

اثر استخدام استراتيجيات التعلم المعكوس في تنمية التحصيل الدراسي لدى تلاميذ الصف السادس في مادة اللغة الانكليزية

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الملخص

هدف البحث الى التعرف على أثر استراتيجيات التعلم المقلوب في تنمية التحصيل الدراسي لدى تلاميذ الصف السادس الأساسي في مادة اللغة الانكليزية. اسخدم البحث المنهج شبه التجريبي. تكونت عينة البحث من 62 تلميذاً توزعوا بالتساوي على مجموعتين: مجموعة تجريبية و مجموعة ضابطة. تم تدريس المجموعة التجريبية وفق استراتيجيات التعلم المقلوب أما المجموعة الضابطة فقد درست وفق الطريقة الاعتيادية. وقد توصل البحث الى أنه توجد فروق ذات دلالة إحصائية بين متوسطي درجات المجموعة التجريبية والمجموعة الضابطة في اختبار التحصيل والفروق كانت لصالح المجموعة التجريبية.

واستناداً الى ما توصل اليه البحث من نتائج فإن الباحثة تقترح الآتي:

- 1- تشجيع المعلمين على تعليم مادة اللغة الانكليزية باستخدام استراتيجيات التعلم المقلوب لان بإمكانها رفع مستوى التحصيل الدراسي.
- 2- الاهتمام باستخدام ثقافة استراتيجيات التعلّم المقلوب بشكل واسع لانها طريقة لتعلم اللغة الانكليزية.
- 3- اختراع شبكات وتطبيقات للاجهزة الذكية تساعد على التعلم باستخدام استراتيجيات التعلّم المقلوب

Effect of Utilizing Flipped Learning Strategy on the Educational Achievement of the Sixth Pupils in English Language

Faten Kassem

Abstract

This research investigates the effect of utilizing the flipped learning strategy on the Educational Achievement of the Sixth pupils in English Language. The quasi-experimental design is utilized. The sample of the study consisted of 62 sixth-grade pupils who were chosen intentionally at Hashem Mansour School. They were equally divided into two groups: The experimental group who study by utilizing the flipped learning strategy, and the control group who study by the usual way. Outcomes of the research revealed that there are statistically significant differences between the means of scores of the experimental and control groups of sixth graders in the total achievement test for the experimental group. According to the outcomes of the research , the researcher suggests the following:

1. Teachers are advised to teach the English language course by utilizing the flipped learning strategy, as it can raise the academic achievement level.
- 2.A wide Utilizing the culture of the flipped learning strategy is recommended widely, because it is a way to learn the English language.
3. Creating websites and applications for smart devices that help to learn by utilizing the flipped learning strategy.

Effect of Utilizing Flipped Learning Strategy on the Educational Achievement of the Sixth Pupils in English Language

1. Introduction

Recently, the international educational system has witnessed rapid and sequential changes. The effects of such changes are reflected on how the developed and developing countries are interested in reforming and using new strategies in learning and teaching processes. Consequently, many countries attempted to make structural modifications on teaching methods in order to face the acceleration that is caused by the huge changes in knowledge and informational fields. Such challenges require a comprehensive review of the educational system of most countries in the world. This entails the need for a new syllabus to develop teaching processes. These approaches focus on the role of the learner and make him/her the center of learning process.

In light of the new role of the teacher and the spread of technology and the increasing demand for it, new teaching methods are required. These methods centered on the learner away from the traditional ones. So that the learner's activity, vitality and integration within the classroom is maintained all the time through educational and training activities. The new strategies in teaching must take into account the learner's motivation to learn. In this case the student's academic achievement will improve. The students will also improve their learning and increase their desires to study and their motivation towards it (Al-Silti, 2015, Al-Khalifa, 2013, Al-Mutawali, 2015; Hilla, 2012).

There is an urgent need for the emergence of the flipped learning strategy which is also called flipped classroom. This strategy tends to know some of the problems that may face students with short-term memory because their knowledge isn't kept for a long time. Therefore the idea of applying the flipped learning strategy was chosen in the educational process so that students will be able to remember, understand, and perceive long-term knowledge. This will be done through repeating scientific materials, utilizing modern teaching strategies to enhance learning, as well as the optimal use of class participation (Bolliger, Supankorn & Boggs, 2010).

2. Research Problem

As a teacher of English language for sixth graders I observed that the pupils' general level in the educational achievement was very low due to

several factors. Firstly, most of the teachers depend on the traditional methods in teaching English language. Secondly, there were no modern evaluation styles. That is the whole teaching–learning process was teacher–centered and there were no important roles for pupils. In addition, some teachers focus on traditional strategies because they don't know how to employ modern strategies. According to my knowledge there is also a lack of studies in Arabic that deal with the effect of utilizing the flipped learning strategy on academic achievement in the English language.

The researcher also showed an electronic questionnaire to groups of teachers and supervisors of English on a Facebook page. These groups included 100 teachers and supervisors. About 90 of them said that there is a weakness in the academic achievement of the sixth graders. Therefore I felt that it was very essential to integrate flipped-learning strategy in teaching English language for the sixth graders to meet their needs. As a result, this study was conducted as an attempt to show the effect of utilizing the flipped learning strategy on the academic achievement of sixth graders in the English language, in order to motivate students to learn English and raise their academic achievement levels.

Thus, the problem of the research could be summarized by the following question:

What is the effect of utilizing the flipped learning strategy on the educational achievement of the sixth graders in English language?

According to the above, the study problem can be formulated in the following questions:

1. What is the effect of teaching by utilizing the flipped learning strategy on the whole educational achievement in English language for the sixth graders in Homs?
2. What is the effect of teaching by utilizing the flipped learning strategy on educational achievement in the English language in relation to : remembering, understanding, applying, analyzing and evaluating levels according to Bloom's classification of sixth graders in Homs

3. Aim of Research

The research aims at examining the effect of the flipped learning strategy on the academic achievement of sixth graders in English language subject in Homs.

4. Research Hypothesis

The following hypothesis was tested at the significant level($\alpha= 0,05$):

There was no statistically significant score difference between the sixth graders in the experimental and control groups in the achievement test of the English language subject at the levels (remembering - understanding - application - analysis - evaluation) in Homs.

5. Research Significance

1.The results and recommendations of the study may benefit in developing and applying the flipped learning strategy in the classroom environment at schools in Syria.

2.It may shed light on the importance of the flipped learning strategy and its role in increasing interaction and raising the level of educational achievement among learners.

3.It may help those who were responsible for the educational process in Syria to identify the effectiveness of the flipped learning strategy and its role in increasing interaction and raising the level of educational achievement among sixth graders.

4.This study may guide teachers and educational decision-makers to develop curricula according to modern attitudes in the field of information and communication technology and in the field of education. So modern teaching strategies such as flipped learning strategy could be employed.

5.This study may emphasize the significance of self-learning using modern technologies for the learner and its role in the learning process.

6.It may direct the teacher to diversify the learning methods using various teaching methods that motivate students to self-working outside the school.

7. This study contributes to enriching Arab libraries with a study on flipped learning, as these libraries suffer from the lack of research in this field.

6. The study terms and procedural definitions

6.1.Effectiveness

Shehata and Al-Najjar (2003) define effectiveness as "the outcome of a desirable or undesirable learning that occurs in the learner as a result of a Learning process"(p. 55).

Effectiveness is defined procedurally: it is the amount of change that occurs in the achievement of the sixth graders in English language subject after using the flipped learning strategy. And it is realized from the difference between the experimental group students' scores in the achievement test (who studied by utilizing the flipped learning strategy) and the control group students' scores (who studied by utilizing the traditional method).

6.2. Flipped learning strategy

According to DeLozier and Rhodes (2017), flipped learning strategy is a modern strategy in which the teacher presents the content of a subject for students in several forms such as recorded lectures, videos, and electronic readings. So that students can review such materials and understand information before attending in the classroom. In classroom, the teacher starts providing opportunities to discuss, review, and analyze such information. Then, students start working in groups or individually to complete several activities or projects inside the classroom. These procedures lead to acquiring knowledge by moving from the memorization and understanding stages to the analyzing, applying, and producing stages with the supervision and guidance of the teacher.

6.3. Educational achievement

Al-Laqani and Al-Jammal (2003) define educational achievement as "the extent to which students understand what they have done from certain experiences through academic courses, and it is measured by the score that students obtain in achievement tests prepared for them"(p.47).

Educational achievement is procedurally defined as: the amount of information and knowledge that are acquired by students in the two groups (experimental and control groups) after studying the units of the second semester in the English language course, and it is measured by the achievement test which is prepared for this purpose.

7. Limitations of the Research

The research was carried out during the second semester of the academic year(2021/ 2022).

7.1.Human Limitations

The pupils of the research consisted of all sixth graders in the Directorate of Education in Homs. They formed the pupils of the research.

7.2.Time Limitation:

The research was conducted in the second semester / academic year 2021-2022.

7.3.Spatial Limitations:

The research was delivered to both groups in Hashem Mansour School.

8. Theoretical framework

Implementing flipped learning strategy

Shorman (2015) indicates that the flipped learning strategy focuses on flipping or inverting the teaching and learning processes. In traditional teaching environment, learning of new knowledge occurs in classrooms. Then, the student returns home and completes his/her homework. However, implementing flipped learning strategy enables students to learn new information at home through several technology tools and educational websites prepared and shared by teachers. For example, teachers prepare and share a video of 5- 10 minutes .

In addition, a teacher can use other technological tools to implement flipped classroom such as multimedia, social media websites, educational games, YouTube for Educational purposes, TED Talk, Khan Academy or other educational websites.

Asiksoy and Ozdamli (2016) demonstrated that flipped learning approach is a type of student-centered approach. So students could learn information of new lessons through an active way at any time and at home by using smart phones or computer devices such as iPads.

Those technology tools enable students to play back educational videos several times in order to understand the new information. In addition, it is possible to accelerate the educational videos to skip the parts that they are mastered in. In addition, it is possible to take notes. By implementing flipped learning strategy, the individual differences of students and performance can be improved. Boredom also will disappear, and excitement and enjoyment will increase.

After reviewing the educational materials, students attend in the classroom easily to apply what they have learned before at home .The teacher starts evaluating the levels of students' understanding and revising what they have learned at home. Then he/she presents the activities, and group projects to be performed in the classroom instead of spending classroom time in passive listening to the teacher's explanation. There is no homework in the flipped learning as students manage these homework in the classroom.

Alzein (2015) showed that blending such technologies does not achieve the strategy of flipped learning . Therefore, it is necessary to know the fundamentals or criteria on which the effective flipped learning is built. Such criteria include: 1) learning process is centered on the student who becomes the center of teaching and learning processes. 2) The teacher identifies the content that students will learn outside the classroom in order to invest the time of the classroom in applying what is prepared by students. 3) The role of teacher in the flipped learning is greater than his/her role in the traditional learning.

In classroom, the teacher provides immediate feedback for students, gives more activities and evaluates students' works.

Identifying flipped learning strategy

Flipped classrooms have been given many definitions. Referring to several studies related to this strategy, we will address some of them: Ali (2015) defines it as: "A form of blended learning, in which traditional classroom learning is integrated with e-learning, in a way that allows the lecture to be prepared via the web; for students to view it in their homes Before attending the class, the class time is devoted to solving questions and discussing assignments and projects related to the course (p.8) .

Al-Shahrani (2014) defined it as "a strategy that depends on changing the nature of teaching, making the student watch lessons outside the classroom via YouTube at any time and anywhere, and making the classroom for discussion and dialogue, and solving assignments"(p.18).

The flipped learning strategy is also one of the modern strategies that seek to integrate technology into the educational process, because it can diversify learning methods that are based on the Internet. So we can overcome traditional learning methods; It increases the positive interaction between the teacher and students, and between students themselves. It also reduces the absence of students, and the teacher becomes more aware about the students' abilities, in addition to providing the students with the opportunity to improve their educational achievement and achieving creativity in the learning process. One of the motivations of adopting the flipped learning strategy is the students' tendencies to tablets and smart phones, and this will increase their motivation towards learning (Al-Ahwal, 2016). In flipped learning, the learners teach themselves at home, using video lessons prepared by the teacher. And during the class they perform a series of activities and applications (Nwosisi, Ferreira, Rosenberg, & Walsh, 2016.)

flipped learning

According to DeLozier and Rhodes (2017) flipped learning strategy is a modern strategy in which the teacher presents the content of a subject for students in several forms such as recorded lectures, videos, and electronic readings. So that students can review such materials and understand information before attending in the classroom. In classroom, the teacher starts providing opportunities to discuss, review, and analyze such information. Then, students start working in groups or individually to complete several activities or projects inside the classroom. These procedures lead to acquiring knowledge and move

from the memorization and understanding stages to the analyzing, applying, and producing stages with supervision and guidance of the teacher.

Ali (2015) also sees that the flipped learning strategy focuses on the student in the educational learning process, and the teacher guides the students. This is demonstrated by the teacher by providing the content of the taught material in the form of lessons and topics that are recorded as videos and lectures. Those are sent to students via social network sites, so that they are employed by the student through various e-learning sources outside the classroom environment. Thus, this strategy is one of the strategies that combines face-to-face with web-based learning (self-learning and group learning). All these reverse of the roles of school and home according to the students' mental abilities, tendencies and desires (Metwally, 2015).

Therefore, the flipped learning strategy is one of the strategies that achieves modern learning style and uses advanced technology, without centralizing the place or time of learning.

It is noted from the previous definitions that all the mentioned researchers agreed on dividing it into two stages: the first one occurs outside the classroom, and the second one occurs inside the classroom. In the first stage, all studies agreed that it should be outside the classroom, and Ali (2015) and Khalifa (2013) emphasized that this stage should be particularly at home . According to the study of Al-Shahrani (2014) it was stated that this stage should be outside the classroom and it doesn't matter where the place is. That means that students can get the lessons anywhere and via any means.

All definitions of flipped learning strategy agreed that the second stage should be within the classroom, and that it is intended to conduct the activities and exercises that the student participates in within the classroom. The student should be the center of the educational process.

The flipped learning strategy is based on a foundation supported by the constructivist theory that is based on the learner, as well as active learning. The class turns into a workshop where activities, exercises, and assessment are practiced

(Bishop &Verleger, 2013, Johnson & Renner, 2012, Strayer, 2007) .

The flipped learning strategy is an educational form through which the teacher seeks to provide education that suits the needs of learners and the requirements of their ages away from traditionalism. In addition to reformulating the method of using time inside and outside the classroom. It is the result of the intersection of a number of teaching

strategies such as blended learning and inquiry learning that aim at focusing more on the learner and learning as well (Qeshta, 2016).

The Bases of the Flipped Learning Strategy

The flipped learning strategy is based on four main basis according to the study of (Al-Ruwais, 2016):

- The first basis is the Flexible Environment, symbolized by the letter (F), which means flexibility in educational systems and the multiplicity of options in teaching and assessment methods.
- The second basis is Learning Culture, symbolized by the letter (L), means a learning culture that adopts the philosophy of active learning that makes the learner an effective center in the educational process.
- The third basis is Academic Content (International Content) , symbolized by the letter (I), and it means the academic content designed in light of the mechanism of applying the flipped learning; This calls for re-designing and organizing the academic content by the teacher to ensure the success of its application, and to be supported by learner-centered strategies and active learning strategies.
- The fourth basis is the Professional Educators, symbolized by the letter (P), which means the able teacher who is prepared and developed professionally with the competencies necessary to implement the strategy.

Advantages of flipped learning strategy

According to Strohmeyer (2016) applying flipped learning strategy achieves many benefits. These benefits are:

- 1) -Making good use of classroom time by the teacher; so, he/she makes use of time in guiding and helping students.
- 2) -Enhancing the critical thinking, self- learning, building experiences, communication skills, and cooperation among students.
- 3) -Providing a technique to evaluate the students' understanding because tests and short tasks that students perform are indicators of weaknesses and strengths in their understanding of content.

Alshahrani (2014) added some other positives of flipped learning that include:

- 1) -Developing the role of teacher as a lecturer to become a guide and supervisor, and developing the role of student to become a researcher who participates in the teaching and learning processes.
- 2) -Helping students' self- learning according to their abilities and individual differences.

3) -Providing students with excited educational environment, and enhancing high thinking skills such as critical thinking skills. Al-Shahrani adds that flipped learning contributes to the application of group learning (cooperative learning) through school participation. And it takes into account individual differences between students by repeating the lesson more than once to retrieve information and knowledge. It also provides positive support for students with low achievement and those with special needs. (Al-Shahrani, 2014)

Alzein (2015) asserts that the flipped learning strategy is a modern technological solution for treating academic weaknesses of students and developing levels of their thinking skills. She added that the flipped learning strategy provides teachers with enough time to converse and discuss students in classrooms instead of memorization.

Furthermore, through applying the model of flipped learning the intellectual abilities of learners can grow up. By utilizing this method learners can develop their abilities and the flipped classroom is considered as one of the active practices that enable the learner to link between what is learned and his/her personal life and experiences. In such process, a learner will be able to link what he/she learns with his/her intellectual behaviors, until it becomes a part of his/her personality.

Obstacles of flipped learning strategy

Although flipped learning strategy has many advantages, Tully (2014) mentions some issues related to applying flipped learning strategy. These issues include that this teaching strategy depends on using internet and technological devices at students' homes. Therefore, it is difficult for students who have not such devices to benefit from this strategy. Further, it requires a motivated teacher who has the will to follow up students' progress. This requires providing additional working hours and effort by teachers. Furthermore, teachers should be professional in integrating modern technology in education. Therefore, implementing this strategy could be difficult for educators who are not qualified in using technology or communication skills.

Some obstacles may face the educational and learning processes while applying technology tools in the classroom. These obstacles include:

1) -The lack of devices and software used in recording and preparing lessons.

2) -The lack of teachers' skills in using the technology tools skillfully to develop teaching methods, motivation and communicating with students.

3) -The insistence of teachers to follow the traditional method in their teaching process. However, those teachers can be convinced through presenting successful practices of applying technology in the classroom compared with the traditional method .

9. Methodology and Procedures

9.1. Design of the Research

The quasi-experimental design was utilized to implement the flipped – learning strategy on a sample of sixth graders in order to investigate its effect in improving the experimental group pupils' achievement in the English language course. A pre-test and post-test were applied on the experimental and control groups. The experimental group studied by utilizing the flipped learning strategy, and the control group studied by the usual way.

9.2. Research Sample:

The community of the study consisted of all sixth grade students in the Directorate of Education in Homs who were registered in the academic year 2021-2022.

The sample of the study consisted of 62 sixth-grade students who were chosen intentionally at Hashem Mansour School. They are equally divided into two groups.

9.3. Research Instruments:

The following instruments have been designed to achieve the purpose of the study:

1- The second semester units are reformulated according to the flipped learning strategy. These units were applied by the researcher in order to present them to learners in the form of video clips. In this case it provides an opportunity for the teacher to practice activities and exercises in the classroom. It also helps to follow up and evaluate the performance of learners inside the classroom. The Active Presenter program was used for editing videos and some effects were added to help learners understand the material. The focus is on the objectives of the lesson, and not dividing it so that the learner would not be distracted while watching the videos. Videos were presented to computer specialists to modify the important things. The videos of the lessons were published on YouTube after it was made sure that everyone could access the required clips. Teaching units were extended for ten academic weeks.

2- The Achievement Test :The objective of this test is to measure the effect of the flipped learning strategy on educational achievement at the levels of remembering, understanding, application, analysis, and evaluation in the English language for sixth grade students. A table has been made for the specifications of the achievement test to clarify the levels of cognitive objectives measured by the test. Table(1) shows specifications of the achievement test. In light of this, the test was divided into two parts. The first one is a multiple-choice questions, and the second one is built in the form of procedural steps to measure the students' ability to apply what they have studied in practice. In its final form, the test consisted of 26 items, and the total score was 36. Two marks for two questions, three marks for one question, four marks for one question, and only one mark for each of the rest of the questions.

Table(1) Achievement test specifications

Cognitive levels of questions of the test							
the topic	Remembering	Understanding	Application	Analysing	Evaluation	Total	
Number of question	5	6	12	2	1	26	
Relative Weight	19.2 %	%23.1	%46.2	%7.7	%3.8	100 %	

The validity of the achievement test

To verify the validity of the achievement test, it was presented to a group of educational arbitrators and specialists in the English language. The observations were in the linguistic aspects and if the question is appropriate to the target level. She also verified the validity of the achievement test after the exploratory application through the comparative method. The means of high scores of the exploratory sample(of 30 students) in the achievement test were compared with the means of the low scores. Then the significance of the differences between these averages was calculated by calculating the critical ratio, and the value of "t" was equal to 5.33, which is significant at the 0.01 level. This means that there are fundamental differences between the high and low scores in the achievement test, and the achievement test distinguishes between high and low scores, which confirms its validity.

10. Study procedures

The pre-test in English language was applied on the students of the experimental and control groups before teaching them the units of the second semester.

To ensure the equality of the two groups before applying the experiment, two independent samples were chosen. T-test was used to clarify the differences between the two groups in the pre-application of the study tool. The results were shown in Table 2.

Dimension	Group	Number	Arith metic mean	Standa rd deviati on	T value	Signifi cance level
remembering	Control	31	1,90	0,908	-0,441	0,661
	Experime ntal	31	2	0,816		
understanding	Control	31	1,65	0,709	-0,597	0,430
	Experime ntal	31	1,77	0,560		
Application	Control	31	2,65	1,142	-0,671	0,505
	Experime ntal	31	2,84	1,128		
Analysis	Control	31	1,03	1,779	0,599	0,551
	Experime ntal	31	0,77	1,606		
Evaluation	Control	31	0,19	0,749	0,584	0,561
	Experime ntal	31	0,10	0,539		
Academic achievement as a whole	Control	31	7,42	2,592	-0,114	0,910
	Experime ntal	31	7,48	1,805		

It is clear from Table 2 that there are no statistically significant differences at the level of 0.05 between the means of scores of students in the experimental group and the control group in the pre-test. "t" values ranged between 0.114 - 1,268, and its significance level is greater than the level of significance 0.05, and therefore the two groups can be considered equivalent. They are equivalent in academic achievement in English language before the experiment of the study. After making sure that the two groups were equal, the study experiment was carried out.

The control group was taught using the usual method, and the experimental group was taught by using the flipped learning strategy.

Results

In order to verify the validity of the first hypothesis , the differences were calculated between the means of scores of the experimental and control groups in the total academic achievement test, and at its levels, using a t-test for two independent samples. This is shown in Table 3

Table (3)

Dimension	Group	Number	Arith metic mean	Standa rd deviati on	T value	Signifi cance level
remembering	Control	31	4,45	0,72	-1,68	0,09
	Experim ental	31	4,71	0,46		
Understanding	Control	31	5,19	0,79	-2,7	0,01
	Experim ental	31	5,65	0,48		
Application	Control	31	11,55	2,09	-2,42	0,02
	Experim ental	31	12,74	1,77		
Analysis	Control	31	6,45	2,46	-2,36	0,02
	Experim ental	31	7,61	1,20		
Evaluation	Control	31	2,32	1,27	-2,33	0,02
	Experim ental	31	2,90	0,53		
Academic achievement as a whole	Control	31	29,96	3,52	-4,90	0,01
	Experim ental	31	33,61	2,19		

It is clear from Table 3 that the value of the t-test amounted to 4.90, which is a significant value. That means there are statistically significant differences between the means of scores of the experimental and control groups of sixth graders in the total achievement test for the experimental group which has the highest means of scores in the total achievement test.

Table 4

The value of the effect on the experimental and control groups in the total post-achievement test and its levels

Dimension	Group	Number	Eta-squar e	D	Effect size
Remembering	control	31	0,045	0,4	Small
	Experim ental	31			
Understanding	control	31	0,109	0,7	Avera ge
	Experim ental	31			
Application	control	31	0,089	0,6	Avera ge
	experim ental	31			
Analysis	control	31	0,085	0,6	Avera ge
	experim ental	31			
Evaluation	control	31	0,083	0,6	Avera ge
	experim ental	31			
Academic achievement as a whole	control	31	0,286	1,3	Big
	experim ental	31			

It is clear from Table 4 that the eta-square value was 0.286 and the d-value was 1.3, which means that there is a significant effect of teaching by utilizing the flipped learning strategy on the total academic achievement in English Language for sixth graders.

In order to verify the validity of the first sub-hypothesis of Table 3, it is clear that the value of the t-test was 1.68. It isn't a significant value, which means that there are no statistically significant differences between the means of scores of the experimental and control groups in the achievement test for sixth-grade students at the level of remembering.

This means that the scores of the experimental and control groups are similar in the achievement test at the level of remembering. Also, the value of the Eta square amounted to 0.045 and the value of d is 0.4, which means that there is a small effect in teaching using the flipped

learning strategy on the academic achievement in the English language for sixth graders at the level of remembering.

In order to verify the validity of the second sub-hypothesis of Table 3, it is clear that the value of the t-test was 2.7, which is a significant value. That means there are statistically significant differences between the means of scores of the experimental and control groups in the achievement test for sixth-grade students at the level of understanding for the experimental group which has the largest means of scores in the achievement test at the level of understanding. The value of the Eta-square was 0.109 and the d-value was 0.7 which means that there is an average effect of teaching by utilizing the flipped learning strategy on academic achievement in the English language subject at the level of understanding.

In order to verify the validity of the third sub-hypothesis of Table 3, it is clear that the value of the t-test was 2.42, which is an important value. That means there are statistically significant differences between the means of scores of the experimental and control groups in the achievement test of sixth-grade students on the level of application for the experimental group which has the highest average at the application level. The Eta-square value was 0.089 and the d-value was 0.6 which means that there is an average effect of teaching by utilizing the flipped learning strategy on academic achievement in the English language subject at the level of application .

To verify the validity of the fourth sub-hypothesis, table 3 shows that the value of the t-test amounted to 2.36, which is a significant value. That means that there are statistically significant differences between the means of scores of the experimental and control groups in the achievement test for sixth grade students at the level of analysis for the experimental group which has the highest average in the achievement test at the level of analysis. The value of the Eta square amounted to 0.085 and the value of d equals 0.6, which means that there is an average effect of teaching by utilizing the flipped learning strategy on the academic achievement in the English language for sixth graders at the level of analysis.

To verify the validity of the fifth sub-hypothesis, table 3 shows that the value of the t-test was 2.33, which is a significant value. That means that there are statistically significant differences between the means of scores of the experimental and control groups in the achievement test of sixth grade students at the assessment level for the experimental group which has the highest average in the achievement test at the assessment

level. The value of the Eta square amounted to 0.083 and the value of d amounted to 0.6, which means that there is an average effect in teaching by utilizing the flipped learning strategy on academic achievement in English language for sixth graders at the assessment level.

From the above it is clear that this strategy helps to increase students' achievement at the levels of understanding, application, analysis and evaluation because of the learners' interests in this type of learning.

There is a lack of growth at the level of remembering in the academic achievement test because the flipped learning strategy develops higher levels of thinking and moves away lower ones (Al-Ahwal, 2016; Al-Zahrani, 2015).

11. Interpretation of results

The above results show that the flipped learning strategy indicates the positivity and effectiveness of its application in order to raise the level of achievement for sixth graders in English language. Previous studies also demonstrate the effectiveness of applying this strategy because it reflects the interaction of a mixture of teaching methods and electronic technologies in its design, which helps to enrich the strategy, and motivate the learners. In its results, this study agrees with the study of (Haroun and Sarhan (2015), Ali (2015), Al Zein (2015), Al Shahrani (2014), and Abu Jalba (2014) on the effectiveness of the flipped learning strategy in teaching.

12. Study Suggestions

1. Encouraging teachers to teach the English language course by utilizing the flipped learning strategy, as it can raise the academic achievement level.
2. Caring about utilizing the culture of the flipped learning strategy widely, because it is a way to learn the English language.
3. Creating websites and applications for smart devices that help to learn by utilizing the flipped learning strategy.

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