question how foreign language teaching should be agree on "Computer Assisted Teaching/Learning". It is such a way that it enlivens the learning medium with audio and visual materials. Thus courses become more enjoyable and fun, making the student interest, motivation and participation rise. Besides, it helps lessen the individual differences and accelerate the learning process according to the cognitive characteristics of the student.

As the software used in the study contained exercises and dills as well as explanations and instructions pertaining to the German language grammar, a highly effective learning process was observed. Students taught with computer assisted teaching techniques learned and mastered the target subject better than those taught with traditional or classical teaching methods. The results of the gap-filling and multiple-choice test, conducted at the end of the study, showed that there was a striking difference between the success standings of the two groups in the paradigm. As well as this, girls performed a better success than boys did in both groups. The findings gained from this study may avail when deciding whether to use the computer in language classes or not and the below points may help if taken into consideration.

- $\quad$ Students learning grammar through computer assisted techniques prove to be more successful than others.
- In several work fields, a hundred- percent feedback can be attained from the students learning grammar through computer assistance.
- In computer assisted language classes, students have the chance to do more exercises and drills than they do in others.
- Traditional or classical teaching methods deprive students of audio and visual facilities.
- It is extremely difficult to take individual differences in hand in courses in which traditional or classical teaching methods are used.

In the light of the above given information, teachers should take the computer as the missing part of the puzzle and use it where and when necessary.

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## Ek 1

Başarı ölçmede kullanılan çoktan seçmeli test ve boşluk doldurma soruları

| Soru <br> No | Questions (1-15 Gap-Filling Questions, 16-30 Multiple-Choice Questions) <br> 1 |
| :---: | :--- |
| Ich lese gern die neu__ Bücher von Grange. |  |


| 2 | Suchst du den rot___ Bleistift? |
| :---: | :---: |
| 3 | Die Wohnung gehört einem reich___ Fräulein. |
| 4 | Die arm Männer sind hungrig. |
| 5 | Ich kaufe dir eine grün___ Tasche. |
| 6 | Sie wäscht eine schmutzig ___ Hose. |
| 7 | Er fährt in die klein __ Stadt. |
| 8 | Mein Vater hat viele gut___ Freunde in Deutschland. |
| 9 | Wir zeigen fremd___ Gästen die Museen. |
| 10 | Die Farbe eines ___ Autos ist blau. |
| 11 | Ein alt___ Haus ist nicht bequem. |
| 12 | Der Professor erklärt ein wichtig__ Thema. |
| 13 | Das Mädchen klettert auf einen hoch__ Baum. |
| 14 | Dieses Papier gehört sein___jung__ Vater. |
| 15 | Neu___ Autos sind nicht wertvoll. |
| 16 | Haben Sie $\qquad$ Blumen? <br> a) frisch <br> b) frisches <br> c) frischer <br> d) frischen <br> e) frische |
| 17 | $\qquad$ Kind liegt im Bett. <br> a) krank <br> b) krankes <br> c) kranke <br> d) kranken <br> e) kranker |
| 18 | Ich höre die $\qquad$ Nachrichten. <br> a) furchtbaren <br> b) furchtbar <br> c) furchtbare <br> d) furchtbares <br> e) furchtbarer |
| 19 | Mein Onkel sucht $\qquad$ schwarzes Auto. <br> a) eine b) einer <br> c) einen <br> d) ein <br> e) eines |
| 20 | Wir sammeln $\qquad$ Zeitungen. <br> a) altes <br> b) alte <br> c) alten <br> d) alt <br> e) alter |
| 21 | Brauchst du einen $\qquad$ Mantel? <br> a) warmer <br> b) warme <br> c) warmes <br> d) warm <br> e) warmen |
| 22 | Das $\qquad$ Mädchen heisst Svenja. <br> a) schön <br> b) schönes <br> c) schöne <br> d) schöner <br> e) schönen |
| 23 | $\begin{array}{llllll}\text { Er hilft den } & \text { Kindern. } & & \\ \text { a) hungrigen } & \text { b) hungrige } & \text { c) hungriges } & \text { d) hungriger } & \text { e) hungrig }\end{array}$ |
| 24 | Sie lernen die $\qquad$ Regeln. <br> a) wichtiger <br> b) wichtige <br> c) wichtig <br> d) wichtigen <br> e) wichtiges |
| 25 | Sein $\qquad$ Bruder ist acht Jahre alt. <br> a) kleines <br> b) kleiner <br> c) kleine <br> d) klein <br> e) kleinen |
| 26 | Sie gratuliert den $\qquad$ Freunden. <br> a) erfolgreichen <br> b) erfolgreich <br> c) erfolgreiche <br> d) erfolgreiches <br> e) erfolgreicher |
| 27 | Die Krankenschwester hilft $\qquad$ Babys. <br> a) kleines <br> b) kleiner <br> c) kleinen <br> d) kleine <br> e) klein |
| 28 | Ich lese das $\qquad$ Lesestück. <br> a) schweres <br> b) schwerer <br> c) schwere <br> d) schwer <br> e) schweren |
| 29 | Seine Freundin kauft ein $\qquad$ Auto. <br> a) kaputtes <br> b) kaputte <br> c) kaputter <br> d) kaputt <br> e) kaputten |
| 30 | Mein Hund trinkt das $\qquad$ Wasser. <br> a) frischen <br> b) frische <br> c) frischer <br> d) frisch <br> e) frisches |


| 31 | Brauchst du ___ Kreiden. |
| :---: | :---: |
|  | $\begin{array}{lllll}\text { a) neuen } & \text { b) neu } & \text { c) neuer } & \text { d) neues } & \text { e) neue }\end{array}$ |
| 32 | Ein $\qquad$ Bauernhaus gehört Familie Braun. a) alte b) alt <br> c) alter <br> d) altes <br> e) alten |
| 33 | Ich schenke der $\qquad$ jungen Frau eine Blume. <br> a) hübsch <br> b) hübsche <br> c) hübschen <br> d) hübscher <br> e) hübsches |
| 34 | Glaubt ihr nicht $\qquad$ netten Menschen <br> a) den <br> b) der <br> c) das <br> d) die <br> e) des |
| 35 | Warum kaufst du das $\qquad$ Auto? <br> a) altes <br> b) alten <br> c) alter <br> d) alte <br> e) alt |
| 36 | Auf dem Bild sehen wir einen $\qquad$ Frosch. <br> a) dicke <br> b) dick <br> c) dickes <br> d) dicker <br> e) dicken |
| 37 | Sie spielen unter dem $\qquad$ Baum. <br> a) gross <br> b) grossen <br> c) grosser <br> d) grosse <br> e) grosses |
| 38 | Wolfgang bringt mir $\qquad$ Stühle. <br> a) braun <br> b) brauner <br> c) braunen <br> d) braunes <br> e) braune |
| 39 | Meine Tante ist eine $\qquad$ Künstlerin. <br> a) berühmt <br> b) berühmter <br> c) berühmte <br> d) berühmten <br> e) berühmtes |
| 40 | Jedes Jahr erscheinen $\qquad$ Bücher auf dem Markt. <br> a) neues <br> b) neue <br> c) neuer <br> d) neu <br> e) neuen |
| 41 | Der $\qquad$ Rock gehört dem Mädchen. <br> a) langer <br> b) langen <br> c) langes <br> d) lange <br> e) lang |
| 42 | Für solche $\qquad$ Menschen können wir nichts machen. <br> a) lustiger <br> b) lustigen <br> c) lustiges <br> d) lustig <br> e) lustige |
| 43 | Die Ärztin hilft dem $\qquad$ Mann. <br> a) krank <br> b) kranken <br> c) krank <br> d) kranke <br> e) kranker |
| 44 | Der Lehrer gibt $\qquad$ fleissigen Studenten ein Buch. <br> a) der <br> b) dem <br> c) des <br> d) die <br> e) den |
| 45 | Der Hund gehört einer $\qquad$ Frau. <br> a) reicher <br> b) reich <br> c) reiche <br> d) reichen <br> e) reiches |
| 46 | Die $\qquad$ Katzen leben im Wald. <br> a) gefährlicher <br> b) gefährliches <br> c) gefährlichen <br> d) gefährlich <br> e) gefährliche |
| 47 | Ihr kauft die $\qquad$ Zeitung. <br> a) neue <br> b) neuer <br> c) neues <br> d) neuen <br> e) neu |
| 48 | Die $\qquad$ Pferde sind schneller als die anderen. <br> a) weisse <br> b) weissen <br> c) weisser <br> d) weisses <br> e) weiss |
| 49 | Die Leute testen $\qquad$ Autos. <br> a) billiger <br> b) billiges <br> c) billig <br> d) billigen <br> e) billige |
| 50 | $\qquad$ Wolf wartet im Wald. <br> a) gross <br> b) grosse <br> c) grosses <br> d) grosser <br> e) grossen |


| 51 | Gisela hat $\qquad$ Tiere bekommen. <br> a) wilde <br> b) wild <br> c) wildes <br> d) wilder <br> e) wilden |
| :---: | :---: |
| 52 | Meine Tante öffnet $\qquad$ schwarzen Türen. <br> a) den <br> b) der <br> c) die <br> d) das <br> e) des |
| 53 | Hier wohnt $\qquad$ fauler Mann. <br> a) einen <br> b) ein <br> c) einer <br> d) eines <br> e) eine |
| 54 | Wer hat die $\qquad$ Pakete gebracht? <br> a) leer <br> b) leere <br> c) leeres <br> d) leeren <br> e) leerer |
| 55 | Möchtest du $\qquad$ Taschentücher? <br> a) saubere <br> b) sauberen <br> c) sauberes <br> d) sauber <br> e) sauberer |

