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# REFLECTIONS OF TEACHERS AFTER USING THE FLIPPED CLASSROOM MODEL: AN ANALYSIS OF INTERVIEWS

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***Abstract***

*The Flipped Classroom is a new model of teaching, under the Blended Learning strategy. It consists of the delivery of content to the students at their homes, using technology, and processing the content in the class, in the presence of teachers and peers. A lot of research worldwide has proved the effectiveness of Flipped Classroom in developing higher order thinking skills among students. The teachers need training to use the Flipped Classroom model in teaching as it is a new pedagogical approach and also needs a different skill set. There has not been much work regarding teacher training for Flipped Classroom in India.*

*A teacher training program was conducted in June 2021 in order to equip secondary school teachers to use the Flipped Classroom model in subject teaching. It focused on building awareness about the model and its benefits, training teachers in technological skills, student engagement, and lesson planning, as well as building the motivation required for implementing the model. After the training, all the 32 teachers planned and conducted one lesson using the Flipped Classroom model. The researcher then selected 10 teachers out of the total 32 to understand their experience in depth. Semi-structured interviews of these 10 teachers were conducted to understand how the implementation had occurred.*

*The analysis of the interview responses show that the training program has been fairly successful in creating interest and eagerness among the teachers about using the Flipped Classroom model. It has equipped them with the basic technological skills and lesson planning skills required. The experience of one lesson has boosted their confidence and curiosity, triggering new ideas about the next lesson in their minds. At the same time, the responses show specific areas where more guidance is needed. A lot of insights for the betterment of the training program have emerged from the data.*

***Keywords**: Flipped Classroom, secondary school teachers, training program*



## Introduction

The Flipped Classroom is a new model of teaching where the homework (HW) becomes the classwork (CW) and vice versa. The Flipped Classroom consists of the delivery of content to the students at their homes, using technology, and processing the content in the class, in the

presence of teachers and peers. It looks at the home as the 'individual study space' and the class as the 'group study space'. It relegates lower order thinking skills, viz. remembering and understanding, to the individual study space. The higher order thinking skills are moved to the group study space i.e., the classroom, where learning can occur with peers and in the presence of the teacher.

It is clear that the model demands a complete shift in the mindset of teachers as also a big change in the learning habits of the students. The teachers need training to use the Flipped Classroom model in teaching (*Broderick, 2016)* as it is a new pedagogical approach and also requires a different skill set.

This study examines the interview responses of 10 teachers who have received training to use the model and then have conducted a lesson using it. The study evaluates the usability of the training program based on the interview data.

**The Flipped Classroom model**

Flipped Classroom, Blended Learning model with the basic idea to reverse the traditional order of instruction where lectures precede student activities. Students are instead given homework as preparation for class, and classroom time is then spent on active learning under the guidance of the teacher (Karlsson & Janson, 2016).

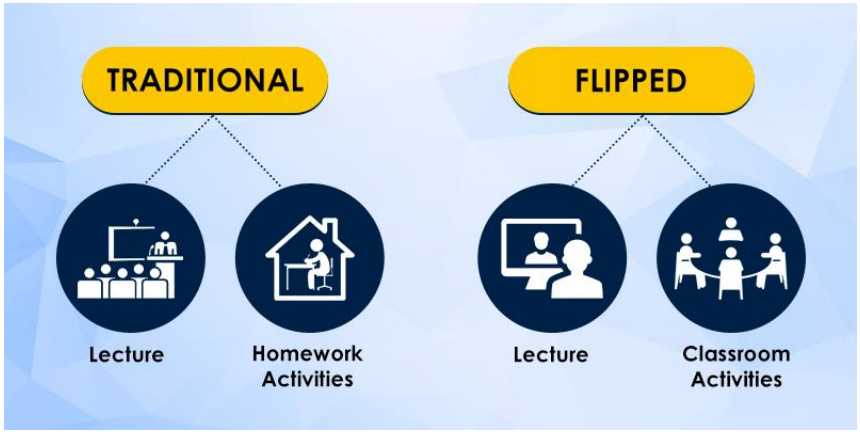


**Fig. 1. Traditional vs. Flipped Classroom (Source: Globsyn Business School)**

In the traditional model of school teaching, the pervading perception is that students sit passively in the classroom, listening to the teacher imparting expert knowledge. After the lecture, the students generally work at home, individually grappling with the application of the concepts learned in the classroom. This model tends to rely on students accessing

knowledge from the teacher and processing that information through assignments with little support from the teacher or peers. This process involves several thinking skills that have been arranged into a hierarchy by Bloom (Bloom et. al, 1956). Remembering, understanding, and applying are considered to be lower-order thinking skills while analyzing, evaluating, and creating are considered to be higher-order thinking skills (Anderson & Krathwohl, 2001).

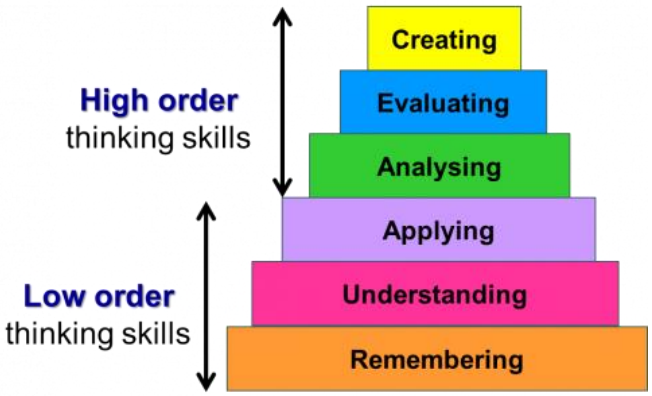


**Fig. 2. Bloom's Taxonomy (Source: Google Sites)**

In the traditional classroom model, the teacher works on lower-order skills when the teacher is present, while the student struggles with higher-order cognitive skills when the teacher is not there to help. Described in this way, the traditional model does not seem the most logical way to prepare our students for the workplace that requires higher-order thinking (Braseby, 2015).

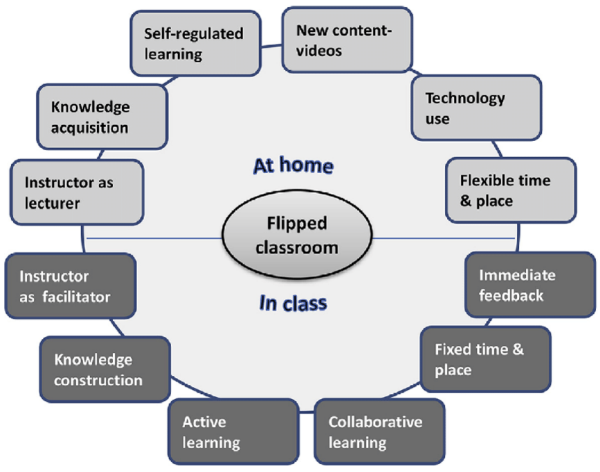


**Fig. 3. Conceptualisation of Flipped Classroom (Source: Science Direct)**

**The advantages of the Flipped Classroom model are as follows:**

1. Optimization of classroom time: It increases the interactive period within the class (Fulton, 2012). Using lecture videos assigned as homework or individual work before the class, the teacher uses the time for the interaction between teacher and student rather than for teaching. Accordingly, the teacher can spare more time to fulfill the learning and emotional demands of students (Goodwin & Miller, 2013).
2. New role of the teacher: In flipped classroom approach the students can find opportunities to discuss with their teachers which is not a possible situation in the traditional approach (Bergmann & Wadell, 2012). The teachers does not 'teach' in the class, but works as a facilitator.
3. Peer learning: According to Milman (2012) the most important benefit of flipped classroom approach is to support team-working within the class. Students are engaged in group discussions and group tasks in the class. In this process, they learn together and from each other too.
4. Student-centered approach: Students can access lecture videos whenever and wherever they want to allow students to learn at their own speed (Fulton, 2012). The students that are educated with this approach are encouraged to think both within and out of class (Kellinger, 2012).
5. Higher-order thinking skills: Learning through the flipped classroom model enhances the higher-order thinking skills such as analysis, evaluation, and creation, among students (Annan, Onodipe, Stephenson, 2019). Teachers can organize activities for this purpose because students come to the class with a ready base of understanding.

A teacher training program was conducted in June 2021 in order to equip secondary school teachers to use the Flipped Classroom model in subject teaching. It focused on building awareness about the model and its benefits, training teachers in technological skills, student engagement, and lesson planning, and also building the motivation required for implementing the model.

**The training program**

The teacher training program was conducted for 32 secondary school teachers who teach to classes VII to X, from Jnana Prabodhini Navnagar Vidyalaya, a school with both Marathi and English medium units. The details were as follows:

The training program was designed to enable the teachers:

1. to understand the flipped classroom model
2. to create lesson plans based on the flipped classroom model
3. to understand how to apply the Flipped Classroom model in their teaching
4. to use appropriate technology required for the flipped classroom model

The assumption behind the program was that the teachers need training in order to implement the Flipped Classroom (*Broderick, 2016).*

The program was developed in such a manner that the teachers would get both theoretical and practical inputs regarding the importance and use of Flipped Classroom model. The following elements of the Flipped Classroom model were incorporated in the program:

- Concept and importance of the Flipped Classroom model
- Instructional scaffolding in Homework material design
- Cooperative learning in Classwork design
- Higher order thinking skills in Classwork design
- Tips for student engagement

The training program consisted of 24 sessions in a duration of 10 days. This included 13 theory sessions and 11 alternating practice sessions. Every practice session was followed by immediate assessment and feedback to the teachers. Teachers were divided into small groups and every group had a mentor who would assess these lesson plans based on a rubric every day and give appropriate feedback to the teachers. The assignments were progressively difficult and prepared the teachers to implement the model in teaching.

After the training, all 32 teachers planned and conducted one lesson using the Flipped Classroom model. The researcher then selected 10 teachers out of the total 32. Semi-structured interviews of these 10 teachers were conducted to understand how the implementation had occurred.

**Methodology**

The objectives of the study were:

1. To find what elements in the training have helped in the implementation of the model and how
2. To find what elements from the training have been retained by the teacher and what are forgotten
3. To find what problems the teachers have faced during implementation

4. To find what more elements should be included or expanded in the training and how The usability testing of the teacher training program will be done through the responses in the interviews.

The 10 teachers for the interviews were selected using the maximum variation sampling method. This approach consists of determining in advance some criteria that differentiate the participants and then selecting participants that are quite different on the criteria. This approach is selected because when a researcher maximizes differences at the beginning of the study, it increases the likelihood that the findings will reflect differences or different perspectives—an ideal in qualitative research (Creswell, 2012). The researcher considered the following variables for sample selection: age, experience, teaching subjects, pre-test scores, post-test scores, technological skill, knowledge of Flipped Classroom, and assignment submission time during the training. Selecting such a sample could bring all extreme responses to the surface and therefore give an idea about the complete picture of the lessons conducted by teachers. On the other hand, the responses might not be necessarily representative as the participants from the extreme ends of every variable spectrum have been selected.

**Findings and Discussion**

The interview transcripts were coded using the qualitative coding method. Two rounds of coding were carried out with every separate interview transcript. Then all the codes that emerged were compared using an excel sheet. Every case was analyzed in detail. Question-wise responses across cases were compared and contrasted too.

The following points emerged from the analysis:

1. HW material - Out of the ten teachers who were interviewed, eight teachers had prepared their own homework material in some or the other form. The simplest form was preparing an audio of poetry reading and explanation, which was chosen by two teachers. One teacher prepared a PowerPoint presentation based on the homework content using good pictures and charts. Two teachers went one step further by making PowerPoint presentations with their own audio. The content was on the slides, while the explanation and scaffolding were achieved through the audio. Two teachers chose to make PowerPoint presentations with a talking head. While one teacher prepared a video of a short mathematical game based on integers. There were two teachers who picked out readymade videos from YouTube that suited their lesson and used those as homework material.

2. Student participation in the Class - The responsiveness of students - attempting to answer the questions asked by the teacher and attempting to raise points in group discussions - has been considered as student participation by the researcher. Three teachers reported more participation than otherwise, while two teachers reported 100 % participation. Three teachers said that students were eager and excited about the activity. One teacher observed reduced hesitation in speaking. Two teachers said that students could derive the content points through discussion. One teacher said that students who never spoke in the class spoke for the first time. "जी मुलं वर्गात कधीच बोलत नाही ती सुद्धा breakout room मध्ये बोलली. अशी मुलं ज्यांचा मी कधी आवाजही ऐकला नव्हता...."

   This shows that classes became more participatory. The interest of students in learning showed a rise. It indicates that the training has successfully helped teachers achieve the objectives of the Flipped Classroom model regarding student participation.

3. Benefits of the model - Four teachers reported better interest and participation of students. Four teachers said that they could work as a facilitator. Here we observe that a clear shift in the role of the teacher was experienced by four teachers, which is a special feature of the Flipped Classroom model.

   Three teachers said that the model prompted them to prepare more deeply. "म्हणजे मी photosynthesis साधी गोष्ट असेल मी फ्लिप क्लास रूम वापरली काय आणि न वापरली काय हे मला शिकवायचं आहे ही concept मला माहिती आहे पण फ्लिप क्लास रूम ने ते खूप organized होऊ शकतं. असं नक्की मला वाटतंय कारण मग मी त्याच्या साठी व्हिडीओ तयार करेन. अरे मग मला या formula वर लक्ष द्याव लागेल. मला हे प्रश्न येतील, हा माझा जो पूर्व विचार आहे म्हणजे नॉर्मल प्रक्रीये मध्ये आपला पूर्व विचार नाही होत जे येतं ते आतून येतं हे आधीच हे मी मागच्या वर्षी शिकवलं होतं तेच ते आहे, म्हणजे मग तुमचा पूर्व विचार करायला बसता content analysis करायला बसता, तेव्हा नवीन काहीतरी नक्की काही तरी सुचतं आणि ते तुम्हाला खूप अं .... म्हणजे cherry on the cake देऊन जातं असं मला याच्यामुळे मला नक्की वाटलं." Two teachers could come up with new creative ideas due to the model. One teacher said that it also saved teaching time in the class. This is also a key feature of the model.

   These responses indicate that the teachers could implement the model successfully.

4. How training helped - Two teachers (who do not have a B. Ed degree) said that the training helped them to understand how to design a lesson systematically. Four teachers said that it helped them to learn to use technology better. "मुळात मला व्हिडिओ करता आला माझा. (laughs happily)…त्याचा उपयोग झाला अ ....breakout रूम्स मी शिकून घेतलं कसं करायचं ते आणि मदतीला असं मी कोणी घेतलं नाही." "आणि व्हिडिओ चा , म्हणजे आधी आपण केल होत म्हणून कोन्फीडान्स वाढला , नाहितर मग असं होत की ," आवाज कसा येतोय माझा?" , मग " बोर होईल का?",मग " सगळे हासतील का?" वगैरे"

   Two teachers started preparing more for their lessons after the training. Five teachers learned how to conduct group activities. Three teachers learned to do instructional scaffolding. Two teachers reported that the equation 'easy part at home, the difficult part in class' was now fit in their minds. Two teachers could conduct HOTS activities.

   Apart from these points teachers also said that - Discussion with other teachers during the training gave them new ideas. They realized the importance of allowing the students to speak in a class. The training was beneficial because of its step-by-step arrangement, where the model was explained in small parts. They came to know about the importance of teacher-made videos. They experienced that content analysis and mind map making can make a difference. This model helped to save the teaching time.

   These responses point out that the way the training schedule was designed has proved to be helpful.

5. Change in teaching style - Four teachers reported that they now try to do less teaching in class. Three teachers have started giving preparatory homework for other lessons as well. Two teachers have started planning maximum group work. Others reported changes like asking more triggering questions in class, doing content analysis before teaching, using scaffolding techniques, and planning more deeply.
6. Ideas for the next iteration - Five teachers would like to work on preparing better HW material. Three teachers want to work at taking CW to a higher level. Two teachers have now realized the need and learned the skill to give better, detailed instructions for group work. One teacher wants to improve time management and another wants to work at becoming more of a facilitator than a teacher.

7. Use in the future - Two teachers said that they are eager to use the model in face-to-face school. Two teachers want to conduct group work in face-to-face mode. One teacher has decided to use the model for longer units, as it saves teaching time. Another teacher plans to record science experiment demonstrations so that classroom time can be devoted to analytical discussion. Four other teachers mentioned topics for which they would like to use this model.
8. Choice of topic - Three teachers said that they chose a small and concise topic that could fit into one teaching period. Three teachers chose a topic in which practice in the teacher's presence was important. One teacher chose a topic, the material for which was readily available. Two teachers said that the topic they chose had possibilities of expansion.

   None of these teachers thought of flipping a unit.

   This shows that the training could not inspire the confidence to flip an entire unit. Some teachers had the confidence and awareness to choose content that suits the model, while some lacked it and just opted for easy content in their first attempt.
9. Student response to HW - Two teachers reported that students who did HW participated better in CW. One teacher said that conducting a higher level of learning was possible due to good student response.

   Six teachers reported 50 to 60 % response, one teacher 30%, one teacher 40 %, and two teachers reported 100% response to HW.

   One teacher got a low response and had to repeat teaching in the class. She said that she needed to make the homework material more attractive next time.

   One teacher who reported 100% student response to HW said that she gave instructions in 'appealing language'.

   More time in the training should be spent on how to elicit student response for HW.
10. CW strategy - Group discussion was used by five teachers, group task by one, and pair task by one teacher. Peer learning is an important feature of the Flipped Classroom model. This has been registered well by teachers. The training could not get into too many details of how to conduct groupwork. But some teachers spontaneously went into greater detail and thought about the 'before' of the process. Two teachers conducted group meetings before the class to explain the task. Their lessons were more successful.

    None of the teachers used the groupwork techniques taught in the training. This could be because the techniques were just touched upon and that could not build enough

confidence to use them. It could also be that teachers had forgotten and therefore ignored them.

11. HOTS - Two teachers conducted HOTS activities in the class. Another two teachers conducted consolidation of HW learning in the class. Three teachers said that they did not think of conducting HOTS activities in this lesson. There were three teachers who did not give a straight answer to the question about HOTS. Out of them one said that she tried to teach things beyond the textbook, another spoke about group discussion when asked about HOTS and the third teacher restated her CW plan which did not, in fact, include HOTS.

    This shows that the training was not adequate to prepare teachers for conducting HOTS activities. Some teachers had not even clearly understood what is meant by HOTS.

12. Constraints - Three teachers said that conducting the CW online is very difficult. The time available in class was less for discussion. Others said that - The HW content could be too easy for some and difficult for others. Class strength makes conducting activities challenging - an assistant teacher is required. More clarification is needed about how to make videos. More time is needed to prepare for such lessons.

13. Training modifications - Three teachers want more practice for video making, including voice modulation training. Two of these had shown low score on the technological skill test that was conducted before the training, and all three are teachers with less teaching experience.

    Two teachers need guidance about how to write learning outcomes. They both have less teaching experience.

    Three teachers need more time to prepare lesson plans immediately after the training. Two of these had good assignment submission time during the training. They were enthusiastic about the model and implementation. The third teacher showed low score in pre-test, post-test and had less experience.

    Two teachers said that more examples of HOTS activities should be added. Teachers also reported that - More time should be spent on content analysis. More examples of group work should be given. Better time planning needs to be taught. More lesson plans should be assigned for practice. A model lesson must be shown, especially for language teaching.

A teacher said that ‘creating’ lesson plans was difficult. This could be because she was a Science teacher and designing exercises of ‘creating’ is easier in languages.

A teacher expressed that the confidence of flipping a unit is not yet there among them. She had high scores in both the pre-test and post-test.

A teacher said that he had some major doubts which could not be cleared during training - due to lack of time and his own hesitation. He is a teacher with less experience, and low pre-test and post-test scores.

***Learnings for future training design:***

*i) Group discussion is easier and therefore more teachers seem to have chosen that over group tasks.*

*ii) Teachers should be guided in more detail about how to conduct group work. If the training time is not enough, handouts about additional points can be given. Time planning of a lesson that includes group work should be taught.*

*iii) The training should include tips and tricks about how to communicate with students to elicit maximum response to the HW. A handout about the same should be given for later use.*

*iv) Teachers did not choose a topic that consisted of HOTS. They should be instructed to do so in the training. The first lesson after the training can be about practicing the HW part. Teachers can be then, with some experience, encouraged to conduct HOTS activities in the second lesson.*

*v) The awareness and confidence about conducting HOTS activities seems to be low. More practice of these should be conducted. Examples of every HOTS activity pertaining to every subject should be added to the handouts.*

*vi) Training should include points about the ability-grouping of students for HW and CW. Video-making practice should be conducted in the presence of experts. Time planning for CW needs to be discussed in the training.*

*vii) More practice should be conducted for video-making in the presence of experts.*

*viii) Writing the learning outcomes should be explained in more detail with some examples. It should also be included in the handouts. The group mentors should be instructed to repeat it every day.*

*ix) Model lesson demonstration should be conducted so that it builds confidence among teachers. A video recording can be shared or watched together as well.*

*x) Some time slots should be reserved during the training (maybe evening sessions) after every two days for open questions and answers so that teachers can freely approach the trainers to clear their doubts.*

**Conclusion**

The analysis of the interview responses show that the training program has been fairly successful in creating interest and eagerness among the teachers about using the Flipped Classroom model. It has equipped them with the basic technological skills and lesson planning skills required. The experience of one lesson has boosted their confidence and curiosity, triggering new ideas about the next lesson in their minds. At the same time, the responses show specific areas where more guidance is needed such as how to write learning outcomes and how to plan HOTS activities.

The study had certain limitations. The interest of teachers in using the Flipped Classroom model was not considered. The training design could not be more than 10 days because that would lead to loss of interest. The teachers also had other duties during the training period which affected their participation.

A lot of insights for the betterment of the training program have emerged from the data. The analysis points out that the 10-day long training program was successful to a certain extent. But it has to be followed by a well-structured support system for teachers. This should include the availability of mentors and peers for discussion, technological skill practice and opportunity for peer lesson observation.

The training was designed to teach separate parts of the model in each session first and then put it together as a whole. The researcher thinks that teachers still require to conduct about five more practice lessons of each separate part of the skill, so that implementing the whole model does not seem like a daunting task. The researcher also strongly feels the need for all teachers to have platforms in schools where reflection about their teaching experiences can be done.

Absorbing the Flipped Classroom model and using it in everyday practice is quite challenging. Systematic efforts carried out over a few months can help the teachers get there. The training program can prove to be a good starting point in the journey.

**References**

*Anderson, L. W. & Krathwohl, D. R., (Eds.). (2001). A taxonomy for learning, teaching and assessing: A revision of Bloom's taxonomy of educational objectives, Complete edition, New York: Longman*

*Bergmann, J. & Waddell, D. (2012). To flip or not to flip? Learning and Leading With Technology*

*Bloom, B. S., Engelhart, M. D., Furst, E. J., Hill, W. H., Krathwohl, D. R., (Eds.). (1956). Taxonomy of Educational Objectives, Complete edition, New York: Longman*

*Braseby, A. (2015). The Flipped Classroom, The IDEA Center, University of Texas*

*Broderick, J. E., (2016). Flipped Classrooms as an Experiential Learning Strategy: How Do Faculty Adapt to Teaching with Instructional Technology. (Publication no. 10245662). [Doctoral thesis, Johnson & Wales University]. ProQuest Dissertations Publishing.*

*Creswell, J. W., (2012). Qualitative Enquiry and Research Design, Third Edition. Sage. Pg 157.*

*Fulton, K. (2012). Upside down and inside out: Flip your classroom to improve student learning. Learning & Leading with Technology*

*Goodwin, B. & Miller, K. (2013). Evidence on Flipped Classrooms Is Still Coming In. Educational Leadership*

*Karlsson, G. & Janson, S. (2016). The flipped classroom: a model for active student learning, Portland Press Limited*

*Kellinger, J.J. (2012). The flipside: Concerns about the "New literacies" paths educators might take. The Educational Forum*

*Kodwo, A., Onodipe, G. & Stephenson A. (2019). Using Student-Created Content Videos in Flipped Learning to Enhance Student Higher Order Thinking Skills, Engagement, and Satisfaction - Journal of Education and Social Policy, Vol. 6, No. 3, September 2019*