

## Employing flipped classroom approach as a means to improve students' overall positivity and achieve a greater level of self-confidence

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### Abstract

The COVID-19 epidemic has become a game-changer in the field of teaching. In most schools, emphasis is on introducing new online teaching methods because of which we are seeing a lot of positive things happening in the education sector, and there might be very few things more exciting than the flipped classroom. Free from the restrictions of the classroom lecture, the flipped classroom encourages students to follow individual learning speed and gives them an extended opportunity to think and interact objectively. Active learning via the flipped classroom and access to digital course material through the Internet brings productive education that benefits both students and teachers. A study was conducted by the undersigned to assess the effect of flipped classroom learning (F.C.L.) strategy on the self-efficacy of school students at the elementary level. Flipped classroom approach was compared to the traditional lecture method through quasi-experimental research. Fifty students ranging from grade eight were assigned to the control and experimental groups. The study revealed an overall increase in students' self-efficacy along with a promising increase in the Self-Confidence and Positive Attitude of the students. It shows that in the future also we will have to offer blended flipped methodologies that seemingly integrate face-to-face and online teaching for learning to be more flexible and logical.

**Keywords:** Active learning, Blended learning, Flipped classroom approach, self-confidence, positive attitude.

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### Introduction

A teacher is a person who can lead the younger generation out of the darkness with the aid of his wisdom. Today's teachers have to cultivate students for the future, especially for the "future" needs of future generations. To keep up with the pedagogy of this generation, teachers need to read and learn constantly. Current teacher training should include techniques that encourage innovative thinking and reflective action. (Sharma & Saarsar, 2020). Educators' position in shaping learners' future as active contributors to society has changed.

There has been a tremendous increase in the use of online resources available since the COVID-19 pandemic began. Moodle and other platforms such as Blackboard, MOOC's, Telegram,

Zoom, Google Meet, Whatsapp, and such have seen an increase in usage and are currently being utilized in a variety of ways. New technology has been introduced into the classrooms to facilitate communication between teachers and pupils. Teachers are exploring new approaches like Flipped Classroom Strategy to meet the requirements of their students' varying course goals. A virtual learning environment in a Flipped Classroom involves linking students with both the subject matter and resources available. For example, teachers use sites like YouTube to provide examples of how things work in the real world and illustrations of scientific processes, experiments, and so on. Rather than providing students with just the standard textbooks, teachers provide extra information about a particular subject. As a result, teachers use the flipped classroom method while delivering education in one manner or another.

**The flipped classroom has emerged as a promising strategy.**

The core principle of Flipped Learning is quite simple: students use online video lectures outside class, which frees up class time for activities that encourage and help students interact with each other. Learning about the content is more effective, and it also allows students to apply their learning in unique and practical situations, which allows them to develop a positive attitude towards learning.

The flipped classroom methodology flips the traditional classroom paradigm by studying primary content outside of class and using class time for problem-based learning and activities (Love et al., 2014). Aside from teaching potential, subject understanding, student engagement, and student-teacher interaction, the flipped classroom has demonstrated promising results in terms of student retention (Talley and Scherer, 2013).

Free from the restrictions of the classroom lecture, the flipped classroom encourages students to follow learning speeds on an individual level and gives them an extended opportunity to think and interact objectively while they are close to their teachers. Active learning via the flipped classroom and access to digital course material through the Internet brings productive education that benefits both students and teachers. Instead of doing what has been traditionally done, and allowing the student to prepare and produce content, and then allowing the teacher to provide the framework, explanations and answers, the flipped classroom approach allows the teacher to participate in interactive time and the student to prepare and formulate their own study material, then provide the explanations and answers leading to a boost in the confidence and positivity of the learner.

The pedagogical structures like Flipped Classroom have been developed to facilitate learning using digital technology in online, open, and hybrid environments in order to engage the millennials

and engage them in the learning process. They can provide a robust scaffold for constructive learning to happen within the curriculum. The flipped classroom is an opportunity for teachers at all levels to advance education by manipulating students' preferences, in turn enhancing their self-confidence. It will allow teachers to communicate with students in a "language," which this new generation of learners understands better.

### **Literature review**

Traditionally, flipped learning stemmed from a blending of online learning and classroom instruction. Blended learning may be applied to numerous teaching environments and tactics, and you can easily adjust it to fit any type of class (Graham et al., 2012). Students have reported a good attitude toward blended learning in past studies. Compared to mixed learning and conventional instruction, flipped learning did make a significant difference in student learning outcomes (Thai et al., 2017). Also, studies have shown how empowering is this flipped learning approach for millennial learners (Sharma and Chowdhry, 2018).

Studies have conclusively shown that flipping learning enhances feelings of enthusiasm, interest, and positivity in scientific students compared to traditional learning. ( Jdaitawi, 2020). Notable improvements have been discovered in the self-confidence levels of students in their spoken English skills during the F.C.M. implementation period. (Abdullah & Hussin, 2020). Students who engage in flipped learning are more likely to retain material long-term rather than traditional teaching methods and see their grades rise and achievement in other areas increase. Investigations show that students benefit significantly from adopting the flipped approach, with the advantages being increased academic accomplishment and a boost in students' enthusiasm and positive attitude toward learning. (Birgili, B., Seggie, F.N. & Oğuz, E, 2021)

Females have been observed to improve their self-efficacy more than their male counterparts while using the flipped classroom method. According to results, females are more confident in generating specific or necessary academic performance in language acquisition, and females can enhance their confidence in such academic performance in the flipped classroom. ( Namaziandost & Cakmak, 2020 )

The research background shows that the flip learning approach is practical; however, there is a lack of research that documents the results of this method in India, particularly at the elementary level. Therefore, the researcher planned to examine it. This research attempted to answer whether elementary kids using flipped learning strategy have higher self-efficacy, in turn resulting in higher confidence and positive attitude.

The author conducted a study to see how flipping the classroom affects elementary school students' self-efficacy in learning. The results demonstrated an overall increase in students' self-efficacy along with a promising increase in the Self-Confidence and Positive Attitude of the students (Sharma and Chowdhry, 2018).

➤ **Method of research**

The current study investigates the effect of F.C.L. strategy self-efficacy of the learners, in particular self-confidence and positive attitude. Keeping this in mind, the researcher followed the Experimental Method. In the first stage, all pupils in two groups were tested on I.Q., S.E.S., confidence, and positive attitude. In the second stage, the experimental group was taught using the Flipped classroom style, while the control group was taught using the usual method. The students were then post-tested on their confidence and positive attitude.

➤ **Research Hypotheses**

1. There is no significant difference between experimental and control group pre-test scores on participants' self-confidence.
2. There is no significant difference between Experimental and Control Group Pre-test Scores on Positive Attitude.
3. There is no significant difference between experimental and control group post-test scores on participants' self-confidence.
4. There is no significant difference between experimental and control group post-test scores on participants' positive attitudes.
5. There is no significant difference between the Experimental and Control Group Mean Gain Scores on Participants' Self-Confidence.
6. There is no significant difference between the Experimental and Control Group Mean Gain Scores on Participants' Positive Attitude.

➤ **Variables involved**

Independent variable: flip learning method and traditional method

Dependent variable: Self -Efficacy (self-confidence and positive attitude)

Intervening variable: age, economic status, social status, intelligence, etc.

➤ **Sample**

In the present study, 50 pupils of the seventh class of Chhotu Ram Memorial Public School of Rohtak city constituted the sample.

➤ **Tools used**

This study used the following standardized tools:

1. Intelligence Group Test (Ahuja, 2005)
2. Socio-Economic Scale (Singh, Shyam & Kumar, 2006)
3. Self-Efficacy scale (Singh & Narain, 2014) with positive attitude and self-confidence domains.

➤ **Statistical techniques and software used.**

The acquired data was statistically examined to test the study's objectives:

1. Mean and standard deviation calculated for self-confidence and positive attitude scores.
2. 't' test was used to assess a student's intelligence and socio-economic level.
3. The 't' test compared the pre and post scores of students' self-confidence and positive attitude.
4. SPSS was used to compute the data.

➤ **Comparison of experimental and control groups' pre-test scores on self-confidence**

The table below shows the pre-test scores of experimental and control groups on self-confidence :

**Table 2.1**

Group	N	M	S.D.	df	t-value	Significance
Experimental	25	19.12	1.78	48	.72	Not significant
Control	25	18.80	1.32			

A quick look at table 2.1 shows the computed t-value to be only .72, which is significantly lower than the table value at the .05 level (1.98) and the .01 level (2.58). This shows no significant change in the pre-treatment mean self-confidence levels of students in the experimental and control groups.

➤ **Comparison of experimental and control groups' pre-test scores on Positive attitude**

The table below shows the pre-test scores of experimental and control groups on positive attitude :

**Table 2.2**

Group	N	M	S.D.	df	t-value	Significance
Experimental	25	18.76	1.56	48	.30	Not significant
Control	25	18.64	1.15			

This is shown in table 2.2 and is smaller than the t - table value at the .05 levels (1.98) and less than the t-value at the .01 level (2.58). This shows that the pre-treatment mean scores of students in the treatment and control groups did not differ significantly in terms of positive attitude.

➤ **Comparison of the experimental and control groups' self-confidence post-test results**

The following table displays the mean scores and t-values for self-confidence after treatment for the experimental and control groups.

**Table 3.1**

Group	N	M	S.D.	df	t-value	Significance
Experimental	25	22.88	1.69	48	2.83	Significant
Control	25	21.48	1.80			

Table 3.1 shows a significant difference in post-test mean self-confidence levels between experimental and control groups students. The experimental group exposed to a flipped classroom method had an average score of 22.88. T-value is more than the table value at.01 levels of significance, 2.83. T-value is more significant than table value. It demonstrates that using a flipped classroom strategy increases students' self-confidence.

➤ **Comparison of the experimental and control groups' positive attitude post-test results**

The following table displays the mean scores and t-values for positive attitude after treatment for the experimental and control groups.

**Table 3.2**

Group	N	M	S.D.	df	t-value	Significance
Experimental	25	23.12	1.56	48	6.65	Significant
Control	25	20.56	1.12			

It can be deduced from the above table that the flipped classroom method approach had a considerable impact on the experimental group's positive attitude (experimental group mean score 23.12 vs. control group's mean score 20.56). At a.01 levels of significance, the estimated t-value is greater than the table value by 6.65. There is evidence to suggest that using a flipped classroom technique to instruct pupils has improved their attitudes.

➤ **Comparison of the experimental and control groups' mean gains in self-confidence**

The following table displays the gains in self-confidence made by the experimental and control groups on average :

**Table 5.1**

	<b>Group</b>	<b>N</b>	<b>Mean</b>	<b>S.D.</b>	<b>'t'</b>	<b>Level of significance</b>
<b>Mean gain</b>	Experimental Group	25	3.76	1.66	2.67	Significant
	Control Group	25	2.68	1.99		

Table 5.1 shows that the experimental group had higher mean gain scores (3.76) after the test than the control group (2.58). Students in the experimental group outperformed their peers in the control group by an average of 2.67 points. As a result, students who used the flipped classroom approach performed marginally better than those who used the traditional teaching style. The Flipped classroom technique is more helpful in boosting 7th-grade kids' self-confidence, according to the study.

➤ **Comparison of the experimental and control groups' mean gains in the positive attitude**

The following table displays the gains in positive attitude made by the experimental and control groups on average :

**Table 5.2**

	<b>Group</b>	<b>N</b>	<b>Mean</b>	<b>S.D.</b>	<b>'t'</b>	<b>Level of significance</b>
<b>Mean gain</b>	Experimental Group	25	4.36	1.70	6.24	Significant
	Control Group	25	1.92	.95		

In the post-test stage, experimental participants outperformed controls, with mean gains of 4.36 versus 1.92, as shown in Table 5.1. It is clear from Figure 5.2 that for students in the experimental group, the t-value of 6.24 indicates a significant difference in mean gain scores between the

experimental and control groups. Students in the 7th grade developed a more positive outlook after utilizing the Flipped Classroom strategy.

#### ➤ **Discussion of results and conclusions**

When comparing the two before and after the experiment, there was a more tremendous increase in self-efficacy among students in the experimental group than among those in the control group. The flipped classroom focused on initial learning through online open educational resources. Students welcomed flipped classroom strategy and were quite engrossed in the quiz time while watching class videos. After being taught from the flipped classroom instructional program, an increase in students' self-confidence and a positive attitude can be seen. Though there is an increase in the self-confidence and positive attitude of control group students, it is pretty insignificant compared to those in the experimental group. This finding could be explained by the fact that students in the flipped classroom had the opportunity to work together on hands-on activities. Prior study on the flipped classroom has found that the additional chances students have in the flipped classroom lead to improved learning results. The findings of this study corroborate those of Bell (2015), Gardner & Willey (2016), Lee (2017), Chong (2018), and Tuncer (2018), all of which confirm the flipped classroom strategy's favorable effectiveness.

The results also showed that with the deployment of F.C.M., the self-confidence of pupils was steadily improved. Improving students' self-confidence could be ascribed to the significant contribution of collaborative and interactive learning to help students feel more independent. They felt they had more responsibility for learning and genuine opportunities for more accessible communication and sharing their thoughts, ideas and experiences. Additionally, a comfortable, safe, encouraging, and interactive class environment could be attributable to students' increased wish and enthusiasm for participating in all activities and communicating with their classmates. This finding is consistent with results from previous studies such as Göktürk, N. et al. (2016), which have shown that learners' self-confidence can be strengthened and consolidated through the use of unique teaching methods.

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