

Effectiveness of Teaching Social and National Education Subject Using the Flipped Class Strategy in Improving Academic Achievement among the Fifth Primary Grade Students in Both Taibeh and Westieh Brigades in Irbid Governorate

Dr. Johar Mousa Al- Nahar Mohidat*

Ministry of Education, a teacher in Educational Directorate of Both Taibeh and Westieh Brigades Jordan

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Abstract

The study aimed to show effectiveness of teaching Social and National Education subject using the flipped class strategy in improving Academic Achievement Among the fifth primary grade students in both Taibeh and Westieh Brigades in Irbid Governorate, through comparing it to the ordinary method in teaching. The study sample consisted of (50) male students of the fifth primary grade in Kufr Asad Primary School distributed into two sections who were chosen by the intentionally method. The random assigning was used to distribute the study individuals into two groups; the experimental group which consisted of (25) students taught using the flipped class, and the control group which consisted of (25) students taught by the ordinary method. To achieve the study objectives, the researcher prepared three videos for the lessons of the unit of Economic resources in The Hashemite Kingdom of Jordan of the Social and National Education subject for the fifth primary grade based on the flipped class strategy, in addition to an academic achievement test was also prepared. The study results revealed that there were statistically significant differences at the level of ($\alpha=0.05$) between means of the experimental and control groups students' degrees in the achievement post-test due to the variable of teaching strategy (flipped class) and for experimental group students. The study concluded a set of recommendations, the most important of which are: hold training courses for teachers and supervisors about employing the flipped class strategy in teaching and employment of modern techniques and social media in the educational process.

Keywords: the flipped class strategy, Social and National Education, fifth primary grade.

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INTRODUCTION

Educators realize the great effect of employing technology in the educational process because of the increasing needs to computer, internet and means of communication and information applications among societies, which was reflected on the educational process with all its aspects. It also affected the students' learning level, planning for teaching, implementation, evaluation and educational content. As the case with the use of any technical tool in education, there are several teaching strategies based on using technology to offer educational content students out of classroom which enable them to involve deeply in the educational content inside the classroom [1].

The inverted class strategy is considered to be one of modern technological methods or aids which concerns in meeting students' educational needs, as it is an educational input through which the educational content is understood at home. It is also considered to

be a model that reforms the classic classroom based on the presentation the content for students inside classroom and assigning homework that enables students to involve deeply with the educational content outside the classroom. So, this strategy is known as the inverted learning or flipped class that allows to flip over the learning model which enable students to self-control of their learning instead of being affected by teaching, and independently review the educational content outside the classroom through the choices the teacher offers then to participate effectively in the classroom [2].

The idea of flipped class, flipped or inverted learning strategy emerged for the need to use teaching methods that help to identify some students' problems who don't benefit from learning in the classroom in the right way where there are a lot of information which come to students very quickly, but they are forgotten quickly, too. The question was about the importance of

implementing a teaching strategy that help students to be exposed to teaching several times through implementing the flipped learning strategy especially with the wide spread of the technique among students in the different educational stages [3].

Alzain [4] pointed to that the flipped classes strategy has a special importance in social education teaching so that it keeps pace with modern educational trends in teaching, get rid of traditional teaching methods, suits different educational stages and ages of the students, consider individual differences, ensure education sustainability and improve national and social skills which are considered to be of the major objectives of Social and National Education teaching.

Therefore, it can be said that the flipped learning or class strategy is a method that involved inverting the classic classroom based on the presentation the content for students inside classroom and assigning homework, that enables students to share effectively with the educational content outside the classroom by using some of the modern techniques, so that the student implements the main part of the lesson, and actually becomes the center of the educational process.

The Study Problem

The flipped class strategy is considered to be one of the modern teaching strategies which based on students' usage of the educational techniques and employ it in their learning since it increased interaction between the teacher and students and the students themselves. It also helps to improve thinking skills and develop the academic achievement among students and raise their self-learning level.

This strategy based on inversion of educational process where students receive new information at home through the teacher's preparation a video part using help programs with a period of (8-10) minutes and sharing it in one of the web sites or social media , or their sharing a video, multimedia or educational games from the electronic information resources and other educational sites, instead of they receive new information inside the classroom then go home to do homework in the traditional learning [4].

Marlowe [5] study results confirm the importance of using the flipped class strategy in teaching to improve the achievement level among students in different educational subjects including Social and National Education among students. The studies results of [6, 4, 7] confirmed the importance of using the flipped class strategy in teaching and improvement of achievement level among students in social education and its different skills.

Therefore, the current study's goal is to reveal the effectiveness of using the flipped class strategy in

teaching a study unit of the Social and National Education book in improving academic achievement among the fifth primary grade students in both Taibeh and Westieh Brigades in Irbid Governorate through answering the following question:

What is the effectiveness of teaching Social and National Education subject using the flipped class strategy in improving academic achievement among the fifth primary grade students in both Taibeh and Westieh Brigades in Irbid Governorate?

The Study Objectives

The study aimed to:

- Show the effectiveness of teaching Social and National Education subject using the flipped class strategy in improving academic achievement among the fifth primary grade students in both Taibeh and Westieh Brigades in Irbid Governorate.
- Show if there are statistical significant differences at the level of ($\alpha=0.05$) between the degrees of the experimental and control groups' individuals on the academic achievement test in Social and National Education subject due to the usage of the flipped class strategy.

Importance of the Study

The importance of the study lies in:

Theoretical Importance

- Set a theoretical and educational framework of the flipped class strategy in teaching Social and National Education to improve students' achievement level.

Practical Importance

- The results of this study are expected to help Social and National Education teachers to develop educational units based on the flipped class strategy to improve students' achievement level.
- The results of this study may contribute to open the way for researchers to conduct more studies about teaching Social and National Education using the flipped class strategy and linked it to other variables.

The Study Terms and Their Procedural Definition: Flipped Class Strategy

Bergman and Sames [8] defined it as: “ a method that depends on inversion of educational tasks between the classroom and home; what the students do in class also do at home, and what homework do at home do it in the class, too”.

Alzain [4] defined it as: “An educational strategy that integrates between employment of modern techniques such as web applications, videos and electronic books where they should be available to students at home, so that students practice direct individual learning and invert the class tasks to become

interacted learning activities in small groups inside the class to implement research activities and tasks assigned to students.

It is procedurally defined as: “The set of procedures and steps which the fifth primary grade students practice in learning Social and National Education subject where students watch lectures of a short educational video part at home before the time of class, while the teacher exploits time in the class to provide an active interactive environment in which students are directed to apply what they have learnt at home that ensures improving their achievement and learning level”.

Achievement

It is what the students gained from the educational subject included in the lessons of the third unit of Social and National Education book in improving academic achievement among the fifth primary grade and has been taught to the experimental group students using the flipped class strategy [9].

It is procedurally defined as the degree that a student gains on the prepared achievement test according to the third study unit lessons of the Social and National Education book of the fifth primary grade.

Social and National Education

The second part of the Social and National Education book for the fifth primary grade by the Ministry of Education in Jordan of the academic year 2019.

The fifth primary grade

The students whose age range between (10-11) years and study in the fifth primary grade in the schools of both Tabeh and Westieh Brigades in Irbid Governorate of the academic year 2019.

Limits of the Study

- Subjective limits: the study restricted to three lessons of the unit of the economic resources in The Hashemite Kingdom of Jordan of national and social book of the fifth primary grade.
- Human limits: the study includes a sample of (5) male students of the fifth primary grade.
- Spatial limits: The study has been applied in Kufr Asad Secondary School for boys in both Taibeh and Westieh Brigades in Irbid governorate.
- Time limits: The study has been conducted in the second academic semester of the academic year 2019.

The study approach: the quasi-experimental approach was used which requires experimental and control group of students where the effect of independent variable is treated on one dependent variable or more.

Theoretical Framework and Related Studies

Marlowe [5] defined flipped class as:” Inverting the educational tasks between inside and outside the classroom where the teacher uses modern techniques and the internet to prepare teaching lessons through a visual video tape so that students look at it in the house, then they learn activities that were homework inside the classroom which reinforce his understanding the learning subject.

Educause [3] pointed to that the flipped class is an educational model where the classic learning situations are inverted to homework, while at school debates and class experiments are implemented where a video is considered to be one of the most important classroom elements.

Bergman and Sames [8] pointed to that the feature of flipped class lies in that those student with difficulties in achievement receive the greatest amount of assistance. The teacher spends his time wandering inside the classroom to help students with difficulties in achievement and receive the greatest amount of assistance on acquiring and understanding knowledge. Using short educational videos which explain the educational content and student see at home makes the teacher to concentrate more on students who need more time to learn in the classroom and direct him towards a better learning.

Bristol [10] thinks that flipped class is based on the student who comes to the classroom ready to acquire educational experiences in the light of what flipped class provides of educational activities based on application, analysis and concentration because he has previous experience about learning he acquired in the classroom. The results of the studies of [11, 5, 4] confirm the effectiveness of flipped class and its positive influence on students’ learning, and the role that is more available to them than the traditional classes.

Therefore, employment of the flipped class strategy in teaching is one of the issues that teachers of Social and National Education should adopt because they encourage students on self-learning and debate between the teacher and students on the one hand, and among students on the other.

Related Studies

Many studies dealt with employing the flipped class strategy or flipped learning in teaching different study subjects and Social and National Education in particular, some of them are as follows:

Strayer [11] conducted a study aimed to compare flipped class with traditional learning. To achieve the study objectives, the researcher used the analytical descriptive approach on a sample of students reached out (28) individual in the university of Ohio

State in mathematics. Data was collected through observations and interviews. The results showed a high degree of satisfaction among students about educational process and their deep understanding of concepts related to educational content more deeply.

Alzain [4] conducted a study aimed to identify a designed model of the flipped class strategy user and its impact on academic achievement among female students in Princess Noura bint Abdel Rahman University in Riyadh. The study used the quasi-experimental approach on a sample of (77) female students of faculty of education through applying an achievement test in social education subject. The results showed the effectiveness of the flipped class strategy in achievement among students of social education subject.

Alzahrani [12] conducted a study aimed to show effectiveness of the flipped class strategy in improving achievement of electronic teaching curriculum among students of faculty of education in King Abdel Aziz University. The study applied the quasi-experimental approach on a sample of faculty of education students consisted of (100) individual distributed equally into two groups: experimental and control. After the pre-test and post-test of the achievement test of the electronic teaching curriculum on the two groups students, the study results revealed that there were statistically significant differences between both the experimental and control groups students in the achievement test for the experimental group students that was taught using the flipped class strategy.

Ali [6] conducted a study aimed to specify the effect of using flipped course on learning outcomes and the level of preparing information and accept technological developments among higher diploma students of King Abdel Aziz University in KSA. The quasi-experimental approach was used on a sample of (36) male students who were distributed into two groups: experimental and control. The results of the study showed that there were statistically significant differences between both the experimental and control groups students in education outcomes for the experimental group that used the flipped course.

Juhary [13] conducted a study aimed to identify the effect of flipped classes in the Malaysian NDUM University and students conceptions about the flipped class strategy. The study used the quasi-experimental approach on a sample of students consisted of (40) individual through applying a questionnaire. The study results pointed to that students were uncertain of the help of flipped classes in teaching, and the university was unready to adopt flipped classes.

Alfi [7] conducted a study aimed to identify effectiveness of flipped class in improving critical thinking skills: (interpretation, deduction, assumptions, induction and evidence evaluation) among the third medium female students in Riyadh City. The study used the quasi-experimental approach on a sample of (50) female students. After the pre-application and post-application of the critical thinking measurement on the study individuals, the study results revealed that there were statistically significant differences between means of degrees of both the experimental and control groups in improving critical thinking skills for the experimental group.

Alsbai'I [17] conducted a study entitled: "effectiveness of using flipped class in improving critical thinking skills", aimed to identify effectiveness of using flipped class in improving critical thinking skills and environmental awareness in studies course among the first medium grade students in scientific colleges in KSA. To achieve the study objectives, the researcher used the experimental approach (of the quasi-experimental design). The study tools consisted of the critical thinking measurement in skills of prediction of assumption, deduction and evaluation of debates, and environmental awareness measurement tool. The study was applied to a sample of the first medium grade students selected by the intentional method which consisted (40) students who were divided into an experimental group included (21) students, and a control one included (19) students. The study results showed that statistically significant differences between the experimental group degrees in critical thinking (whole degree and dimensions) after using the flipped class strategy for the experimental group and there were also statistically significant differences between the experimental group degrees in environmental awareness (whole degree and dimensions) after using the flipped class strategy for the experimental group, and there was a positive statistical significant relation between critical thinking and environmental awareness.

Alharbi [15] conducted a study aimed to investigate effectiveness of using flipped class in teaching national and social studies subject in improving self-learning skills among talented female students of the first secondary grade in Al-Ahsa Governorate. The study sample consisted of (30) female students, and it used the descriptive approach through application of a questionnaire. The study results showed the effectiveness of using the flipped class strategy in teaching national and social studies subject in improving self-learning skills among the talented female students.

After revision of the previous studies, it is observed that it is important to review the studies that dealt with the subject of the current study either through the followed approach, objectives and the study tools. Through the induction of some of the previous studies,

it is clear that some of them dealt with effectiveness of the flipped class strategy in improving thinking or academic achievement among students such as the studies of [11, 4, 12, 14, 15].

What distinguishes the current study from other studies is that it tries to reveal effectiveness of using the flipped class in improving the academic achievement through teaching the third unit of the Social and National Education subject among the fifth primary grade students in both Taibeh and Westieh Brigades in Irbid Governorate, which gives the study a kind of uniqueness compared to other researches and studies. The researcher benefited from the previous studies, literature and measurements in specifying the study plan and approach, selecting the tools and the statistical processing methods.

Method and Procedures

The Study Individuals

The study individuals were selected from the fifth primary grade by the intentional method from Kufr Asad Secondary School for boys which belongs to the Directorate of Education of both Taibeh and Westieh Brigades in Irbid governorate. Two sections of the fifth primary grade were chosen randomly which are: fifth grade (A) which consisted of (25) students as control group which was taught by the ordinary method, and the fifth grade (B) which consisted of (25) students as an experimental group and was taught using the flipped class strategy

The Study Tool

To achieve the study objectives, the researcher used the entry of the flipped class in teaching the learning unit the economic resources in The Hashemite Kingdom of Jordan of national and social book of the fifth primary grade. The researcher prepared three videos each one time ranged between (8-10) minutes based on the following steps:

- Identify and plan the lessons of the required educational unit and the aim for making the video parts and its suitability to present the lesson.
- Offer the flipped class tools such as a computer, internet, applications of the video parts production and a factor to transfer the produced educational video to students.
- Preparation of the video parts: The teacher prepared the video parts with contribution of a student who has experience in this aspect, and three video parts were prepared each one period is from (8-10) minutes where the video production quality and educational subject were taken into account.
- Produce a video for every lesson of the three educational unit, edit and add the required sound and optical effects.
- Add the interactive questions and educational activities to the recorded lesson.

- Upload the included educational subject to the teacher's link and share it through the social media with the students in the experimental group.
- The experimental group students see the educational content of each video attached with an observation paper related to the video part that has been sent through the social media at home.
- In the classroom the teacher discussed with the students the educational subject that the video included which the students have seen at home, questions and inquiries about the video were addressed, implement the educational activities planned before and the record results to gain a deep understanding of the content and control and evaluate learning.

Achievement Test

After defining the educational unit of the Social and National Education book for the fifth primary grade which was economic resources in The Hashemite Kingdom of Jordan that consisted of four lessons, the researcher prepared the achievement test which included (18) questions of multiple choice; each question contained an introduction of a position or a specific idea followed with four alternatives, one of them represent the correct answer. The build of the test is completed as the following steps:

- Determining the objective of the test, which is : measuring the students achievement level in the unit of economic resources in The Hashemite Kingdom of Jordan of the Social and National Education book before and after the strategy application.
- Writing the test instructions clearly and the way of answering the questions.
- Building the test in the light of Bloom Levels (memorizing, comprehension, application, analysis, synthesis and evaluation).
- Counting one degree for each question, and the whole degree for the test is (18).
- Validity of the test: the test was presented to (6) arbitrators specialized in curricula and teaching methods of Social and National Education in order to ensure the linguistic clarity of the test questions. In the light of their observations some of the test questions have been adjusted.
- Counting of ease and difficulties coefficients of the test questions: the test was applied to (20) students outside the study sample where their coefficients percentage between (0.25-0.62). These percentages indicate suitability of the test questions of the fifth primary grade students.
- Counting distinguished coefficient of the test where they ranged from (0.22-0.65). These percentages indicate suitability of the test items on distinguishing between the students levels.
- Test reliability counting: the test was applied to (20) students outside of the study sample and it was reapplied after two weeks. The correlation coefficient (Cronbach's Alpha) between the two

application reached out (0.86) which is a good reliability percentage of the test, and therefore, the test becomes valid for application.

The Study Design

Starting from the study question, the design of the current study was the quasi-experimental one (pre-post) (experimental and control control) as follows:

$$EG = O1 \times O1$$

$$CG = O1 - O1$$

Where,

(EG) = The experimental group (was taught using the flipped class strategy).

(CG) = The control group (was taught by the ordinary method).

(O1) = Pre- post- application of the achievement test.

(X)= The experimental processing (teaching the experimental group according to the flipped class strategy).

(-) (implementation of the ordinary program in teaching).

The Study Variables

First: the independent variable: teaching strategy which has two levels:

- The flipped class and the ordinary method.

Second: the dependent variable: achievement in Social and National Education subject.

The Study Results and Their Discussion

The results related to the answer of the first question: What is the effectiveness of teaching Social and National Education subject using the flipped class strategy in improving academic achievement among the fifth primary grade students in both Taibeh and Westieh Brigades in Irbid Governorate?

To answer this question, the arithmetic means and standard deviations of the students' degrees in both experimental and control groups on the achievement test in both pre-application and post-application were extracted. ANCOVA was analyzed on two stages to show the differences between arithmetic means of the students' degrees on the whole achievement test; while (MANCOVA) was analyzed to show the differences indicator in arithmetic means of the students' degrees on the test as shown in Table-1.

Table-1: The arithmetic means and standard deviations of the students' degrees in both experimental and control groups on the achievement test in both pre-application and post-application

Group	Descriptive statistics	Pre-application	Post- application
Experimental(teaching by flipped class)	Arithmetic Mean	3.25	4.15
	Standard Deviation	0.34	0.42
Control(teaching by ordinary method)	Arithmetic Mean	3.35	3.42
	Standard Deviation	0.36	0.46

As shown in the table there was a virtual difference between means of raw degrees of the experimental and control group students in the pre-test achievement. There was also a virtual difference between means of degrees of the experimental group students in the pre-test and post-test which was (0.12), and it may be due to that the control group students were exposed to a teaching experience through teaching by the ordinary method. This statistical difference was controlled using (ANCOVA). There was also as shown in the table there was a virtual difference between means of degrees of the experimental and control group students in the post-application of the achievement test where the arithmetic mean of the experimental group students was (4.15) and standard deviation of (0.42),

while the arithmetic mean of the control group students' degrees was (3.42) and standard deviation of (0.73), which means that there was a virtual difference between means of degrees between both groups on the achievement post-test reached out (0.73).

To know if the difference in the arithmetic mean of degrees of the experimental and control group students in the post-application of the achievement of a statistical significant at the level of ($\alpha = 0.05$) and to isolate the post-differences statistically between the two groups on the achievement test, (ANCOVA) was used and the results were as shown in Table-2.

Table-2: Results of (ANCOVA) of the students' degrees in both experimental and control groups on the post-test achievement

Source of variance	Sum of squares	Freedom degrees	Sum of squares	Counted "F" Value	Significant level	η^2 size of strategy effect
Pre-test	3.355	1	3.239	40.10	0.000	
Group of flipped class	5.120	1	5.029	50.20	*0.000	0.320
Error	6.330	47	0.084			
Whole	14.805	49				

The results in Table-2 pointed to hat there was a statistical significant difference between means of

students' degrees in both experimental and control groups on the post-test achievement where (F) value

reached out (50.20), and this value is statistically significant at the level ($\alpha = 0.05$), which means that there was a statistical significant difference between means of students' degrees on the achievement test between the experimental group students (was taught using the flipped class strategy) and the control group students (was taught by the ordinary method). To identify the size of effect flipped class strategy variable in improving achievement among students, (η^2) was counted where its value on the achievement test reached out (0.320). So, it can be said: the proportion of (32.2%) of variance of students' degrees on the achievement test between both experimental and

control groups students refer to the variable of the used teaching strategy. The size of flipped class strategy effect in this result is considered to be high according to (Cohen) criteria in interpreting the effect which the independent variable created in the dependent variable.

To define the value of difference between means of degrees of both experimental and control groups students on the achievement test, the adjusted arithmetic means resulted from isolation the effect of the pre-measure on the students' performance in post-application of the achievement test. The results were as shown in Table-3.

Table-3: the adjusted arithmetic means of the students' degrees in both groups the experimental and control on the achievement test (whole)

Group	Adjusted average	deviation
Experimental	4.17	0.05
Control	3.52	0.05

The adjusted arithmetic means results of students degrees in both experimental and control groups on the achievement post-test after isolation of their degrees effect in the pre-application of the test pointed to that the difference was for the experimental group students (was taught using the flipped class strategy) where they got an arithmetic mean of (4.17) which is higher than the control group arithmetic mean (was taught by the ordinary method) that was (3.52).

This result indicated the effectiveness of using the flipped class strategy in improving the academic achievement level where the experiment results outperformed the results of the control group results which the experiment wasn't applied to, and there was a difference due to the flipped class strategy.

Therefore, it can be said: teaching Social and National Education subject for the fifth primary grade using the flipped class strategy help to improve the academic achievement among students compared to the ordinary method in teaching. The researcher thinks that due to using the flipped class strategy which helped to improve achievement level among the experimental group students, where the activities and application that they practiced inside the class are complementary to the videos which were available to them at home where they can be referred to anytime.

The researcher concluded to that the flipped class strategy has a clear effect of remaining the previous learning and transfer it to the class because this strategy concentrates on the student's self-learning and makes him the center of learning which contributed in increasing the achievement level among the experimental group students in Social and National Education subject.

This result agreed with the most of the previous studies that dealt effectiveness of using the

flipped class strategy in improving achievement among students in the different study subjects. It agreed with the studies of [4, 12, 14, 15]. The results of this study didn't disagree with the results of studies that dealt with effectiveness of the flipped class strategy in improving educational outcomes and academic achievement among students.

RECOMMENDATIONS

In the light of the study results, the researcher recommended the following:

- Hold training courses for teachers and supervisors to train them to employ the flipped class strategy in teaching.
- Employ modern techniques and social media in the educational process.
- Take care of enrichment activities in the educational situation.
- Train students on how to get self-information and criticize each new information and experience they receive.
- Conduct studies to reveal the effectiveness of the flipped class strategy in teaching other study subjects and in different educational stages.

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