

## Effect of Online Learning Objects on Academic Achievement and Transfer Skills

### Online Öğrenme Nesnelerinin Akademik Başarı ve Transfer Becerilerine Etkisi\*

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**ABSTRACT:** This research aims to determine the effect of learning method enriched with learning objects on students' academic achievement and transferable skills in foreign language teaching. Another purpose of the study is to examine what the experimental group students' attitudes towards learning objects, the method and teaching process are. To obtain the data for the research, mixed research method, in which quantitative and qualitative research methods were used in combination, was applied. Experimental design to collect quantitative data and the semi-structured interview technique to collect the qualitative data were used in order to support and explain the results obtained from the qualitative data. For data analysis, Analysis of covariance (ANCOVA) was used in order to determine the differences between the control and experimental groups. According to the findings of the study, it has been concluded that both of the methods of teaching English enriched with learning objects and traditional way of teaching English increased the success in a great deal. It has been realized that method of teaching English with Learning objects increased the level of transferable skills more than that of traditional one.

**Keywords:** Learning objects, english language teaching, educational technology, e-learning,

**ÖZ:** Bu araştırmanın amacı; yabancı dil öğretiminde öğrenme nesneleriyle zenginleştirilmiş öğrenme yönteminin öğrenci akademik başarı ve transfer becerileri üzerine olan etkisini belirlemektir. Araştırmanın bir diğer amacı ise, deney grubu öğrencilerinin araştırmada kullanılan yöntem, öğretim süreci, süreç içerisinde kullanılan öğrenme nesnelere yönelik görüşlerinin neler olduğunu incelemektir. Araştırmanın amacına yönelik verileri elde etmek için karma yöntem (mixed method research) olarak adlandırılan nicel ve nitel araştırma yöntemlerinin birlikte kullanıldığı araştırma modeli kullanılmıştır. Araştırmada nicel ve nitel veriler birlikte işe koşulmuştur. Araştırmanın nicel verilerini toplamak için deneysel desen, nicel verilerden elde edilen sonuçları desteklemek ve açıklamak amacıyla gerçekleştirilen nitel boyutta ki verileri toplamak için ise için yarı yapılandırılmış görüşme tekniğinden yararlanılmıştır. Araştırmada kontrol ve deney grupları arasındaki farklılıkları belirlemek üzere veri analizinde kovaryans analizi (ANCOVA) kullanılmıştır. Araştırmada elde edilen bulgulara göre öğrenme nesnelere ile desteklenmiş İngilizce öğretimi ile geleneksel yöntem ile gerçekleşen İngilizce öğretiminin öğrencilerin akademik başarılarını arttırmıştır. Öğrenme nesnelere ile gerçekleştirilen İngilizce öğretiminin geleneksel öğretime göre öğrenci transfer becerilerini daha yüksek seviyede gerçekleştirdiği görülmüştür. Araştırmaya katılan öğrencilerin öğrenme nesnelere yönelik tutumlarında olumlu artış olduğu görülmüştür.

**Anahtar sözcükler:** Öğrenme nesnelere, ingilizce öğretimi, eğitim teknolojisi, e-öğrenme

## 1. INTRODUCTION

The objects are pieces of software, similar to physical objects in the real world such as books, pencils, etc., having specific properties and behavior. Learning objects are software objects with education purposes. The learning objects reveal themselves when we cover a piece of information with another explanatory piece of information. Learning objects are entities, which are whole alone, yet at the same time, parts of a whole. The underlying logic of the objects is that materials developed for education purposes can be reused in different contexts or for different goals or by different people (Karaman, 2007).

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Learning objects are bits of information, prepared to be utilized in classroom for teaching purposes, which are constituted by files containing text, graphic, sound, video or interaction. 'Learning Objects' are a concrete product of the studies conducted on with a purpose of obtaining highest level of efficiency from the information technology and of using such technology in the field of especially education (Wiley, 2000). Described as "digital resources being used to promote learning" in the most general term, learning objects, in its structure, enable the utilization in both classroom environments where face-to-face teaching occurs, and in over-increasing online applications (Türel, 2008). Learning objects have advantages that cannot be yielded from the conventional teaching materials. Knowledge can be conveyed through various means in a simple learning object so that students can study and examine a subject from different perspectives. Students, thanks to the interactive and attention-drawing objects, get a chance to practice while learning (Barit, 2004).

Likewise, learning objects can be a course unit, a course or a subject. An extract from an interview, a scene from an incident, an interactive animation, an educational play or a drawing can be a learning object. The most striking feature of learning objects in the sense of utilization for teaching purposes is their reusability. They can be used in quite many lessons and learning scenarios (Saum, 2006). Standard structure of learning objects allows easily being employed by different teaching management systems and similar application. Moreover, they are seen to have been quite effective in terms of pedagogy (Uzunboylu, 2002).

The needs of learner are now so many that cannot be satisfied by merely traditional methods within a boundary-limited teaching-learning atmosphere and technological improvements have stepped in to meet such needs with a quick and ever-growing infrastructure. As a result, a great has occurred in design, development of teaching materials and access to them by those having a desire to learn. According to Prensky (2001), "Students in today's world have been undergoing a radical change and they are not, any more, the learners of the education system we have designed to educate them." This new group of learners defined as "digital natives" by Prensky are able to use their skills of using the technology, they have acquired mostly in young age, in learning environments in addition to many other fields and demand conditions and environments where they will be able exhibit this skills of theirs.

This demand encourages the designers to develop teaching environments where the learners can be more active and use the technology in a much more advanced level and a good deal of international scientific research is underway to this end. Though the knowledge transfer via conventional teaching means is still in application, new methods and techniques are increasingly emerging. Current education systems should get themselves free from uniform teaching and adapt to changing circumstances by taking into consideration evolving and different needs and interests of learners. For Reigeluth (1999), education systems should take the learner needs as the center of learning process and arrange accordingly rather than standardizing learning in the way students learn the same content in the same manner. Today's students can gain benefits by improving their critical thinking, problem-solving skills and reasoning (Jonassen, Howland, Moore, & Marra, 2003). At this point, new teaching models should be created where technology is benefited from to redesign the curricula to meet the learner needs, and in fact such models do emerge.

Review of the local and foreign publications and research has produced two quite different situations. It has been found out that foreign teaching designers and education scientists have numerous publications and applications on learning objects. It is possible, recently, to come across with these scientific papers in most journals of technology and education sciences. Yet again, the literature review has revealed that scientific researches on learning environments enriched with learning objects are rather rare in our country. This situation points at the fact that academic interest of instructional designers and educationists in Turkey in the learning objects is

quite low. One other problem area of the research is the foreign language teaching. Today, there is growing demand for foreign language education all across the globe. There is a significant problem in teaching of foreign language in our country. Difficulties in foreign language education have made it necessary for the teaching designers to investigate into this area.

Much better teaching of a foreign language and development of teaching materials which the learners can easily access to and reuse are quite important issues. Learning objects with the above-specified properties can also be used in teaching of foreign languages in addition to many other fields, and their significance cannot be ignored in terms of foreign language teaching. It is considered a need to conduct the necessary experimental applications and analyze the resulting findings from such applications to include these materials in the foreign language teaching curricula. Examination of conclusions of recent researches shows that issues such as how the teaching-learning processes and methods will be developed, used, and provided have become more important and serious studies must be done and precautions must be taken to this effect. Right at this point, the learning objects are the very teaching materials that can address to this need which requires attention. Therefore, we are in the opinion, by means of this study, that learning objects will be beneficial in the field of teaching English as a foreign language by their online use. Effect of online learning objects on academic achievement and transfer skills of students in foreign language education is the problem studied in this paper.

### **1.1. Goal**

The goal of this paper is to find out whether there is a significant different between the students of experimental group having foreign language education supported by learning objects and those in the control group put through conventional teaching (plain lecturing, question and answer, discussion) in academic achievement and transfer skills. The scope of the research has also included the opinions of students in the experimental group about method, teaching process, and learning objects used during the process, and whether the conclusions from the qualitative data collected in this part of the study account for and support the conclusions derived from the quantitative data.

### **1.2. Sub-goals**

1. Is there a meaningful difference between pretest achievement scores of the students in the experimental group who are taught in learning environment with the use of learning objects and pretest achievement scores of the control group students undergoing conventional teaching methods?

2. Is there a meaningful difference among the pretest and posttest scores of the students in the experimental group, and among the pretest and posttest scores of the students in the control group?

3. Is there a meaningful difference between posttest achievement scores of the students in the experimental group who are taught in learning environment with the use of learning objects and posttest achievement scores of the control group students undergoing conventional teaching methods?

4. Is there a meaningful difference between transfer test scores of the students in the experimental group who are taught in learning environment with the use of learning objects and transfer test scores of the control group students undergoing conventional teaching methods?

5. What are the opinions of the experimental group students who have learnt a foreign language supported with learning objects regarding the teaching method applied, teaching process and learning objects used within the process?

## 2. METHODOLOGY

### 2.1. Model of the Research

Mixed method research where quantitative and qualitative methods are used together has been employed in order to collect the data oriented at the goal of the research.

### 2.2. Study Group

The study group of this research is 40 students from the Grade 1 of the Vocational Higher School of Physical Therapy and Rehabilitation at the Fatih University. There are 1 experimental group and 1 control group in this research. Unbiased designation has been taken as basis for formation of the experimental and control groups. 13 male and 27 female subjects have participated in the research.

### 2.3. Data Collecting Tools

#### 1. Achievement Test in English Course

The researcher has prepared a multiple choice test comprising 33 questions, all with four possible answers, as "Passive Voice and Adjective Clause Achievement Test" in order to measure the achievement level of students in English course for the purpose of collecting quantitative data in the research. The achievement test has been applied as pretest, conducted to determine the readiness of students before the application, and posttest to determine the achievement of students on the subject. A table of specifications has been formed while preparing the achievement test and a draft test consisting of 45 questions based on the content validity and student gains has been submitted to the expert opinion. The number of questions has been reduced to 39 in line with the expert opinion. This achievement test of 39 items has been conducted on a preliminary testing group of 107 students and reliability and item analysis of the test has been performed. All items having a distinctiveness value higher than .30 have been included in the test scope. Items having a distinctiveness value below .30 have been excluded from the test and the test has been finalized by reducing the number of items to 33. Since 1 score is granted to items correctly answered and 0 score is granted to incorrectly or not answered items in measurement tools (Kuder-Richardson), KR-20 reliability formula has been used. "KR-20 reliability coefficient" of the achievement test of English course has been calculated as .76 at the end of the pretest. Average distinctiveness index of the test has been calculated as 0.47 based on the results of the item analysis made on the items of achievement test of English course. Item difficulty of the test has been found as .54.

#### 2. 4. Transfer Test

"Passive Voice and Adjective Clause" Transfer Test has been prepared as a multiple choice test of 20 questions with five possible answers in order to measure the transfer skills of the students in the English course. Transfer test has been administered 2 weeks after the posttest to establish the transfer levels of students for the subjects in English. A table of specifications has been formed while preparing the transfer test and a draft test consisting of 30 questions based on the content validity and student gains has been submitted to the expert opinion.

The number of questions has been reduced to 26 in line with the expert opinion. This transfer test of 26 items has been conducted on a preliminary testing group of 98 students and reliability and item analysis of the test has been performed. All items having distinctiveness strength higher than .30 have been included in the test scope. Items having a distinctiveness value below .30 have been excluded from the test and the scale has been finalized by reducing the number of items to 20. Since 1 score is granted to items correctly answered and 0 score is granted to incorrectly or not answered items in measurement tools (Kuder-Richardson), KR-20 reliability formula has been used. "KR-20 reliability coefficient" of the achievement test of English course has been calculated as .72 at the end of the pretest. Average distinctiveness index of the test has

been calculated as 0.43 based on the results of the item analysis made on the items of achievement test of English course. Item difficulty index of the test has been calculated as .52.

### **2.5. Semi-Structured Interview Form**

First of all, a draft form comprising 12 open-ended questions has been made up to develop the student interview form. A table of specifications has been prepared to ensure the content and structure validity of interview form, and opinions of experts from various universities have been sought. Number of open-ended questions in the draft form has been set to 7 according to the expert assessments. The interview form has been applied onto 3 students as pilot administration. The pilot administration has shown that questions in the interview form are comprehended by the students and an interview takes about 5-10 minutes. The interview form has been administered on 7 students in the experimental group.

### **2.6. Experimental Procedures and Process Followed**

Pieces of learning objects have been prepared prior to start of the application, under the scope of this research, based on the expert opinion and support. All learning objects have been prepared in conformity with the IEEE-LOM higher data standards. Content validity relating to the learning objects prepared have been checked by 3 Instructors of English who are expert in their fields and finalized after necessary adjustments. The objects prepared have been made available to online access of 20 students, who constitute the experimental group, via [englishmyself.com/moodle](http://englishmyself.com/moodle), domain of which has been registered by the researcher. The application of the research has taken 10 weeks in total.

A presentation of 30 minutes on the learning objects have been made for the students both in the experimental and control group at the week 1 of the implementation to inform them about the content and purpose of the learning objects. Following this information, the achievement test, reduced to 32 questions developed by the researcher and for which the pilot study has been performed, has been administered on both groups. At weeks 2, 3, 4 and 5 of the administration, online remote teaching, lasting 2 weeks per each subject, for “adjective clause and passive voice” over the learning objects for the students in the experimental group has been conducted. Access of the students to the learning objects has been monitored for 4 weeks and it has been made sure that all students access to the system at specified durations. While the students in the experimental group have received online teaching for this 4-week period, the control group has been taught through conventional methods in the classroom environment.

Posttest has been administered for the experimental and control group students at Week 6 of the study. For the opinions of the students in the experimental group on the study, a semi-structured interview form, prepared based on the expert opinion, has been given to fill in. Face-to-face interview with 7 of the students has been recorded and later on these data has been transcribed. The transfer test has been administered on both groups 2 weeks after the posttest and the data collection process has thus been completed.

### **2.7. The Analysis of the Data**

The research has employed covariance analysis (ANCOVA) for the purposes of data analysis in order to determine the differences between the control and experimental groups. The covariance analysis has been conducted based on the assumption that pretest has an impact on the posttest for this study. Pretest scores have been selected as the covariate and posttest scores have been corrected by adjusting the differences revealed by the regression analysis. Since the conformity of achievement pretest – posttest and transfer scale scores, used in the research, to the normal distribution is less than 50; number of samples, Shapiro-Wilk test has been employed to test the conformity of data to the normal distribution. T-test has been used while calculating

whether the scores of transfer scale differ according to the groups. The data has been analyzed using the SPSS 18.0 statistical package program.

### 3. FINDINGS

#### 3.1. Findings Relating to First Sub-Problem and Comments

The first problem of the study is “Is there a meaningful difference between pretest achievement scores of the students in the experimental group who are taught in learning environment with the use of learning objects and pretest achievement scores of the control group students undergoing conventional teaching methods?” The findings obtained are given in Table 1.

**Table 1. Shapiro-Wilk Test Results for Conformity of Scores to Normal Distribution**

Shapiro-Wilk	Statistic	df	Sig.
Achievement pretest score	,945	40	,052
Achievement posttest score	,953	40	,096
Transfer test score	,950	40	,076

It is seen that scores of both groups have normal distribution since the level of significance achievement pretest scores (.052), achievement posttest (.096) and transfer test (.076) scores are higher than 0.05 in the Shapiro-Wilk test ( $p > .05$ ). Achievement pretest scores of experimental and control groups have been compared. Values obtained from the t-test made for the pretest scores are given in Table 2.

**Table 2. Examination of Achievement Pretest Scores According to Groups**

Group	N	Mean	Std. Deviation	t	p
Experimental	20	32,500	8,80388	-1,535	,133
Control	20	36,875	9,21464		

As seen from Table 2, there is no statistically significant difference according to the groups in the pretest scores based on the t-test results conducted for pretest scores ( $p > 0.05$ ).

This finding shows that there is no significant difference between the average of achievement pretest scores in English of the subjects in the experimental group who undergone teaching with learning objects (32.50) and average of achievement pretest scores of the subjects in the control group who undergone traditional teaching (36.88). According to this, it is seen that behaviors of subjects in the experimental and control group with respect to Adjective Clause and Passive Voice are quite close to each other prior to the experimental process and both groups are equal, and it can be said that there is no difference regarding the English course subjects in terms of pre-conditional learning or introduction behaviors; that is to say, both groups are equal.

### 3.2. Findings Relating to Second Sub-Problem and Comments

The second problem of the study is “Is there a meaningful difference among the pretest and posttest scores of the students in the experimental group, and among the pretest and posttest scores of the students in the control group?” Results of this part in the study are given in Table 3.

**Table 3. Explanatory Statistics about Achievement Pretest-Posttest Scores**

Group	Experimental			Control			General		
	Ave.	N	Std. Dev.	Ave.	N	Std. Dev.	Ave.	N	Std. Dev.
Achieve. pretest score	32,50	20	8,804	36,88	20	9,215	34,69	40	9,167
Achieve. posttest score	63,59	20	9,739	66,25	20	9,597	64,92	40	9,638

Examining Table 3, there is significant difference between the pretest score (32.50) and posttest score (63.59) within the experimental group and between the pretest (36.88) and posttest scores (66.25) within control group. According to this, achievement of both groups has significantly increased. Based on these findings, it can be said that teaching English with both learning objects and traditional methods has an effect on the increase of student achievement.

### 3.3. Findings Relating to Third Sub-Problem and Comment

The third problem of the study is “Is there a meaningful difference between posttest achievement scores of the students in the experimental group who are taught in learning environment with the use of learning objects and posttest achievement scores of the control group students undergoing conventional teaching methods?” Comparison of achievement posttest scores are given in Table 4.

**Table 4. Comparison of Achievement Test Posttest Scores of Subjects in Experimental and Control Group**

Group	Exper.			Control			General		
	Ave.	N	Std. Dev.	Ave.	N	Std. Dev.	Ave.	N	Std. Dev.
Achiev. pretest score	32,50	20	8,804	36,88	20	9,215	34,6	40	9,167
Achiev. posttest score	63,59	20	9,739	66,25	20	9,597	64,9	40	9,638

Table 4 shows that there is no significant difference between the average of achievement posttest scores in English, of the subjects in the experimental group, who undergone teaching with learning objects (63.59) and the average of achievement posttest scores of the subjects in the control group who undergone traditional teaching (66.25). A similar study by Türel (2008) has not found out a significant difference between posttest scores of experimental group students and control group students, too. However, as seen in Table 10, there is a significant increase in achievements of both groups following the teaching. While the pretest score of experimental group was 32.50 prior to the experimental implementation, the posttest score has occurred as

63.59 after the implementation. This result indicates that learning levels of the group undergone through the experimental process has occurred in the desired level. While the pretest score of the control group with traditional teaching was 36.88, their posttest score has occurred as 66.25. In the same way, this shows that learning level of control group undergone traditional teaching has occurred in the desired level for the concerned lessons. The covariance analysis has been employed to determine whether there is a statistically significant difference for the groups in their posttest scores by taking the pretest scores as covariate. The findings obtained are given in Table 5.

**Table 5. Results of Covariance Analysis**

Source of Variance	Total of Squares	sd	Average of Squares	F	P
Pretest	445,016	1	445,016	5,299	,027
Group	9,319	1	9,319	,111	,741
Error	3107,230	37	83,979		
Total	172216,797	40			

According to the covariance analysis, when the pretest scores are taken as covariate, it has been concluded that there is not a statistically significant difference between the groups in terms of their posttest scores ( $p > 0.05$ ). Therefore, it is seen that the method applied on the experimental group has not yielded to a statistically significant change in the achievement. Another similar study conducted by Ceylan (2008) has produced higher posttest scores by the experimental group students, but it has been seen that this difference is not significant in the statistical measurement between the pretests and posttests. According to Farrell, K. & Carr, A. E. (2007), one of the circumstances where it will be correct to use ANCOVA is that the Pearson correlation coefficient between dependent variable and covariate is  $r > 0.3$  on a random pattern. The correlation coefficient between the pretest and posttest has been found as 0.375 ( $p < 0.05$ ). As stated in Chapter 3.5, taking the pretest scores as the covariate while examining the difference of posttest scores per the groups has more reinforced the research model (Büyüköztürk, 1998). According to this result, the use of analysis of covariance method has proven correct.

#### 3.4. Findings Relating to Fifth Sub-Problem and Comments

The fifth problem of the study is “Is there a significant difference between transfer scores of the students in the experimental group who are taught in learning environment with the use of learning objects and transfer test scores of the control group students undergoing conventional teaching methods?” Analyses of transfer test scores by groups are given in Table 6.

**Table 6. Examination of Transfer Test Scores by gGoups**

Group	N	Mean	Std. Deviation	t	p
Experi.	20	14,3000	1,97617	1,418	,164
Control	20	13,4000	2,03651		

According to the t test, there is not a statistically significant difference between the transfer scores of experimental and control groups ( $p>0.05$ ). The explanatory statistics regarding the transfer test are given in Table 7.

**Table 7. Explanatory Statistics Regarding the Transfer Test Scores**

Group	Experim.			Control			General		
	Ave.	N	Std. Devia.	Ave	N	Std. Devia.	Ave.	N	Std. Devia.
Achiev. pretest score	32,50	20	8,804	36,88	20	9,215	34,69	40	9,167
Achiev. posttest score	63,59	20	9,739	66,25	20	9,597	64,92	40	9,638
Transfer test score	71,50	20	9,881	67,00	20	9,881	69,25	40	10,162

As seen in Table 7 showing the transfer test scores of experimental and control groups, it is seen that the transfer test score (71.50) of the experimental group is higher than the score of control group (67.00). Thus, we can say that the learning and transfer levels of experimental group students who received English teaching with learning objects are higher than those of control group students who received conventional teaching about the relevant English topics.

### 3.5. Findings Relating to Sixth Sub-Problem and Comments

Qualitative data of the research has been collected by means of semi-structured questionnaire technique, with 3 male and 7 female students chosen among the experimental group to explain, make sense of and support the findings obtained from the quantitative data. We have asked the opinions of the subjects in the experimental group on learning foreign language with learning objects and tried to determine their opinions oriented at doing English learning with learning objects. In order to collect the qualitative data, **7 open-ended questions have been asked to the students about teaching method, teaching process and teaching activities used within the process** employed during teaching. Each student has been designated with a code name in the findings, without changing their own sentences, in order not to uncover the identities of students. Male students have been coded with the names as Mehmet, Mustafa and Faruk and female students as Yasam, Ay, Pinar, Hilal, Arzu and Gül, from whom the qualitative data have been collected.

### 3.6. Findings Relating Question 1

The question “What do you think about the contribution of learning objects on your understanding the topics of English grammar?” has been asked, and A major number of the

respondents stated that their understanding level of the English grammar topics with learning objects is not much different from learning occurring in classroom environment. Yet they also stated that freedom of studying as long as and whenever they want positively contributed to their learning according to their speed. Mehmet of the experimental group students expressed his opinions given below on his understanding the English grammar topics with learning objects.

*"... To me, learning English Grammar in classroom environment seems easier, but I think I can learn by this method as much as I could in the classroom as well. I guess I can learn in a way without depending on teacher."*

Another student, Mustafa, mentioned that both systems have their own advantages.

*"... Frankly, the positive side of learning English grammar on my own with learning objects is a great advantage for me. To illustrate, it is not quite possible to ask the teacher repeat a topic I do not understand in the classroom. But, there is not such a problem while studying grammar with learning objects. Naturally, I cannot say that learning English grammar in classroom environment is that bad."*

### **3.7. Findings Relating Question 2**

When the respondents were asked "Did you like practicing English with the learning objects," almost all of them labeled practicing English with learning objects "very enjoyable."

Ay, one of the respondents, expressed her opinions on this question as follows:

*"... In my opinion, doing English exercises and drills with learning objects is much more practical. I enjoyed doing the practices very much compared to doing on the textbook. The opportunity to look up any word that I did not understand during the exercises on online dictionaries facilitated my comprehension."*

### **3.8. Findings Relating Question 3**

When the respondents were asked "What do you think about the feedback you get while studying English with learning objects," most of them stated that they did not get any feedback during the application and feedbacks during learning would make their understanding the topics better. Hilal, another student, expressed her feelings as below.

*"... I had great fun while studying English with learning objects. But the only thing I found negative with the method is that sometimes I had to ask questions, yet there was no chance to do so. In fact, the instructions and explanations during the applications were sufficiently clear, but still I felt the need to ask questions."*

### **3.9. Findings Relating Question 4**

The respondents were asked "How would you evaluate your learning English with learning objects in the classroom environment with the English teacher," and about half of them said that they can better learn English in the classroom environment, and the other half stated that they learn better with the learning objects. However, the respondents who stated that they better understand English in the classroom environment said listening and reading with learning objects is more fun and instructive.

Saying *"... I find learning in the classroom better rather than with learning objects. But sometimes it is almost impossible to do listening and reading in the classroom because it is crowded. For this reason, I think doing listening and reading with learning objects is much better,"* Gül emphasized that although she prefers learning in the classroom, activities which are difficult to do in the classroom crowded environment can be done with learning objects.

### 3.10. Findings Relating Question 5

Almost all of the respondents stated when asked about the visuality of the learning objects remarked that they liked the visual aspects of the learning objects most. They said they liked especially the video and animation objects very much.

Mehmet told that the videos attracted his attention and that he also liked the audio lecturing very much.

*“... Hearing the voice of teacher while watching the videos on English grammar was quite useful for me. I have mostly found the rules in the English grammar boring, but this is the first time I liked the grammar. Video quality was relatively good. Learning objects in animation format was quite fun and informative”*

Faruk told that he liked the visuality of the learning objects most.

*“... This part, the visuality, was what I liked most. Videos and animations already made the study enjoyable for me. At least it is more enjoyable than watching the board without blinking.”*

### 3.11. Findings Relating Question 6

When the respondents were asked of their opinions on the practicality and user-friendliness of the learning objects, A great majority of them stated that it is easy to use the learning objects and explanatory phrases on the learning objects notably facilitated the usage. Furthermore, they uttered that free access to the learning objects is something good.

Yasam, one of the respondents, said that preliminary instructions on how to study with learning objects made it easier to work with them alone.

*“... That the teacher demonstrated in practice how to study with the learning objects in the class in advance made it easier for me to study. In fact, why and how to do what is clearly written on each video and animation. Moreover, it is very good to make use of such sources without paying any price.”*

Mustafa on the other hand expressed his opinion as the following.

*“... Topic by topic ordering and teaching of learning objects has facilitated my study. It is good that I can go back and repeat the past topics. For me, learning objects are quite practical and useful.”*

### 3.12. Findings Relating Question 7

The question “Would you like to continue learning English with the learning objects and why?” has been asked to the respondents. A significant number of them stated that they would like to continue with the learning objects because the learning objects make learning English a more enjoyable activity. Very less number of the respondents said that they would prefer learning English in the classroom environment since they cannot get any feedback or teacher support while studying with the learning objects.

## 4. DISCUSSION and RESULTS

### 4.1. Conclusions Derived Based on Findings Relating Achievement and Transfer Level

When compared, it has been seen that there is not a significant different between the average of achievement pretest scores of English of the subjects in the experimental group who received teaching with the learning objects and the average pretest scores of control group who got teaching through conventional methods. According to this, it has been concluded that initial behaviors of experimental and control group subjects are very close to each other and both groups are equal prior to the experimental process.

It has been seen that there is not a significant difference between the average of achievement posttest scores of English of the subjects in the experimental group who received teaching with the learning objects and the average posttest scores of control group who got teaching through conventional methods. However, there is a significant increase in the achievement of both groups after the teaching. A significant increase in the posttest scores of the experimental group has been observed following the experimental application. This finding refers to that the learning levels of the group who undergone the experimental process with the learning objects has occurred as desired.

There is a significant difference between the pretest score and posttest score of the control group who received conventional teaching. In the same way, this shows that learning level of control group undergone traditional teaching has occurred in the desired level for the concerned lessons. It has been seen that the transfer test score of the experimental group is higher than the transfer test score of the control, yet not a significant difference. Despite this, we can say that the foreign language teaching with the learning objects positively contributes to the transfer skills of the students.

#### **4.2. Conclusions Based on Findings Relating to Student Opinions on Learning Objects**

A great number of the respondents stated that their understanding level of the English grammar topics with learning objects is not much different from learning occurring in classroom environment. But they also said that freedom of studying as long as and whenever they want positively contributed to their learning according to their speed. According to this expression, foreign language teaching with the learning objects is at least effective as the conventional method.

Most of the subjects stated that they would better understand the topics if they received feedback. Based on this, it can be said that concurrent feedback while online teaching with the learning objects will promote and increase learning. About half of the subjects think that they can better learn the grammar topics in the classroom environment, and the other half stated that they learn better with the learning objects. However, the subjects who stated they could better comprehend the grammar in the classroom environment also complained about the difficulty of listening and reading activities during foreign language teaching in the classroom and they think these activities are more fun and instructive with the learning objects. From this point, we can conclude that grammar rules can be learnt with the learning objects as much as in the classroom and activities difficult to apply in crowded classrooms will be easier and more beneficial with the learning objects.

Almost all the subjects have the opinion that the visuality of the learning objects facilitates their learning. According to this, it can be argued that visuality of the learning objects positively contributes to the learning level. A great majority of the subjects say that user-friendly nature of and free access to the learning objects make positive contributions to their learning as well. In this case, free offer of learning objects to the students can be said to positively contribute to their learning.

The following suggestions have been developed based on the above-conclusions; it has been seen that foreign language education over an operating management system with learning objects is at least as effective as the conventional teaching methods. For this reason, foreign language education can be given online with learning objects. Likewise, the students have stated reading and listening activities which are hard to apply in crowded classroom environments can be better learnt with learning objects. Therefore, learning objects can be used while teaching with these two skills (reading-listening). The qualitative data obtained in the interviews with the students indicate that learning levels of students may be increased if feedback is given during the foreign language teaching with the learning objects. Considering the foregoing, the research to be

conducted with learning objects may cover teaching with these materials along with the feedback and reveal its effect on the learning level of the students.

## 5. REFERENCES

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## Genişletilmiş Özet

Bu araştırmanın amacı; yabancı dil öğretiminde öğrenme nesnelere ile zenginleştirilmiş öğrenme yönteminin öğrenci akademik başarı ve transfer becerileri üzerine olan etkisini belirlemektir. Araştırmanın bir diğer amacı ise, deney grubu öğrencilerinin araştırmada kullanılan yöntem, öğretim süreci, süreç içerisinde kullanılan öğrenme nesnelere yönelik görüşlerinin neler olduğunu incelemektir. Araştırmanın amacına yönelik verileri elde etmek için karma yöntem (mixed method research) olarak adlandırılan nicel ve nitel araştırma yöntemlerinin birlikte kullanıldığı araştırma modeli kullanılmıştır. Araştırmada nicel ve nitel veriler birlikte işe koşulmuştur. Araştırmanın nicel verilerini toplamak için deneysel desen, nicel

verilerden elde edilen sonuçları desteklemek ve açıklamak amacıyla gerçekleştirilen nitel boyutta ki verileri toplamak için ise için yarı yapılandırılmış görüşme tekniğinden yararlanılmıştır. İki faktörlü deneysel bir desen uygulanmıştır. Faktörlerden biri tekrarlı ölçümler (ön test, son test, izleme testi) diğeri de farklı gruplar (deney ve kontrol grubu) olarak belirlenmiştir. Bu modelde kontrol ve deney grubunda yer alan katılımcılar seçkisiz olarak belirlenmiştir.

Araştırmada, öğrencilerin akademik başarılarını ölçmek için 33 sorudan oluşan İngilizce Dersi Başarı Testi kullanılmıştır. Öğrencilerin transfer becerilerini ölçmek 20 sorudan oluşan Transfer Testi kullanılmıştır. Öğrenci görüşlerini ortaya koyabilmek için 7 açık uçlu sorudan oluşan yarı yapılandırılmış görüşme formu kullanılmıştır. Araştırmanın çalışma grubunu 2011-2012 Eğitim-öğretim yılı Bahar döneminde Fatih Üniversitesi Fizik Tedavi ve Rehabilitasyon Yüksekokulu Bölümünden 1.sınıf İngilizce II dersini alan 40 kişilik öğrenci grubu oluşturmaktadır.20 kişilik deney grubu öğrenme nesnelere destekli İngilizce Öğretimine, 20 kişilik kontrol grubu ise geleneksel İngilizce öğretimine tabi tutulmuşlardır. Hazırlanan nesnelere araştırmacı tarafından [englismyself.com/moodle](http://englismyself.com/moodle) üzerinden deney grubunu oluşturan 20 öğrencinin çevrimiçi ulaşımına açılmıştır. Araştırmanın uygulanması toplam olarak 10 hafta sürmüştür.

Araştırmada kontrol ve deney grupları arasındaki farklılıkları belirlemek üzere veri analizinde kovaryans analizi (ANCOVA) kullanılmıştır. Ön test- son test ve transfer ölçeği puanlarının normal dağılıma uygunluğu test etmek için Shapiro-Wilk testi kullanılmıştır. Tutum ölçeği ve transfer ölçeği puanlarının gruplara göre farklılık gösterip göstermediği hesaplanırken t-testi kullanılmıştır. Veriler, SPSS 18.0 istatistik paket programı kullanılarak çözümlenmiştir. Araştırmada elde edilen bulgulara göre öğrenme nesnelere ile desteklenmiş İngilizce öğretimi ile geleneksel yöntem ile gerçekleşen İngilizce öğretiminin öğrencilerin akademik başarılarını artırdığı fakat her iki yöntem karşılaştırıldığında öğrenci başarısına etkileri bakımından aralarında anlamlı bir fark olmadığı sonucuna ulaşılmıştır. Öğrenme nesnelere ile gerçekleştirilen İngilizce öğretiminin geleneksel öğretime göre öğrenci transfer becerilerini daha yüksek seviyede gerçekleştirdiği görülmüştür. Araştırmaya katılan öğrencilerin öğrenme nesnelere yönelik tutumlarında olumlu artış olduğu görülmüştür. Ayrıca deney grubu öğrencilerinin büyük çoğunluğu İngilizce dilbilgisi kurallarını sınıf ortamında daha iyi öğrenebildiklerini belirtmiştir. Ancak deneklerin büyük kısmı, kalabalık sınıflarda yabancı dil öğretilirken dinleme ve okuma aktivitelerini yapmanın çok zor olduğunu ifade ederek, bu aktiviteleri öğrenme nesnelere ile yapmanın daha eğlenceli ve öğretici olduğunu düşünmektedirler.

Deneklerin büyük bir bölümü, öğrenme nesnelere ile İngilizce dilbilgisi konularını anlama düzeylerinin sınıf ortamında gerçekleşen öğrenmeden çok farklı olmadığı görüşünü belirtmişlerdir. Fakat kendi hızlarına göre, istedikleri kadar ve istedikleri zaman çalışabilmelerinin öğrenmelerine olumlu katkısı olduğunu belirtmiştir. Bu duruma göre, öğrenme nesnelere ile yabancı dil öğretimi en az geleneksel yöntem kadar etkilidir. Deneklerin çoğu geribildirim alabilmeleri halinde konuları çok daha iyi anlayabileceklerini ifade etmişlerdir. Buna göre, öğrenme nesnelere ile çevrimiçi öğretim yaparken eşzamanlı geribildirim yapılmasının öğrenmeyi teşvik edeceği ve artıracığı söylenebilir. Deneklerin yarıya yakın bölümü dilbilgisi konularını sınıf ortamında daha iyi öğrenebileceklerini, diğer yarısı öğrenme nesnelere ile daha iyi öğrendiklerini düşünmektedir. Ancak sınıf ortamında dilbilgisini daha iyi anladıklarını belirten denekler kalabalık sınıflarda yabancı dil öğretilirken dinleme ve okuma aktivitelerini yapmanın çok zor olduğunu ifade ederek, bu aktiviteleri öğrenme nesnelere ile yapmanın daha eğlenceli ve öğretici olduğunu düşünmektedirler. Bu durum dilbilgisi kurallarının sınıfta öğrenilebileceği gibi öğrenme nesnelere ile de istenen seviyede öğrenilebileceği ve kalabalık sınıflarda uygulanması oldukça güç olan aktivitelerin öğrenme nesnelere ile daha kolay ve faydalı olabileceği sonucuna ulaşılabilir.

Deneklerin tamamına yakını öğrenme nesnelere'nin görselliğinin öğrenmelerine olumlu katkı sağladığını düşünmektedirler. Buna göre öğrenme nesnelere'nin görselliğinin öğrenme düzeyine olumlu katkıda bulunduğu söylenebilir. Deneklerin büyük bir kısmı öğrenme nesnelere'ni kullanmanın kolay olması ve öğrenme nesnelere'ne ücretsiz ulaşabilmelerinin de öğrenmelerine olumlu katkı sağladığını düşünmektedirler. Bu durum, öğrenme nesnelere'nin öğrenenlere ücretsiz sunulmasının öğrenmelerine olumlu katkısının olduğu söylenebilir. Yukarıdaki sonuçlar dikkate alınarak şu öneriler geliştirilmiştir; Öğrenme nesnelere ile bir işletim yönetim sistemi üzerinden verilecek yabancı dil öğretimi en az geleneksel öğretim kadar etkili olduğu görülmüştür. Bu sebepten ötürü, yabancı dil öğretimi öğrenme nesnelere ile çevrimiçi olarak öğretilmelidir. Yine Öğrencilerin kalabalık sınıf ortamında uygulanması oldukça güç olan okuma ve dinleme aktivitelerini öğrenme nesnelere ile yaparak daha iyi öğrendiklerini ifade etmişlerdir. Dolayısıyla, özellikle bu iki beceri(okuma-dinleme) ile ilgili öğretim yapılırken öğrenme nesnelere'nden

yararlanılabilir. Öğrencilerle yapılan görüşme neticesinde ulaşılan nitel veriler göstermektedir ki, öğrenme nesnelere ile yabancı dil öğretimi yapılırken öğrencilerin geri bildirim almaları sağlandığı takdirde öğrenme düzeyleri artırılabilir. Bundan ötürü, öğrenme nesnelere ile ilgili yapılacak araştırmalarda bu materyallerle öğretim yapılırken öğrencilerin geribildirim alabildiği uygulamalar yapılabilir ve bunun öğrenme düzeylerine etkisi ortaya koyulabilir.

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