

The Impact of Using Flipped Classroom Model on Students' Reading Achievements

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Abstract

The purpose of this study is to investigate the impact of the flipped classroom model on the students' reading skills. This is accomplished through the study aims which are: to investigate how the flipped classroom model influences students' engagement with reading materials both inside and outside of class and examine the effects of flipped classroom activities on students' reading comprehension, critical thinking, and overall literacy skills. A sample of students was selected from the Department of English at Tripoli University, Faculty of Education, Gasser Ben Ghashair. Data for this study were collected by pretest and posttest. The sample of the study consisted of 30 students. The results of this study indicated that a flipped classroom has a significant effect on students' reading skills, it can improve students' progress accurately, and it can save time. The study recommended that teachers should use a flipped classroom, flip classrooms may require training for both students and teachers, students must master time management and establish effort, and teachers may consider offering comprehensive instruction to students regarding flipped classroom learning ideas.

المخلص

تهدف هذه الدراسة إلى معرفة أثر نموذج الصف المعكوس على مهارات القراءة لدى الطالب. تم التحقق من ذلك من خلال أهداف الدراسة وهي: التحقق من كيفية تأثير نموذج الصف المعكوس على تفاعل الطالب مع مواد القراءة داخل الفصل وخارجه وفحص تأثيرات أنشطة الصف المعكوس على فهم القراءة لدى الطالب والتفكير النقدي ومهارات القراءة والكتابة بشكل عام. تم اختيار عينة من طالب قسم اللغة الإنجليزية بجامعة طرابلس كلية التربية قصر بن غشير. تم جمع بيانات هذه الدراسة عن طريق الاختبار القبلي والاختبار البعدي. وتكونت عينة الدراسة من 30 طالباً. أشارت نتائج هذه الدراسة إلى أن الفصل الدراسي المعكوس له تأثير كبير على مهارات القراءة لدى الطالب، ويمكنه تحسين تقدم الطالب بدقة، كما يمكنه توفير الوقت. أوصت الدراسة بأن يستخدم المعلمون الفصول الدراسية المعكوسة، وقد تتطلب الفصول الدراسية المعكوسة تدريباً لكل من الطالب والمعلمين، ويجب على الطالب إتقان إدارة الوقت وبذل الجهد، وقد يفكر المعلمون في تقديم تعليمات شاملة للطالب فيما يتعلق بفكرة التعلم في الفصول المعكوسة.

Keywords: flipped classroom, reading, skills, students.

1. Introduction

The term "flipping" refers to transferring homework for classwork (Ash, 2012). When students go home to do their homework, some have well-educated parents who can help them with it, while others have parents who are unfamiliar with the subject and cannot help them. According to Ash (2012), students can return to class with the information and then get

homework assistance from the subject matter expert--the teacher--during class time. The flipped classroom gives students in-class assistance in completing tasks. The concept of flipped classrooms allows for more hands-on activities, as well as subject inquiry and analysis. Fulton (2012) discovered that the flipped classroom encourages "students to take more responsibility for their learning". Students may also access the information from home, so if they are absent due to illness, they can simply catch up and avoid missing important lectures.

Falciani (2020) adds that a flipped classroom is an educational method and a type of blended

learning that tries to improve student engagement and learning through the way students complete readings at home while working on live problem-solving in class. This educational technique incorporates tasks, including some that were historically considered homework, into the classroom. A flipped classroom allows students to view online lectures, participate in online conversations, or conduct research at home while actively interacting with subjects in the classroom, guided by a mentor. In traditional classroom education, the teacher is usually the lesson leader, the main focus of consideration, and the principal disseminator of knowledge during the class hour. The teacher answers questions and students ask for assistance and comments directly from the teacher. Many conventional instructional approaches concentrate on lecture-style presentations of individual topics, restricting student participation to activities in which students work individually or in small groups on teacher-designed application assignments. Typically, the instructor takes responsibility for participating in class discussions and directing the flow of the topic (Ryback & Sanders, 1980). Typically, this form of instruction includes assigning students at-home assignments like as reading from textbooks or applying topics by working on problem sets (Strauss, Valerie 2012). The flipped classroom specifically transforms education into a learner-centered paradigm, in which students are frequently introduced to new subjects outside of school, freeing up classroom time for in-depth research of topics, which leads to meaningful learning experiences. In a flipped classroom, 'content delivery' can take many forms, including video courses created by the teacher or third parties, but online collaborative conversations, digital research, and text readings may also be employed. The most effective amount of time for a video lecture is typically regarded as eight to twelve minutes (Lakmal, Phillip 2015). Flipped classrooms also transform in-class activities. In-class lessons that accompany flipped classrooms may involve active learning or more regular homework assignments, among other approaches, to interest students in the material (Bergmann, Sams 2012).

1.1 Significance of the study

The flipped classroom model is a pedagogical approach where traditional teaching methods are reversed. Instead of students receiving direct instruction during class time and then doing homework independently, they study the instructional material independently outside of class and use class time for activities, discussions, and problem-solving. The flipped classroom model holds significant promise in revolutionizing traditional educational approaches. By shifting the focus from passive listening to active engagement, students are empowered to take ownership of their learning journey. In this model, instructional content is delivered outside of class, allowing students to absorb material at their own pace through videos, readings, or online resources. Class

time is then utilized for collaborative activities, discussions, and problem-solving exercises, where students apply their newfound knowledge in meaningful ways. This approach not only fosters deeper understanding and retention of concepts but also cultivates critical thinking skills and promotes peer collaboration. Furthermore, immediate feedback from instructors during class sessions helps students navigate any misunderstandings or difficulties in real time. The flipped classroom's flexibility and accessibility ensure that all students, regardless of learning style or background, have equal opportunities to engage with the material. Ultimately, the flipped classroom model prepares students for success by equipping them with the skills needed

to thrive in both academic and real-world contexts.

1.2 Statement of the Problem:

In recent years, educators have increasingly explored alternative teaching methodologies to improve students' reading skills, recognizing the critical role of literacy in academic success and lifelong learning. Among these approaches, the flipped classroom model has garnered significant attention for its potential to revolutionize traditional learning paradigms. However, despite growing interest in the flipped classroom's efficacy, there remains a gap in understanding its specific impact on enhancing reading skills among students.

1.3 Research Questions:

The present study asks the following questions:

1. How does the flipped classroom model influence students' engagement with reading materials both inside and outside of class?
2. What are the effects of flipped classroom activities on students' reading comprehension, critical thinking, and overall literacy skills?

1.4 Aims of the study:

The aims of the study are as follows:

1. To investigate how the flipped classroom model influences students' engagement with reading materials both inside and outside of class.
2. To examine the effects of flipped classroom activities on students' reading comprehension, critical thinking, and overall literacy skills.

1.5 Hypothesis of the study:

The research hypothesizes that flipped classrooms have a positive impact and can improve students' reading skills.

Literature Review

Flipping a classroom does not mean the teacher cannot lecture or that the classroom is constantly flipped. A teacher remains required in the flipped classroom. The teacher is still required to plan and prepare for each class. The flipped classroom also doesn't require any technology to operate. The term "flipping" comes from switching homework for classwork. Students are usually required to view videos for homework, which releases up. Instead of listening to lectures, students may now engage in hands-on activities and use their knowledge in their homework. Educators who have used the strategy emphasize that there are several ways to "flip" a classroom. Some lecturers give videos for homework, while others let students watch them during class. Some teachers create educational videos without requiring learners to watch them. Giving learners a chance to select from a variety of sites helps them learn the knowledge they need. (Ash 2012).

Ash (ibid) offered the following five suggestions for flipping your classroom:

1. Avoid focusing just on producing individual videos.
2. Consider carefully which elements of the lesson should "flip" and when.
3. Consider collaborating with a video-creation partner.
4. Address the issue of access immediately.

5. Find a strategy to engage the students using.

Teachers who use a flipped classroom frequently show recordings of their lectures. The videos are used in a variety of ways. Teachers discovered that using short 10-15 minute videos was the most effective approach to introduce them. The web of content information has provided resources on a wide range of topics. Some websites offer prepared videos, lessons, and interfaces about the subject. The most effective flipped classes say that they use videos of information obtained from many sources. Students stated that receiving videos from various sources has increased their engagement and found the content refreshing. (Schmidt& Ralph 2016).

Traditionally, students would frequently arrive at class confused about some of the homework problems from the night before. Typically, teachers would spend the first 25 minutes doing a warm-up exercise and going over the difficulties they did not comprehend. They would then present new material for 30 to 45 minutes before spending the rest of the class on independent practice or a lab.

In the flipped model, time is reorganized. Students still have questions regarding the video-delivered curriculum, so teachers usually answer them in the first few minutes of class. This helps teachers deal with misunderstandings before they are practiced and applied inadequately. The remainder of the time is devoted to more extended hands-on activities and/or focused problem-solving time. (see table 1). Bergmann and Sams (2012).

Table 1 Comparison of Class Time in Traditional versus Flipped Classrooms:

Traditional Classroom		Flipped Classroom	
Activity	Time	Activity	Time
Warm-up activity	5 min.	Warm-up activity	5 min.
Go over the previous night's homework	20 min.	Q&A time on video	10 min.
Lecture new content	30–45 min.	Guided and independent practice and/or lab activity	75 min.
Guided and independent practice and/or lab activity	20–35 min.		

According to Talbert (2012), students require instructor assistance with homework assignments and extracurricular activities. The flipped classroom concept allows students extra time to complete complicated tasks. FCM allows teachers to focus their limited class time on students (Obradovich et al 2015). The graphic below shows the application differences between the old model and FCM (Şık, 2019).

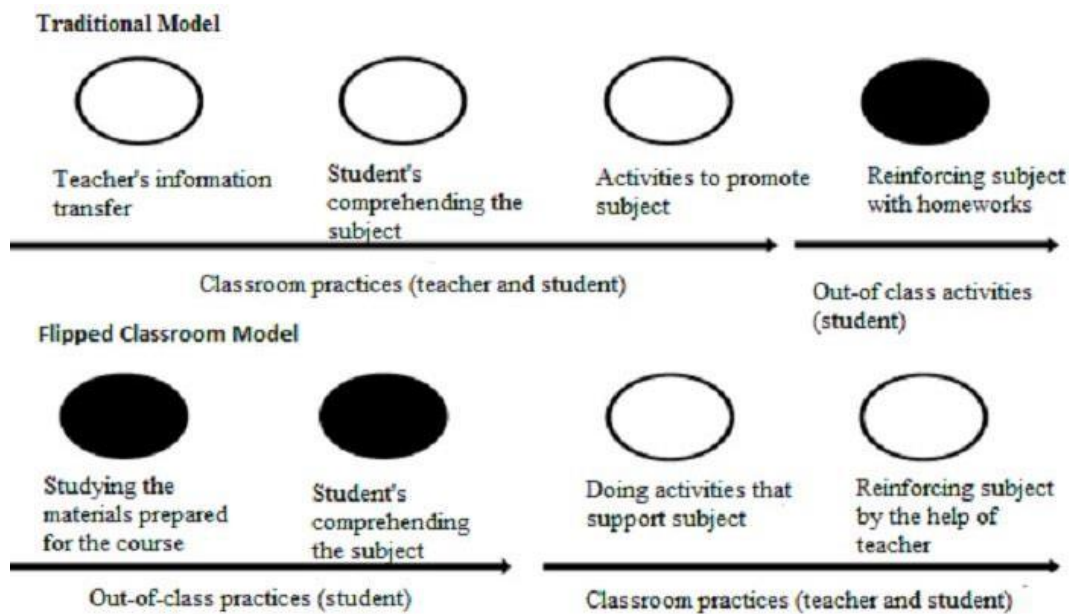


Figure 1. Comparison of Traditional Education Model and Flipped Classroom Model (Moravec et al, 2010)

FC provides additional benefits for acquiring higher-quality abilities during the learning process. According to Bloom's updated teaching taxonomy (Anderson, Krathwohl, and Bloom, 2001), cognitive thinking skills are categorized as simple to complicated. The figure below illustrates in both traditional and flipped classes, the sequence of skills is important for effective learning. As a result, students are exposed to typical educational settings. Direct instruction in class focuses on low-level abilities like memory and understanding, whereas homework projects need higher-level cognitive skills like application, analysis, evaluation, and design. The FC Strategy reverses these processes due to their complexity, with instructors overseeing the process in schools. They need higher-order cognitive abilities including applying, analyzing, assessing, and designing for assigned tasks. FC Strategy converts difficult stages under the teacher's guidance to promotion. Göksu Yüreğilli (2018) and Bulut (2018) (cited in... suggest employing video lectures at home to engage higher-order cognitive abilities while offering easy information for less structured thinkers.

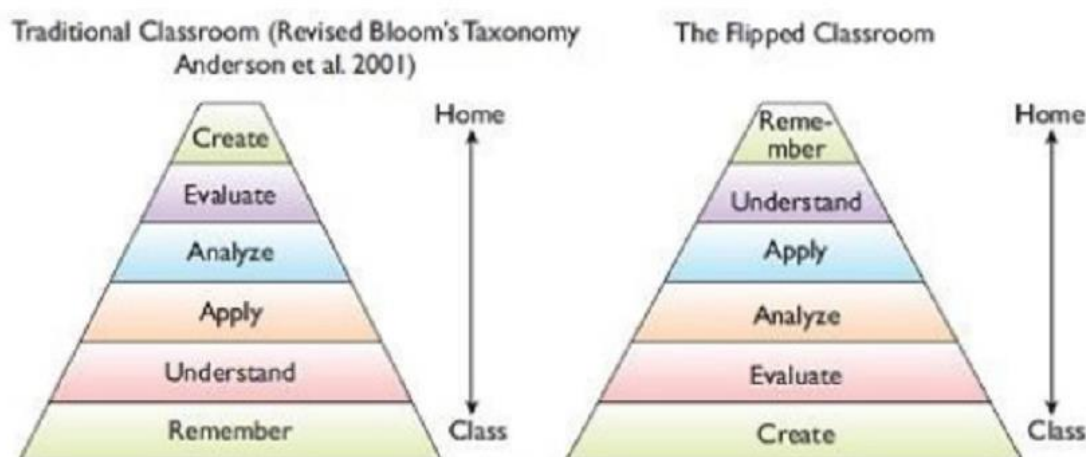


Figure 2. Revised Bloom's Taxonomy of Educational Objectives in the Context of Flipped Classroom Model (Bulut, 2018:16).

The implementation of the flipped classroom

Bergmann & Sam (2012)

Homework: The Videos

Give significant attention to whether a video is the best teaching tool for the intended learning objective before you start producing videos. Plan a video if that's the proper course of action. Don't create a video merely to create one if it is inappropriate. This would be a terrible example of "technology for technology's sake" and a disservice to students. Use technology only when it is the best tool for the task at hand. Make use of your professional judgment, consult mentors and peers, and even inquire with the students.

Using Other Teachers' Videos

When you start flipping your classroom, using other instructors' videos rather than making your own can be the most effective option. You may be keen to start flipping but are just too busy to create your videos. Perhaps you struggle with using screencasting technology or with speaking in front of a screen. Techs sit in the classroom and communicate with the computer and one another as they create their movies. It is more difficult than giving a lesson in front of a live class. Since the students are not there, teachers must introduce a slightly artificial dynamic presence. They make videos engaging since they don't want their students to become bored.

Video-Making Equipment

The cost of making videos is quite inexpensive. Only tools are a computer, a pen-tablet input device, a camera, a microphone, and screencasting software. The webcam and microphone on the majority of modern computers are built-in, so the pen/tablet input device and the software are the only two items one will need to buy.

Screencasting software

Software for screencasting records everything that appears on a computer screen. It records the presentation if you are presenting a PowerPoint. It records your navigation if you are going to a web page. Your pen strokes will be recorded by the computer if you are annotating on it. A microphone records voice when it is set up. Screencasting software comes in a variety of forms. Some are for Windows, Macintosh, and Linux computers; some are free and open source. Currently, we record our videos using Camtasia Studio. The secret is to pick a program that

works for you in your particular scenario rather than getting bogged down in the details of which software to employ.

Pen annotation

Teaching a science lesson with a quantitative focus, we found the pen annotation option to be quite helpful. It must be possible for us to write on our screen. Microsoft PowerPoint is the main piece of software we utilize. We utilize the pen annotation feature on it a lot. Since our schools recently obtained SMART boards, we have started playing with SMART software; however, any interactive whiteboard software has a pen option.

You have a lot of hardware alternatives if you need to annotate your films using a pen. These gadgets range in price from less than \$60 for a very cheap USB pen tablet to upwards of \$4,000 for interactive whiteboards. The tablets that connect to a computer are made by several companies. The Wacom Bamboo is among the most widely used instances of this kind of technology. Wireless tablets are the next generation of gadgets. These tablets range in price from

\$200 to \$400 and are produced by several different manufacturers. They function in the same way as the tablets that are hooked. If teachers want to film some or all of their live classes, we suggest these.

Interactive whiteboard

Interactive whiteboards are designed for annotation. We know several teachers that record their lessons using their interactive whiteboards. The only disadvantage with these is that recording them requires you to be there in your classroom. We enjoy the flexibility of being able to record in a variety of places, such as our own homes, hotels in Atlanta, the National Mall in Washington, D.C., or the classrooms of colleagues who are looking to flip. A few USB tablets have been purchased by certain schools that have made films on their interactive whiteboards by having teachers use them at home.

Microphone

Microphones also vary in price and functionality. Most newer laptops have built-in microphones. However, in our experience, many of these microphones are not of very high quality. We recommend that you create a recording, play it back, and see what you think. You can also purchase external microphones for under \$10 at a local big box retailer. These are not the highest quality, but they work. An advantage to an external microphone is that it won't record the sounds of clicking a mouse or track pad that a built-in microphone will.

Webcam

Teachers probably don't need a webcam because the majority of modern laptops have one built in, but you might need to buy one if you want this capability. We frequently incorporate science demonstrations that are either too risky or too time-consuming to carry out in class using a camera and the PIP capability. To capture the event, we record our lecture, pause it, turn the webcam onto the science demonstration, and then restart the recording.

Recording software

Teachers probably don't need a webcam because the majority of modern laptops have one built in, but you might need to buy one if you want this capability. We frequently incorporate science demonstrations that are either too risky or too time-consuming to carry out in class using a camera and the PIP capability. To capture the event, we record our lecture, pause it, turn the

webcam onto the science demonstration, and then restart the recording.

Video camera

As soon as we began playing with our webcam, we saw how important it is to provide content across screencasts. Our videos mostly consist of screencasts, but we've found that adding brief videos from a camera has a big impact as well. We went to a large box store and bought a digital video camera. and we try to record video as much as we can. A few of these videos feature scientific experiments, such as lighting objects on fire and closely focusing in to see scientific phenomena. Additionally, we record videos anytime and anywhere we observe science in the environment. We open up the world to our pupils by doing this. Jonathan's students recorded him discussing the Andes Mountains' geology when he was in Peru. Speaking at a conference in Washington, D.C., we discussed the chemistry of diamonds in front of the Smithsonian's Hope Diamond.

Benefits of the flipped classroom

Bergmann & Sam (2012) clarify the following benefits of the flipped classroom:

Flipping speaks the language of today's students

Today's students grow up with access to the Internet, YouTube, Facebook, MySpace, and a variety of other digital tools. They are often noticed doing their math homework while texting with their friends, IMing on Facebook, and listening to music. Many of their classmates indicate that when they arrive at school, they must turn off and dumb down since mobile phones, iPods, and other electronic devices are not permitted.

The terrible thing is that most students are carrying in their pockets a more equipped computing device than the vast majority of computers in our impoverished schools and we don't allow them to use it. When we present the flipped classroom to educators, we often receive an ooh-aah reaction from our audience, which is mostly made up of adults who did not grow up in an always-on digital environment. When we started flipping, we were startled by our student's lack of reverence. After two weeks of watching the videos, the initial "wow" impact went away. These students comprehend digital learning. To them, we are simply speaking their language. Don't get us wrong; we're not suggesting students don't appreciate this method of learning. However, education through video is not a major problem for today's students.

Adults have expressed worry that increased spending time on computers contributes to the disconnect between teachers and their students. To this, we respond that, rather than resisting, we are entering the video/digital culture. Isn't it time we embrace? Can we use digital learning to assist students learn, rather than ignoring their ability to learn using modern tools? It seems absurd to us that schools have not adopted this reform.

Flipping helps busy students

Today's students are extremely busy. Many have too many events scheduled, going from one to the next. The students like the flipped classroom's flexibility. Students have the opportunity to work ahead of time because the primary topic is presented through online videos. One of Jonathan's students was a competitive gymnast who frequently traveled to contests held outside of the state. She missed the majority of the material covered in her classes while she was away. However, she did not miss any of the material because she was in a flipped science classroom. When contests were approaching, she decided to work ahead. She had at least one lesson she didn't have to worry about when she got back.

One of Aaron's students is very active in the student council. She got ahead in her job this year

as homecoming came near. She gained one week's advantage over him in his class, and during homecoming week, she worked on homecoming events during Aaron's class period. These two students are gaining important life skills in time management in addition to knowing how to "work the system." Although flipping the classroom provides a great lot of flexibility to assist students with their busy lives, this would not function in a typical classroom.

Flipping helps struggling students

The smartest learners, those who would raise their hands first and offer insightful questions, were usually the ones who received the most attention while being taught traditionally. While teachers were having this talk with the curious learners, the other students would just sit there and listen. However, after using the flipped approach, teachers now spend most of their class going about assisting those students who struggle the most. Teachers believe this to be the primary factor contributing to students' success in the flipped classroom. This is not to imply that teachers pass up their best students. But they no longer receive the majority of their attention. It is now focused on students who require the most help.

Flipping helps students of all abilities to excel

Teachers in special education also appreciate this concept. Students with special needs are allowed to watch the instructional videos as many times as necessary to fully understand the content, as all of the direct instruction is recorded. There's no need to scramble to write notes down in the hopes that they may make sense later. Alternatively, students have the option to fast-forward or rewind the teacher to make sure they grasp the main concepts.

Flipping allows students to pause and rewind their teacher

In the classroom as teachers, they are often required to cover a certain curriculum. It is expected of students to acquire a specific body of information, and teachers often assume that they will comprehend the material they provide. Even the most skilled teachers and presenters occasionally have students fall behind and fail to pick up the necessary knowledge. Teachers turned the classroom around and gave each student the remote control. Allowing students to pause their instructors is a genuinely groundbreaking idea.

Flipping increases student-teacher interaction

It has heard people say things like, "I don't want to replace my classroom with online courses, but this is a great method for online teaching." The goal of this book is not to promote the advantages of online learning, even if flipping offers a lot of potential to improve it. As classroom teachers, they work with students on a regular schedule. Nowadays, the majority of students still attend traditional classrooms where they interact with students and teachers.

Flipping allows teachers to know their students better

In addition to providing information, the teacher's role also includes listening, inspiring, encouraging, and giving students a sense of direction. Relationships are the setting in which this occurs. It has long been their belief that a competent educator develops relationships with students. Positive professional role models are essential for students. Our goal is to serve as such role models. Although these connections were made before the classroom flip, flipping enables us to establish stronger rapport with the students.

Flipping increases student-student interaction

The general increase in teacher-student and student-to-student interaction is one of the great

positive effects of flipping. They now spend more time conversing with students as teachers since their job description has evolved from content presenter to learning coach. They respond to inquiries, assist with small group work, and direct each student's particular learning. teachers spontaneously establish teaching groups out of students who are working on the same project and they notice that a few of them are having similar difficulties.

Flipping allows for real differentiation

Having students in each class with a wide variety of skills is one of the challenges facing today's educators. Teachers deal with a wide range of learners, including ordinary, talented, and non-readers as well as those who struggle with the curriculum. The process of flipping the classroom emphasized to them the need that many of the students had and the effectiveness of this approach in reaching students across a broad range of abilities.

Teachers can personalize each student's learning since they spend much of their time walking about the classroom and assisting the students. Teachers have discovered that for students who grasp the material fast if they can demonstrate to their classmates that they comprehend a certain goal, There will be fewer issues for teachers to complete. Consider them as distinctive agreements with each student, each of who must demonstrate comprehension. Because they understand that teachers are more engaged in teaching than in busy work, the students are grateful for this.

Flipping changes classroom management

Teachers who used a traditional teaching approach dealt with students who were consistently inattentive in class. These students frequently interfered with other students' studying and caused disruptions to the class as a whole. Most of the time, they were simply rebellious or bored. Teachers found something incredible when they flipped the classroom. Many of the issues related to classroom management disappeared since teachers were doing more than just talking to the students while standing there. There was no longer an audience for students who required one. The majority of students' class time is spent working in small groups or doing hands-on activities, thus disruptive students no longer pose a problem. Either they had no one to watch them, or they were bored and prepared to dive into the learning.

Flipping makes your class transparent

Flipping the classroom doors lets people inside during a time when certain communities have confidence in the educational system. Videos are freely accessible to the parents of the learners and other people through the Internet. With a few clicks, parents can find the lessons their children are learning in the classroom, eliminating the need to wonder.

Schools are competing for students, whether you like it or not. For several reasons, the school loses some students to nearby schools. Parents' mistaken belief that the school is less scholarly than other local schools has contributed significantly to the loss. Uploading the videos and making our teaching methods available to some of these students have been brought by the public.

Flipping is a great technique for absent teachers

instructors work at a semirural school where it is challenging to find competent replacement instructors. It is particularly difficult for them to obtain competent teachers to teach in a chemistry classroom. They merely videotaped the lessons live in front of the students when they initially began recording them and putting their videos online. Then it occurred to us that, when they knew they would be absent, they might record a lesson in advance for the students.

Jonathan decided to give this a try before leaving town for a wedding. Instead of teaching the lesson as usual, he taped it while seated in front of his computer. The other strategy was to just switch on the LCD projector, pull up the video file, and press Play. Students took notes as if they were there in class. This way his students didn't miss a beat. They got the same lesson on the right day. Students reported how almost eerie it was to hear Jonathan's voice without him being present in the class. The country as a whole is using this technique. In the local area, an elementary school teacher prerecords his classes for his students while he is away. By doing this, he can make sure that the students learn the material in the manner that he desires and avoid having to reteach when he returns. The substitutes appreciate this method of teaching.

The Disadvantages of the Flipped Classroom Model Approach

The use of flipped classes has several disadvantages. Making the videos is the first thing that comes to mind, and it requires the majority of teachers' time. A teacher who does not actively engage with their students outside of the classroom may give them a sense of doom and severely impact their motivation. Students used to the conventional model can encounter some difficulties adapting to this new one. If teachers produce videos, which students are required to watch, causes students to struggle with grasping the material (Talbert, 2012).

In a study conducted by the National Case Analysis Study Center, which has over 15,000 members in the STEM fields (science, technology, engineering, and math), the opinions of nearly 200 teachers using the flipped classroom model were assessed. The findings indicated the following disadvantages (Herreid and Schiller, 2013):

Since they will be dealing with the course material outside of the classroom for the first time, students may be opposed to this new approach. They might not have readied themselves for interactive learning before coming to class. This issue may be resolved by using the knowledge gained from watching videos, reading books, and taking online or in-person tests.

- Resources like videos and reading lists have to be made in line with the activities covered in class. The majority of teachers include videos in their out-of-class instruction. However, according to the study's teachers, students had trouble locating high-quality videos. Teachers produce relatively few high-quality videos, and making them takes time.

Jenkins (2012), Duerden (2013), and Miller (2012) state that the flipped classroom model has some disadvantages as well as advantages these disadvantages can be summarized as;

- It might be challenging for teachers to monitor whether or not students watch the video.
- Students who cannot learn encounter challenges in the classroom.
 - Complicating the model's applicability is the requirement for a computer and internet access.
- The expense of technology is rising.
 - Students who learn by watching videos never pose questions, find it difficult to draw connections between subjects, and thus struggle to study in the absence of a computer or internet connection.
 - The inability to provide an atmosphere where students can communicate while studying the material and their responses can be recorded. (cited in Serdar & Ahmet 2016).

Methodology

This part presents the method and procedure that apply in this study. It is organized under the following sub-headings: design of the study, the participants, time and place of the Study, and instrument of the study.

Design of the Study:

The purpose of this study is to investigate the impact of the flipped classroom model on the students' reading skills at the Faculty of Education/Qasser ben Ghashair. The nature of this research is quantitative.

The Participants:

The participants in this study are the students at Tripoli University, Faculty of Education, Gasser ben Ghashair, Department of English. The participants are selected to do pre-tests and post-tests. The participants are 30 students, all the participants are Libyan. Their ages range between 18 to 25 years old.

Time and Place of the Study:

The study is conducted in January 2024 at the Faculty of Education, Qasser ben Ghashair.

Instrument of the Study:

Pre-tests were submitted to the participants at the beginning of the course, and then the researcher sent some video containing the syllabus of that course through Gmail, before each lecture students were required to listen to the video, and then read the passages at the lectures. At the of the course, students did a post-test to investigate the impact of flipped classrooms.

Data Analysis, Results and Discussion Results of T test

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	post-test	8.3600	25	1.70489	.34098
	pre-teat	5.5200	25	2.02320	.40464

Table 2 shows paired sample statistics

The table shows that the mean of the post-test is 8.36, the mean of the pre-test is 5.52, and N for the post-test equaled N for the pre-test and it is 25. Pre-test Standard Deviation is 2.023, std. error mean is 0.404 and the post-test Standard Deviation is 1.704 and std. error mean 0.340.

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	post-test & pre-test	25	.535	.006

Table 3 paired samples correlation

The table shows paired sample correlation, with $N = 25$, correlation of 0.535, and $\text{sig} = 0.006$.

Paired Differences		Paired Samples Test					T	df	Sig. (2-tailed)
		Mean	Std. Deviation	d. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	post-test - pre-test	2.84000	1.81842	.36368	2.08939	3.59061	7.809	24	.000

Table 4 Paired Sample Test

The table shows the paired samples test since the mean is 2.8, std deviation is 1.818, and std. error mean is 0.363, 95% confidence interval difference lower is 2.089, upper is 3.59, $t = 7.80$, $df = 24$, and $\text{sig} = 0.00$.

Results and Discussion

The paired samples t-test was conducted to evaluate the effectiveness of an intervention by comparing pre-test and post-test scores. The results are detailed in the provided tables.

The paired samples statistics (Table 2) indicate a noticeable improvement in scores from the pre-test to the post-test. Specifically, the mean post-test score was 8.36, compared to a mean pre-test score of 5.52. The standard deviation of post-test scores was 1.70489, indicating less variability among post-test scores compared to pre-test scores, which had a standard deviation of 2.02320. The standard error of the mean was 0.34098 for the post-test and 0.40464 for the pre-test, reflecting the precision of the sample means. The paired samples correlation (Table 3) shows a significant positive correlation between pre-test and post-test scores, with a correlation coefficient of 0.535 and a significance level of 0.006. This suggests that higher pre-test scores were associated with higher post-test scores, indicating some consistency in participants' performance across both tests. The paired samples test results show a mean difference of 2.84 between post-test and pre-test scores, with a standard deviation of 1.81842 and a standard error of 0.36368. The 95% confidence interval for the mean difference ranged from 2.08939 to 3.59061, not crossing zero, which indicates that the difference is statistically significant. The t-value was 7.809 with 24 degrees of freedom, and the p-value was less than 0.001 ($p = 0.000$). The significant t-test result ($p < 0.001$) indicates that the intervention led to a statistically significant increase in test scores from the pre-test to the post-test. The mean difference of 2.84 points suggests a substantial improvement in participants' performance. The positive correlation between the scores further supports the reliability of the test measures used. The data suggest that the intervention was effective in enhancing the participants' performance, as evidenced by the significant increase in post-test scores compared to pre-test scores. The consistency observed through the correlation analysis strengthens the validity of these findings. The results of the paired samples t-test demonstrate a significant improvement in scores from the pre-test to the post-test. The descriptive statistics indicate that the mean post-test score ($M = 8.36$, $SD = 1.70$) was higher than the mean pre-test score ($M = 5.52$, $SD = 2.02$). The standard errors for the mean were 0.34 for the post-test and 0.40 for the pre-test, suggesting a relatively precise estimation of the means. A significant positive correlation ($r = 0.535$, $p = 0.006$) was found between pre-test

and post-test scores, indicating that participants' performances were consistently related across both tests. The paired samples test revealed a mean difference of 2.84 points between the post-test and pre-test scores (95% CI [2.09, 3.59]), which was statistically significant ($t(24) = 7.809$, $p < 0.001$). This finding supports the hypothesis that the intervention led to a meaningful increase in test scores. Overall, the analysis indicates that the intervention was effective in significantly improving participants' performance, as evidenced by the higher post-test scores compared to pre-test scores.

Recommendations

Teachers should use the flipped classroom model.

Flip classrooms may require training for both students and teachers. Students must master time management and establish effort.

Teachers may consider offering comprehensive instruction to students regarding flipped classroom learning ideas.

Conclusion

The study's findings highlight the significant impact of the flipped classroom model on students' reading skills. By enhancing engagement with reading materials both inside and outside of class, the flipped classroom approach fosters improvements in reading comprehension, critical thinking, and overall literacy skills. The results from the pretest and posttest data indicate that this model not only boosts students' academic progress but also offers time-saving benefits. Consequently, the study recommends the adoption of the flipped classroom model by educators. To optimize its implementation, both teachers and students may benefit from training on effective practices. Additionally, students should focus on mastering time management and dedicating consistent effort to their studies. Comprehensive instruction on the flipped classroom concept should be provided to ensure all participants are well-prepared for this innovative learning approach.

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