



Implementation of flipped education into Turkish EFL teaching context^{*}

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Abstract

This study aims to search for the effect of Flipped Classroom/Education (FC) on academic success and retention of knowledge in EFL context and learner opinions about this new teaching approach. Research includes two groups studying at compulsory English preparation class in 2013-2014 academic year. The research employs a quasi-experimental method with a pre-test post-test control group design. The tests that were developed by the researcher were used to collect the quantitative data. Focus group interviews were carried out in order to collect personal opinions of students about FC and descriptive analysis were done on collected data. The test scores of experiment group taught through FC were higher than the control group taught through Traditional Education (TE) method and the difference was statistically significant. The rate of the positive comments on FC was 73.77% while the rate of negative comments was 17.39%.

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1. Introduction

Constructivist approach in which the individual is in the focus of education does not need to sacrifice the content while trying to make learning easier and more effective. Although we might think that all educators will adopt this approach easily due to the benefit given in the previous sentence, the educators tend to keep away the idea of teaching by taking into consideration all individual differences (different learning speed, motivation levels, cognitive skills, etc.) that students bring to the class in a limited time. Therefore, teachers should save time and students should start taking over their learning responsibility. In this point, FC that brings together individual based education idea of constructivism and the technology seems to be one of the solutions to that problem. FC requires students to spend some of their out of school time for schoolwork and aims to make best use of school time. It employs the technology and its popularity among students to realize this aim. The technology eliminates dependency on time and place between teacher and student, student and student and most importantly student and information, and keeps schools and libraries open 24/7.

^{*} This study is a summary of the MA thesis entitled "Evaluating flipped classroom/education method in English teaching" written by the first author and under the supervision of the second author.

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1.1. Literature review

What is FC?

The definition of FC is given as follows by “Flipped Learning Network (FLN)”: Flipped Learning is a pedagogical approach in which direct instruction moves from the group learning space to the individual learning space, and the resulting group space is transformed into a dynamic, interactive learning environment where the educator guides students as they apply concepts and engage creatively in the subject matter. Increasing student-teacher interaction in class is the factor that forms the success (may be also the difference) of FC as replacing the time when the content is presented and homework is done with each other is not a new idea (Kachka, 2012); this situation is redefined and improved thanks to new technologies. On the other hand, Johnson (2013) warns that FC “should be viewed as a mindset rather than a pedagogy” and that “educators are continuing to experiment with the flipped classroom strategies to meet their curricular needs” (cited by Larsen, 2013). FC was implemented in 2008 by Jonathan Bergmann and Aaron Sams who worked at Woodland Park High School as chemistry teachers for students who did not come to school for some reason. They used live video record and screen casting software to record their lectures, demonstrations and presentations with annotations and posted them on YouTube for students to access (Hamdan, McKnight, McKnight, & Arfstorm, 2014). Bergmann and Sams (2012) state that, by using a flipped classroom, the lecturer no longer must lecture for two hours while students take notes; class time no longer is used to lecture, but instead, is used for activities and problem solving (Acton & Knorr, 2013; Roach, 2013; Tucker, 2012; Jamaludin & Osman, 2014).

Although teachers apply FC in different forms, the content is the same (Bergmann and Wilie, 2012; Berrett, 2011; Talbert, 2012; Davies, Dean, & Ball, 2013). Individualized and differentiated learning is enabled by integrating direct instruction and constructivist learning pedagogies. Learning is not limited within the classroom; students develop with an appropriate pace and direct their efforts to the points that they personally need. Students are expected to take the responsibility of their own learning. The teacher’s role changes from the authority who organizes class time to a guide who provides asynchronous learning resources in case of need and effective FC classrooms share some common points: (1) students turn into active learners rather than passive listeners, (2) generally, technology enables putting less effort, (3) in-class time and traditional homework time change place and in-class time becomes more flexible in order to provide individualized learning, (4) the content includes real-life scenarios and (5) in-class time is used either for enabling students to understand difficult concepts or making them participate in high-level critical thinking and problem solving activities (Bergmann, Overmyer and Wilie, 2012). Brunsell and Horejsi (2011) state that Bergmann and Sams’ FC model creates a classroom environment in which students take their learning’s responsibility both in and out of classroom. Teachers who use this method find themselves working like a supervisor rather than information source and find time to help all students individually.

According to Bergmann and Sams (2012), in TE, students would usually come into class confused about some of the homework problems from the previous night. Generally, they would spend the first 25 minutes doing a warm-up activity and going over those problems that the students did not understand. They would then present new content for 30 to 45 minutes and spend the remainder of the class with independent practice or a lab. However, in the flipped model, the time is completely restructured. Students still need to ask questions about the content that has been delivered via video, so they generally answer these questions during the first few minutes of class. This allows them to clear up misconceptions before they are practiced and applied incorrectly. The remainder of the time is used for more extensive hands-on activities and/or directed problem-solving time (Bergmann & Sams, 2012, p. 14).

FC vs. TE: Advantages and Disadvantages

TE which is also known as transmittal model and passive by nature assumes students as empty vessels into which knowledge is poured (King, 1993; cited by Shimamoto, 2012). Once the information is acquired, it is stored without relevance and left unchanged over time. Even though TE is a commonly used method, it does little to prepare today's students effectively for a future in which success relies on one's ability to think independently, solve unexpected problems and deal with complex issues. On the other hand, the constructivist model presents learning as an active, social process in which learners use their prior knowledge and experiences to build an individual understanding of new material (Brown, Collins, & Duguid, 1989; cited by Shimamoto, 2012). As a means to integrate the constructivist model into their classrooms, teachers are now utilizing technology to implement a blended learning method known as FC that shifts lectures out of the classroom and on to the internet in order to free up class time for collaborative activities. This inverted method combines the benefits of direct instruction and active learning to engage students in the educational process (Shimamoto, 2012).

One concern with the flipped classroom is how to enforce students actually doing their part and watching the requisite video or other materials at home (Kordyban & Kinash, 2013). Bergmann and Sams (2012) thought using a website where students would log in to view the video and would check the viewing log for participation but then a much simpler idea came out: checking the notes students take on papers, or make them write on online blogs or directly send to teachers while watching the videos. A very much like TE is applied to students that come to class without watching the videos. There are two computers at the back of the classroom for such students and they are allowed to watch them in the lesson. No viewing students who have to use class time to watch the video miss out on the tutorial time when the teacher walks around and helps students. Because all assignments are now done in class, these students have to complete their assignments at home as in TE. Students quickly realize that it is to their benefit to have the teacher as a resource when working on their assignments, and most take the time to view the videos at home so they can take advantage of the time with the teacher. According to Bergmann and Sams, this is a good motivator for most of the students (Bergmann & Sams, 2012, p. 97-98).

According to Ocak (2013), FC saves students from monotony of TE; gives them the opportunity of coming to class prepared and reviewing lectures unlimitedly and makes them take their own learning responsibility. The problems that students with learning disorders and personal differences face are minimized; in-class time is used much more effectively through activities such as problem solving, discussing, reinforcement, etc. What is more, the technological tools such as smartphones and tablet computers that are widely used by students in daily life are a widely used part of this method that increases students' motivation. Teacher finds a chance to easily monitor students' improvements and guide them while they try to make up their weak points and easily acts like a "guide" that is especially emphasized in constructivist approach as the teacher role. Another advantage of the method for the teacher is that s/he finds an opportunity to follow students' works also out of the classroom by social networks s/he creates. Although its all these positive sides, followings about the the method should be thought: i) as it is fairly new, it can cause reactions from students and parents if they are not informed carefully, ii) some students may not have smartphones, tablet or desktop computers, iii) it may take time for teachers to create lecturing videos, audio etc., iv) teachers that have been trained for TE might have discipline problems in individual or group works of students in class activities (Ocak, 2013, p. 326-327).

In the light of all information provided above, it can be concluded that the popularity of FC is increasing in the international literature and the main aim of it is using the time spent within and out of the classroom more effectively and productively although there are small differences in the way

educators apply it. While lecturing which includes lower level cognitive skills in Bloom's Taxonomy like remembering and understanding is the main activity in the classroom in TE, this situation is "flipped" and problem solving, experiments and doing exercises that require higher level cognitive skills in Bloom's Taxonomy like analyzing and creating replace lecturing. The classroom time relation of FC and TE with skills in Bloom's Taxonomy is shown below in Figure-1:

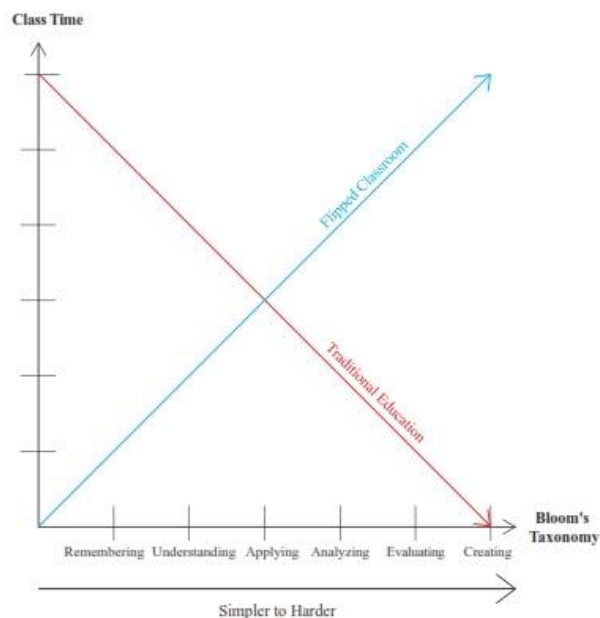


Figure 1. The classroom time relation of FC and TE with skills in Bloom's Taxonomy (Boyraz, 2014)

1.2. Research questions

This study has two main aims: i) to compare student success lectured via FC and a more traditional education that includes lecturing, board activities etc., ii) to collect student ideas on FC as it is a fairly new method. The research questions are:

- 1) Does FC provide better achievement test scores than TE?
- 2) What are the participants' perceptions on FC?

The interest in FC that is one of the newest teaching approaches includes computer but different from computer assisted language learning (CALL) and focuses on individualism is currently increasing in the literature. More applications and feedback are required to make this new method more understandable and better. This study that is summarized from a dissertation published in Turkish stands as an important piece of work as it transfers a lot of information about the new approach into the Turkish literature and gives idea about its effectiveness on academic success and student perceptions for the international literature.

2. Method

In this part, information about research design, participants, topic that was lectured to the groups, tests formed in order to collect data, interview questions and results of statistical procedures are given. The main aim of the study is to investigate if FC provides a more effective learning than TE. In other words, the study looks for the effect of FC on learning outcomes. Following this aim, quasi-experimental design was preferred. While control and experimental groups are formed from a sample pool randomly in true-experimental design, classes as whole become control and experiment groups in

experimental studies in educational context, as assigning students to groups randomly would disrupt classroom learning (Creswell, 2012, p. 309). Therefore, one of the two classes that participated to the study was randomly assigned as control and the other as experimental group, and both groups were lectured by the same lecturer. The control group was lectured through TE (meaning lecturing the topic at class and assigning homework) and experimental group through FC (meaning assigning video lectures to be watched at home before the class and doing assignments at school).

Interview questions were formed and focus group interviews were carried out in order to collect student opinions about FC that is the second aim of the study. When focus groups are administered properly, they are extremely dynamic. Interactions among and between group members stimulate discussions in which one group member reacts to comments made by another. This group dynamism has been described as a "synergistic group effect" (Stewart & Shamdasani, 1990; Sussman et al, 1991; cited by Berg, 2001, p. 236).

To summarize, this study mixed the quantitative and qualitative data collection methods through a pedagogical application and an interview.

2.1. Sample / Participants

The sample included two classes that consisted of 42 students -23 in Class-B and 19 in Class-C- and were lectured by the researcher,. While two students from Class-C did not take pre-test due to their absence on the day of application; these students were allowed to participate every other stage but their results were not included in the study. Focus group interviews that were done in order to collect qualitative data based on volunteer participating; 20 students from B and 14 students from C class took part in interviews.

2.2. Instruments

In the study, an achievement test was formed in order to collect quantitative data and interview questions were formed in order to collect qualitative data. In order to form the achievement test, the literature and source books were examined and then the test that included 50 multiple-choice questions with five choices was formed. The test was examined by three English lecturers from two different state universities in Turkey and found appropriate for pilot testing after minor changes. Before pilot testing, the test was given to 10 students that were similar to target group in order to be sure that all questions were understandable and find out how much time it required. Students taking this version of the test declared that each question was understandable and solved up to 30 minutes. After that, the pilot testing was done in two state universities in Turkey with 179 students that were similar to target group. KR-20 values of the test and item discrimination and difficulty of each question was calculated after piloting. When data from the achievement test was analyzed, it was seen that KR-20 which is the statistic of choice for determining the inter-item consistency of dichotomous items, primarily those items that can be scored right or wrong (such as multiple-choice items) (Cohen & Swerdlik, 2010, p. 148) value was .94 and item discrimination values changed from .46 to .79; so the test could be used with all items in pilot test.

In order to collect students' opinions about this method, eight interview questions were formed to ask about four different aspects of it: use of time, preparation and motivation for the lesson, effect on learning, reaching materials. After these eight questions were formed, they were sent to one expert in ELT and another expert in Curriculum and Instruction to be checked for content and language validity. After minor changes, questions were piloted with five students whose one lesson had been flipped. Students answered all the questions in a focus group interview which showed that questions were understandable for them. So, the last form of the interview questions became ready for data collection.

2.3. Data collection procedures

Following pre-test came the application. The control group was lectured without any preparation before the classroom. The content was presented through direct instruction and question-answer techniques that are elements of TE and examples were provided. In the rest of time left from lecturing, the exercises on the course book were done in order to provide a better learning. On the other hand, experimental group that would take the subject through FC was directed to a virtual classroom environment –Edmodo- in which they found the links to videos that lectured the topic as homework. The videos were chosen by the teacher/researcher from YouTube. There were nine videos whose durations changed from 6.31 to 10.57 minutes and they took 84 minutes to watch completely. The group was given a video quiz that they needed to complete while watching the videos to be sure that they watched them. Students brought video quizzes to the classroom next day and the lesson started by checking the answers of this quiz which included important points of the subject. The review of the topic was done through this quiz and problematic points were discussed with active participation of students and nearly no teacher intervention. The distribution of the time for the two groups is given below (Table-1):

Table 1. Use of in and out of Class Time in the Application

Control Group		Experiment Group	
Activity	Time (min.)	Activity	Time (min.)
Lecturing	100	Lecturing*	84
Question-Answer	20	Review of Video Quiz-Discussion	25
Exercises	60	Exercises	155
Total	180	Total**	264

*Done out of the classroom through videos

**Including the out of classroom lecturing

Only in-class time was used with control group and this resulted in teacher's being active in most of the classroom time by lecturing. The time when students were more active by question-answer and do exercises (80 mins.) equals to nearly 44% of the total classroom time (180 mins.). It is important to note that nearly 1/3 of exercise time was left for students to answer the questions. As a result, the time in which students were really active equaled to 40 minutes which was 22% of the total classroom time. On the other hand, experiment group started with a quick review of the subject by answering video quiz and then moved to the exercises. The time left for doing the exercises (155 mins.) equaled to nearly 86% of the total classroom time. As 1/3 of it left for students to do the exercises, total amount of time in which students discuss the answers of the exercises actively equaled to nearly 103 mins. and 57% of the total classroom time. When groups' active time is compared, the experimental group was two and a half time more active than the control group. Below is given the types and numbers of exercises solved by the two groups. Compared to the control group, the experimental group did two times more exercises so had two times more opportunity of practice (Table-2).

Table 2. Types and Numbers of Exercises Done

Types of Exercises	Number of Exercises	
	Control Group	Experiment Group
Multiple Choice	32*	83**
Unscramble the words to form sentences	6*	6*
Complete the sentences	28*	53*
Matching	12*	12*
Fill in the table	-	5***
Total	78*	159

*All from course book

**13 from video quiz, the rest from course book

***All from video quiz

2.4. Data analysis

2.4.1. Analysis of Quantitative Data

Shapiro-Wilk normality test was applied to the data coming from achievement test in order to decide whether to use a parametric or non-parametric test to find out if the difference between groups was statistically meaningful. Shapiro-Wilk (S-W) test gives better results compared to other normality tests when the sample is up to 35 (Shapiro, Wilk & Chen, 1968) and up to 50 (Razali & Wah, 2011; Yazıcı & Yolaçan, 2007). As the number of sample in this study was below 50, S-W test results were taken into consideration to test normality of the data. When the distribution was normal, Paired samples t test was used for comparing the data coming from the same group and independent samples t test was used for comparing data coming from different groups. When the distribution of the data was not normal, Mann-Whitney U test was used rather than independent samples t test and Wilcoxon test was used instead of paired samples t test.

2.4.2. Analysis of Qualitative (Interview) Data

After the application, focus group interview was carried out in order to collect students' opinions about FC. Participant groups each of which consisted of 4 or 5 students were formed within the experimental group randomly. Student answers were voice recorded and then transcribed. All 8 questions were taken as a sub-theme and students opinions about them were analyzed and interpreted in two ways: coding by researchers which represented the overall positive and negative comments of the students and data analysis through Nvivo qualitative data analysis program that provided more detailed frequency analysis.

Percentages of codes done by researchers were compared in order to determine coding consistency. According to Miles and Huberman, one way of increasing the reliability of qualitative data analysis is to work with another researcher in coding phase. Reliability of the independent coding by researchers was calculated through Miles and Huberman (1994, p. 64) formula. The consistency of positive ideas between researchers was 96.54% while it was 92.37% for negative ideas. According to Miles and Huberman (1994), mean of all coding should be above 90%. As the consistency of coding is 94.45% in the research, codes were accepted to be reliable.

3. Results

The findings from the quantitative and qualitative data were presented through tables below.

3.1. Quantitative Findings

Sub-problem: Is there a statistically significant difference between experimental group taking reported speech subject through FC and control group taking the same subject through TE in terms of academic success?

3.1.1. Comparing Students' Pre-Test Results in terms of their Academic Success

Pre-test was given to two groups in order to be sure that the groups were equal at the beginning and to understand the effectiveness of two teaching.

Table 3. Pre-test Results of the Two Groups

Group	N	S-W	X	SD	p
GC	23	.428	63.39	10.33	.560**
GE	17		61.24	12.19	

**p>0.05

The results of the pre-test show that the control group had similar scores ($M = 63.39$; $SD = 10.33$) with the experimental group ($X = 61.24$; $SD = 12.19$). As the means of the two groups were close to each other, it could be interpreted that their level was also close to each other. Since the S-W test result of pre-test was not significant ($S-W p = .428$; $p > .05$), data was accepted to show normal distribution. As a result, the difference between group means was tested through parametric independent samples t test. The difference between groups' means was not statistically significant ($p = .560$; $p > .05$).

3.1.2. Findings and Comments related to Post-Test

After completing the application, groups were given the post-test and data related to it and interpretations are given below.

Table 4. Post-Test Results of the Two Groups

Group	N	S-W	X	SD	p	r
GC	23	.638	75.65	7.96	.004*	.46
GE	17		83.12	6.96		

*p<0.05

According to the results of post-test, the students in experimental group taking the subject through FC had higher post-test scores ($X = 83.12$, $SD = 6.96$) than the control group ($X = 75.62$, $SD = 7.96$), $t(38) = 3.08$, $p = .004$. While SD of experimental group was higher than the control group in pre-test, it was lower in post-test which can be interpreted as scores in the experiment group came closer to each other. In other words, it can be interpreted that FC method brought students' academic success closer to each other. As a normal distribution was seen in S-W normality test ($S-W p = .638$; $p > .05$), independent samples t test was done to see if the difference between the means of two groups was

statistically significant. The t test result ($p = .004$) was meaningful in 0.05 level ($p < .05$). Effect size was medium ($r = .46$). FC was more successful than TE under the light of these findings.

3.1.3. Findings related to Retention Test

The two groups were given the post-test again two weeks later and findings and comments related to it are given in this part.

Table 5. Findings Related to Retention Test Results of the Two Groups

Group	N	S-W	MR	SR	M	U	p	r
GC	23	.003	16.76	385.50	75.00	109.500	.018	-.37*
GE	17		25.56	434.50	82.00			

* $p < 0.05$

The retention test results showed that the experimental groups' scores (Mean of Rank (MR) = 25.56, Sum of Ranks (SR) = 434.50, Median (M) = 82.00) were higher than the control group's scores (MR = 16.76, SR = 385.50, M = 75.00). As the data distribution was not normal (S-W $p = .003$; $p < .05$), the difference between groups' scores was tested by Mann-Whitney U test. The test results indicated that the retention of the knowledge in the group lectured through FC was better than the control group in a statistically significant level, $U = 109.500$; $p = .018$, $p < .05$. The effect size shows a medium level effect ($r = -.37$) (Table-5). The negative sign represents the direction of the relation when the relation of two variables is examined while it shows the coding of the groups in experimental studies like this (Field, 2009, p. 57).

Table 6. Post and Retention Test Results of the Groups

Group	Change	N	MR	SR	S-W	p
Experimental	Negative	8	9.38	75.00		
	Positive	8	7.63	61.00	.012	.716**
	No	1				
Control	Negative	9	13.67	123.00		
	Positive	12	9.00	108.00	.158	.757**
	No	2				

** $p > 0.05$

S-W normality test result showed that the data coming from the difference of post and retention test results of the experiment group was not normally distributed ($p = .012$; $p < .05$). While 8 of the students had a better re-post test score than post test (MR= 7.63; SR= 61.00), 8 had a worse score (MR= 9.38; SR= 75.00) and one student's score did not change. Although negative change was a bit higher than positive, Wilcoxon test result showed that it was not statistically significant in 0.05 level ($p = .716$) (Table-6).

3.2. Qualitative Findings

Sub-problem: What are the students' opinions about FC?

Four main themes -i) *Preparation and motivation for the lesson*, ii) *Use of time*, iii) *FC's effect on learning* and iv) *Reaching materials required by FC*- and 8 sub-themes that were derived from 8 questions were formed and students' opinions were coded accordingly. Below is given the number of words for each theme:

Table 7. Findings Related to Themes Coding

Number of Students: 34			
Themes	Number of Words		
	Positive	Negative	Neutral
Use of time	1375	220	-
Preparation and motivation for the lesson	3877	474	112
FC's effect on learning	7362	431	147
Reaching materials required by FC	568	525	-

The number of positive words used by the students for the first three themes was much bigger than negative ones. However, in the fourth theme which was about the technical part of the method –having a tablet, desktop or any kind of computer or smartphone, internet connection etc.- number of negative words was close to positive one.

The first question of the interview was about comparing the out of classroom time required by TE for homework and by FC for video lecturing. Of all the words coded for this theme (1595), 86% (1375) was used to indicate positive ideas that meant video lecturing of FC did not require more time than homework of TE while 14% (220) told the opposite. A big majority of the students stated that watching the lecturing videos instead of doing homework did not require more time than doing homework in TE. Of all the words coded for preparation and motivation for the lesson theme (4463), 87% (3877) was used to tell positive ideas while 10% (474) was used for negative ideas and 3% (112) was neutral. The second question of the interview was about how coming to class having prepared effected their motivation towards the lesson. A majority of the words used for answering it (86%) was positive while 14% was negative coded. It was also questioned how students perceived this new teaching approach, if they thought they learned better, if it affected them positively to do the exercises in class under teacher guidance and whether FC provided a teaching that was appropriate for their personal differences. Of all the words coded for this theme (7940), 92% (7362) was used to tell positive ideas while 6% (431) was used for negative ideas and 2% (147) was neutral. Students, with a big majority as can be understood from number of words, told that they learned better, it was better to be with teacher while dealing with questions and exercises and FC was more appropriate for personal differences such as visual or audio learners, learners with different learning paces than TE was. Students were also asked if they had had problems with internet connection to reach the videos and a kind of computer or smartphone to watch them as an important part of FC is video lectures. Of 1093 words coded for this theme, 52% (568) indicate positive ideas –no problem with technical part of FC- while 48% (525) state problems with either internet or tool. The most common problem stated by students was internet connection as students who stayed at a dormitory told they didn't have either internet connection or a fast one.

A good way to organize and discuss your research findings is to restate the hypotheses – research questions, one by one, and present the data collected to test each of them. It is your decision as to what data to present in a narrative form and what to present in tables or figures. Very often, the tables and figures are accompanied by a narrative explanation. You do not need to describe in words everything presented in a numerical or visual form. Instead, take the reader through the numerical and visual information. As the author, you should highlight the main findings, point to trends and patterns, and guide the reader through the information you present. For example, in a table displaying results from four independent-samples *t* tests, you can state that the second *t* value, which was used to test the second research hypothesis, was statistically significant at $p < .01$, and that the mean of the experimental group was eight points higher than the mean of the control group. You do not need to repeat in the narrative all the numerical information reported in the tables. Or, suppose your Results chapter includes a double-bar graph that is used to show trends and differences in the percentages of male and female teachers in preschool, elementary school, and high school. You may explain that the trend is for the percentage of male teachers to increase with grade level, whereas the percentage of female teachers decreases from preschool to high school.

4. Discussion

The results of the study reveals that FC had the potential to increase learning gains more than TE and the literature reveals similar results (Berrett, 2012; Fulton, 2012; Pennsylvania State University, 2011; Stone, 2012). A majority of the participants of this study state FC helped them learn better. According to participant statements, FC does not require more out of classroom time than TE does; it improves their motivation to prepare for the lesson and effects their learning positively. Frydenberg (2012) expresses in his study that FC did not improve his students' performance on paper, but students found watching videos before classes and doing the exercises in the classroom more motivating than listening the lecture in the classroom in TE. The new method has been highly accepted as effective for preparation and motivation for the lesson, use of time and effect on learning but students have had problems with technical requirements. The biggest problem with FC, according to participants, is lack of internet connection and/or a device to watch lecturing videos. Students whose some lessons were flipped asked about the things they liked and did not like about the method. They told that they liked teacher's being with them and ready to help while doing homework, being able to pause and rewind video lectures when they didn't understand; dealing with more difficult questions in class and asking more questions, watching the lecture at home and becoming competent about the topic in class. The only thing they did not like was not being able to understand the lecturing videos (Fulton, 2012). In this study, participants found FC motivating; doing exercises with teacher guidance was safer; beneficial to be able to rewind lecturing videos when they did not understand. They stated that video choice is very important and they might have problems if videos are not carefully selected.

Larsen (2013) states students who have been lectured through FC are more participating in terms of autonomous and cooperative learning and they are aware of this situation. Similarly, participants in this study express that FC is more appropriate to their personal features and enables them to be learners that are more independent. In his study in which students were taught through FC with an intelligent teaching system, Strayer (2007) found that students focused on the new intelligent teaching system instead of competence in the subject and learning was pushed behind. Students' excitement because of meeting with FC method for the first time was observed in this study also. Such a situation might be observed in similar studies and technology might obviate learning and undesired results might be faced. It should be noted that one of the main concerns by one of the participants about the

use of FC is not being sure what happens if the teacher decides to work less and leaves most of his responsibilities to students by telling that every information is in videos.

The study in which FC and TC were compared in Seattle University, FC provides an opportunity to use in-class time for problem solving individually and in groups. The teacher both lectured more subjects and students in FC group performed either equal or better performance with those in TE group; they showed better performance in design problems and easily adapted to FC and showed equal or more satisfaction with those in TE group (Mason, Shuman, & Cook, 2013). A majority of the participant in this study also expressed a high level of satisfaction of FC.

5. Conclusions

FC helps much by making students learn terms and definitions out of the classroom and spend their in class time to solve problems individually or in groups also being more active with teacher guidance and interaction. What is more, the technology element of FC is an indispensable part of modern students' life and not making use of its popularity among them causes lose of time and energy. Although FC is not a solution to every problem of modern education, it provides opportunities for educational principles required by modern age such as active learners, passive teachers, education and technology integration, etc. FC should be carefully examined and told to all partners of education, managers, policy makers, teachers students and parents. Need for the devices like tablet or laptop computers and internet service should be supported by institutions that plan to use FC method and students who are expected to take their own learning responsibility shouldn't be discouraged due to lack of technical requirements.

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Tersine eğitim modelinin Türk yabancı dil öğretim ortamında uygulanması

Öz

Bu çalışmanın amacı Tersine Eğitim yaklaşımının yabancı dil olarak İngilizce öğretiminde sınav başarısına ve bilginin kalıcılığına etkisini ve öğrencilerin bu yeni yöntem hakkındaki görüşlerini belirlemektir. Araştırmanın katılımcıları 2013-2014 yılında zorunlu İngilizce hazırlık eğitimi almakta olan iki sınıf oluşturmaktadır. Çalışmada ön test-son test kontrol gruplu desen kullanılmıştır. Veri toplama amacıyla, başarı testi ve odak grup görüşmelerinde kullanılmak üzere görüşme soruları oluşturulmuştur. Konuyu Tersine Eğitim yöntemiyle alan deney grubunun ortalaması istatistiki olarak anlamlı bir biçimde kontrol grubundan yüksektir. Deney grubunun yeni yöntem için genel değerlendirmeleri %73.77 iken olumsuz görüşlerin oranı %17.39 olarak belirlenmiştir.

Anahtar sözcükler: tersine eğitim; bilgisayar destekli dil öğretimi; İngilizce öğretimi

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