PARTIALLY FLIPPED ENGLISH CLASSROOM IN A SCHOOL SET-UP: A COMPARATIVE STUDY OF PEDAGOGICAL PRACTICES

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ABSTRACT: *With the advent of digital technology and the realization of its usefulness in classroom, pedagogical practices are changing in a major way. Flipped Classroom Model (FCM) is touted as the future pedagogical practice. Technology cannot replace the teacher, but better teaching /learning can take place if technology is used to aid the teacher in the classroom. A partially flipped classroom involves flipping some of the classroom / home activities. An experiment was conducted at a selected school in the Kashmir Valley in India by partially flipping the English classroom. The purpose of the study was to test whether the proposed model works as a better pedagogical model compared to the conventional teaching-oriented classroom setting. The results obtained from the study show students favour the partial flipping and the model is successful in generating stronger student motivation and better performance compared to conventional pedagogical models of teaching English.*

KEYWORDS: Flipped classroom model, Partially flipped class, Comparative study, Pedagogical practices, Teaching of English as a second language

INTRODUCTION

The demand for English language in India, especially working knowledge of English, is very high while the output, in the form of fluency of learners, is generally low ((Bashir, 2016). One of the major factors influencing learners' performance is pedagogical practices. Learning of a foreign language needs constant active use of the language in various contexts, whereas, the limited time in an often overcrowded class and the outdated pedagogical practices leave no scope for students to actively use English (Rahman, 2002; Brok, Fisher & Koul, 2005; Nazima, 2007; Tasaduq & Azim, 2012; Riyaz & Mullick, 2016). However, the recent information revolution seems to have shown a ray of hope in this dismal scenario. With the help of digital technology, the dependence of learners on teachers and class lectures can be minimized; learners can learn at their own pace, and can explore the unprecedented depth of knowledge available at their doorstep (McNally et al., 2017; Sharma, 2010; Kaur, 2016). The teacher-oriented conventional classroom can be replaced by learner-oriented flipped classroom where learners learn in a different manner as the events "that have typically happened inside classrooms occur outside and vice versa" (McNally et al., 2017; Bishop & Verleger, 2013; Strayer, 2012; Lage et al., 2000). FCM depends on pre-class activities (which may be done online or offline with the help of a computer and CD ROMs or any memory stick), face-to-face in-class interaction, discussion, feedback and online peer collaboration and interaction. Flipped classroom model (FCM) of pedagogy is in practice at higher education level in many developed countries (Rogan, 2007; Ono & Ferreira, 2010; Fleith, 2010), and in India the practice is in its

experimental phase. The model has been experimented with in English language teaching too (Sam, 2016; Sharma, 2010) and the researchers report satisfactory results.

Research Background: Literature Review

The present study was conducted at a school in the state of Jammu & Kashmir in India. School education in Jammu & Kashmir is imparted by two types of institutions – government schools and private schools. English teachers at both types of institutions employ conventional modes of teaching, predominantly teacher-fronted education. But, it is observed by the researchers, and confirmed by some scholars through empirical studies, that as regards teaching of English in the state, private schools fair better than government schools, as private school teachers use different pedagogical approaches and practices which suit better to the needs of the learners (Brok, Fisher & Koul, 2005; Riyaz & Mullick, 2016; Rahman, 2002; Tasaduq & Azim, 2012). The traditional pedagogical methods, it appears, are fraught with several problems and are less motivating to students, and therefore they hardly cater to the communicative needs of the learners (Riyaz & Mullick, 2016; Rahman, 2002). Private school teachers enjoy more freedom to experiment with pedagogical practices and they use more technology to their classes, such as audio-visual media clips, and they encourage more classroom discussions. The success of these teachers in enhancing student motivation and achievement in English leads to the idea that digital technology-based flipped classroom can bring even better results in language learning.

Flipped Classroom Model of Pedagogy

As a pedagogical strategy FCM is a new concept in India, though around the world the approach has been in practice for over 27 years now (Sharma, 2010). Its potential use in language teaching is still very recent (Sharma, 2010; Sharma and Barrett, 2007). The concept is at present in experimental phase in higher education (MacDonald, 2008), and in Indian contexts educationists have begun bringing to the fore the potential benefits of FCM to both teachers as well as learners (Sam, 2016; Kaur, 2016; Goyal and Tambe, 2015; Shinde & Deshmukh, 2012). Teachers, for instance, can benefit from FCM as the strategy enhances their roles as facilitators, student mentors and differentiating instructors for individual learners. They can provide quick feedback to students in a fast-paced environment (Shinde & Deshmukh 2012, p. 2) and deliver the content better in a speedy way. Learners have improved learning effectiveness as the approach extends the learning environment and provides them with personalised learning climate. The practice also makes learning more social leading to more transparency, increased flexibility and personalization of students' learning experiences, increased communication among teachers, enriched professional development, curriculum development, easy management of grades/attendance, and easy tracking of student behaviour problems (Kaur 2016, p. 230-31).

A flipped classroom requires reversal of students' in-class and at-home activities. So, learners attend online/offline lectures at home (lecture videos, quizzes, workbooks, and so on), gather information from online sources and come prepared for discussion and problem-solving that takes place in the class (Bishop & Verleger, 2013; Strayer, 2012; Lage et al, 2000). FCM is being successfully implemented at higher education institutions for various courses and therefore it is touted as the future pedagogy (Kim et al., 2017; McNally et al., 2016; Tu & Liu, 2016; Kaur, 2016; Hoffman et al., 2014). But, at present the model is tested only at higher education level, and all the literature on the subject discuss the success of FCM in terms of student motivation and achievement for higher education courses flipped. In a research study

conducted with school students the researchers found the learners do not favour FCM, for various reasons (Qayoom & Saleem, 2017). Yet there exists a possibility that fully flipped course may be the major reason for students' disfavour for the new pedagogy, and therefore, it is required that an empirical research study be carried out with partially flipped English course. Following the opinions of Cutrell et al. (2015) that blending online and in-person instruction is more likely to succeed in developing regions such as India, the researchers have framed the hypothesis that a partially flipped course in English will generate better student motivation leading to better student achievement in the target language.

The Problem

As discussed above, all the experiments with and research in FCM are concentrated in the higher education sector, while almost no experiments have been conducted with school students. An entirely flipped classroom may not work at schools since school students may depend more on teachers. The findings of another study by the researchers prove this (Qayoom & Saleem, 2017). This situation led the researchers to the idea that a partially flipped classroom may work well under the given circumstances. What is meant by 'partial flipping' is that learners will not be required to do all the pre-class activities on their own; some of the activities, such as problem-solving, doing quizzes, etc. will be done in the class as well. The major thrust of the present study is to identify the best suited pedagogical model to teach English to school students, especially in the state of Jammu and Kashmir. The issue has evaded scholarly attention as till now no such study has been conducted and there exists a knowledge gap in the area. Moreover, whatever few studies exist on the subject (e.g., Brok, Fisher & Koul, 2005; Riyaz & Mullick, 2016; Rahman, 2002; Tasaduq & Azim, 2012), they touch upon only the conventional pedagogical mode of teaching, and since FCM is a fairly new approach, no research studies concerning the effectiveness of the model with school students have been conducted yet.

Hypotheses

The researchers' personal experiences of teaching English to school students, and a review of previous studies on pedagogical practices led them to form the following hypotheses:

H1: A partially flipped classroom model to teach English to high school students in Kashmir Valley brings better results in terms of student motivation and student achievement compared to a conventional teacher-fronted classroom model.

H2: Partially Flipped Classroom is a better model of teaching for school students as it follows pedagogical practices better suited to them.

Assumptions

Certain assumptions have been made by the researchers to arrive at the research hypotheses, which may be put as follows:

1. School teachers teach English to students in a conventional manner in which the majority of teaching and lesson-related exercises are carried out by the teachers in the class, and only a few exercises are given to students to be done at home.

2. Pedagogical practices have direct bearing on student motivation and achievement.

3. Students in a conventional class set-up are passive learners.

4. Conventional, teacher-oriented pedagogical practices can be replaced by advanced, learner-oriented pedagogical practices to enhance learner motivation and achievement.

5. Students in flipped classroom model are active learners as they actively take responsibility of their learning, making all the preparations before class and actively taking part in classroom discussions and collaborating with their peers for further learning leading to heightened motivation and better learner achievement.

Research Questions

RQ 1: Does partially flipped mode to teach English to high school students generate more student motivation and better student achievement compared to conventional fully teacher-fronted classroom setting?

RQ 2: Is partially flipped classroom a better pedagogical model to teach English to school students?

Objectives of the Present Study

The primary goal of the present study is to identify good pedagogical practices to teach English to school students. A corollary to this objective is to test the hypothesis that to teach English to high school students, a partially flipped classroom will generate stronger student motivation and better performance in mastering the language, in comparison to the conventional teacher-oriented mode of teaching. To achieve these objectives, in an experimental and comparative study, motivation and achievement of students – to master the language, and to achieve more in English – taught in a conventional teacher-fronted classroom and partially flipped classroom have been compared and evaluated.

METHODOLOGY

Mixed methods research paradigm has been employed to achieve the objectives of the present study. Quantitative and qualitative research methods have been used separately, and wherever necessary, the procedures of the two have been overlapped. Quantitative data have been collected through the survey questionnaire and the two tests, and qualitative procedures have been followed to make meaning of the data and to interpret the obtained results.

Participants

The student participants selected for the present study were High School students enrolled at a private school in Kashmir Valley in India. English is taught to them as a compulsory subject. A total of 100 students were selected for the study through a random selection process. The participants ranged between 16 to18 years of age. The participants had no prior experience or training in FCM to learn English, though they had some experience in learning through audio-visual data presented in English, mainly pictures, video clips, conversations and reading passages that their teachers sometimes brought to the class as teaching aids. They had no problems with the use of Internet to browse data and search relevant materials. They were given additional training in the use of laptop computers and tablets to type, save and access information as MS Word documents and to respond to questions online. They were comfortable with using a password and logging-in for file retrieval.

Data Collection: Instruments

Data for the study were collected using two different instruments – (i) a survey questionnaire that collected students' preference for (partially) FCM based on their experience with partially flipped English lessons, and (iii) pre-test and post-test that measured students' achievements in English prior to and at the end of partially flipped classroom session.

The survey format was adapted from McNally et al. (2017). Some modifications were carried out in the format to suite the research requirements. The researchers constructed the pre- and post- tests themselves. The tests were modelled on the annual student achievement tests conducted by Jammu and Kashmir Board of Secondary Education.

Variables

(a) Independent Variables

The primary objective of the present study was to evaluate the effectiveness of partially flipped classroom as a pedagogical practice to teach English to school students in J&K in bringing about stronger motivation and better student achievement in comparison to conventional teacher-fronted classroom. So, the independent variables set to conduct the study were the pedagogical practices employed in the two models – methods, activities and feedback – to achieve the desired results. In the experimental study, the variables were used constantly, consistently, over a period of two weeks, with a selected group of participants to study their effect on their learning of English.

(b) Dependent Variables

The outcome of teaching English to be studied, using FCM as an approach, was enhanced student motivation and better student achievement. Motivation of students was expected to reflect in their opinions about FCM, while student achievement should reflect in their test marks. These variables were measured in two ways: (i) survey of students' opinions, and (ii) achievement tests, conducted for both treatment and control groups.

Measurement

Validity, reliability and accuracy of the data collection instrument in terms of internal consistency of test items were checked through Cronbach's Alpha calculations. The Alpha value for the survey questionnaire was obtained 0.814. The pre- and post-test instruments were validated by getting them checked by three subject experts at the researchers' university. In addition, the preliminary test papers were piloted with a small number of participants, and upon getting satisfactory results, the final test papers were prepared afresh.

T-test is applied to calculate the significance of difference in the achievement marks of the participants in two groups. SPSS (Version 12.0) was put to use for further calculations.

Procedure

A pre-test was administered to the selected participants. This served twofold purposes – (i) it provided the researchers a standard of judgment against which the progress of participants in terms of their achievement in English was to be measured, and (ii) it also provided the standard of judgment against which the achievement of the treatment group participants in English in comparison to control group participants was to be evaluated. After the pre-test, the participants

were divided into two groups – treatment group and control group, 50 students in each group. The treatment group participants were taught English for two weeks using partially flipped classroom pedagogical approach, whereas the control group participants were taught the same lessons using conventional, teacher-fronted classroom teaching method. Partial flipping of the class involved that the participants learnt the lessons at home (accessing the digitized versions of lessons taught by an expert in virtual classroom environment and provided to them on a CD ROM), but other supplementary activities, such as quizzes, exercises, problem-solving and discussions were carried out in class, and according to the requirements of participants, the teacher explained even part of the lessons as well in the class. Assessment and feedback were provided to participants online. At the same time, the participants were encouraged to join the online group of treatment group participants created specifically for this purpose. They were encouraged to post their comments and suggestions on class/lesson issues for the benefit of their peers with the hint that more group participation will be rewarded with extra marks. After the experimental teaching session, post-test was administered to the participants of both the groups. At the same time, the treatment group participants were handed out the opinion survey format, which they returned filled-in after one hour.

DATA ANALYSIS: RESULTS

The parameters followed to conduct pre- and post-tests are as follows:

Pre-test /Post-test

	Test Type	Marks
(i)	Reading and Writing	80
(ii)	Listening and Speaking	20
	Total marks	100

Pre-test: N = 100

Post-test:

Treatment Group: N = 50

Control Group: N = 50

The descriptive statistics for the results obtained from pre- and post-tests are given below.

Table 1: Descriptive statistics for pre-test/post-test variables included in the present study

	Pre-test	Post-test						t-value
		Treatment Group, N = 50			Control Group, N = 50			
	Mean	Mean	SD	Variance	Mean	SD	Variance	
Reading/W riting	69	72	4.133	16.74	69	5.34	17.87	4.822*
Listening/S peaking	14	17	1.58	2.47	14	2.12	3.23	

*Significant at p < .05, df. 98

An overview of the descriptive statistics of the variables used in the study, i.e., students' achievements in the four skills in English as a second language, viz., reading, writing, listening and speaking, shows a marked difference in (i) pre-test marks and post-test marks of treatment group participants, and (ii) pos-test marks of the participants in two groups. In both the cases, an average increase of 3 marks (approximately 4%) in reading/writing, and an average increase of 3 marks (approximately 15%) in listening/speaking is a noticeable enhancement in student achievement. The t-test value, i.e., 4.822 is significant at p < .05, df. 95, which is an indication of significant difference in the achievement results of the participants brought about by FCM of pedagogy.

In table 2 below are presented the descriptive statistics of the results obtained from the survey questionnaire given to treatment group participants. The higher mean for the given variables indicates higher motivation of participants to learn English if taught using partially flipped classroom as a pedagogical model. The reliability coefficient (Cronbach's Alpha) for the questionnaire items was obtained .814, which is a very satisfactory value for internal consistency of test items in the questionnaire.

Table 2: Descriptive statistics and reliability coefficient for scale variables included in the present study for treatment group participants

(N= 50)

	Variable	M	SD	Min	Max	Reliability^α
1	**Pre-class activities:** Were helpful to my learning	4.42	.574	3	5	.814
2	Motivated me to learn more	4.46	.613	3	5	.814
2	Enabled me to learn at my own pace	4.46	.613	3	5	.814
2	Prepared me for in-class activities	4.48	.579	3	5	.814
5	**In-class activities:** Clarify what I had learned in pre-class activities	4.46	.613	3	5	.814
6	Apply what I had learned in pre-class activities	4.42	.574	3	5	.814
7	Develop problem-solving skills	4.46	.613	3	5	.814
8	Improve my group-work skills	4.46	.613	3	5	.814
9	Develop better learning and study skills	4.48	.579	3	5	.814
10	Improve my communication skills	4.46	.613	3	5	.814

^{α} Cronbach's Alpha

In table 3 given below are presented the descriptive statistics of the results obtained from the survey questionnaire given to control group participants. The pre-class and in-class activities in the questionnaire indicated the activities carried out in a conventional, teacher-fronted classroom. The lower mean of scores for variables indicates a low preference for and lower motivation to learn English if taught using conventional pedagogical approach. The reliability score of test items was obtained .645, which is just a satisfactory value of Cronbach's Alpha.

Table 3: Descriptive statistics and reliability coefficient for scale variables included in the present study for control group participants

(N = 50)

	Variable	M	SD	Min	Max	Reliability$^\alpha$
1	**Pre-class activities:** Were helpful to my learning	4.18	.388	1	5	.645
2	Motivated me to learn more	2.34	.626	1	5	.645
3	Enabled me to learn at my own pace	1.78	.615	1	5	.645
4	Prepared me for in-class activities	1.78	.545	1	5	.645
5	**In-class activities:** Clarify what I had learned in pre-class activities	3.32	.978	1	5	.645
6	Apply what I had learned in pre-class activities	2.12	.872	1	5	.645
7	Develop problem-solving skills	3.14	.989	1	5	.645
8	Improve my group-work skills	1.7	.462	1	5	.645
9	Develop better learning and study skills	2.7	.073	1	5	.645
10	Improve my communication skills	2.3	.952	1	5	.645

$t = 7.8039$

On a comparative scale, the t-test value was obtained 7.8039. This is a slightly higher than expected value of t, yet the value is acceptable at α level .05, with degrees of freedom being 98, in a two-tailed hypothesis test (that is, testing whether participants displayed higher degree of motivation if taught through flipped classroom model of pedagogy, which is entirely different from the conventional mode of teaching, and to test whether the new pedagogical practice is more effective in teaching of English in terms of student achievement)

DISCUSSION

The primary motive of the present study was to investigate whether flipped classroom model of pedagogy effectively enhances school students' motivation to learn English, and whether FCM proves to be an effective pedagogical practice in terms of students' higher achievement in English at school level. The research findings hint that at school level a partially flipped classroom model of pedagogy may be successful, especially as regards teaching of English as a second language. The obtained results support the first research hypothesis, that is, a partially flipped classroom model to teach English to high school students in Kashmir Valley brings better results in terms of student motivation and student achievement compared to a conventional teacher-fronted classroom model. The second research hypothesis, that is, a Partially Flipped Classroom is a better model of teaching for school students, as it follows pedagogical practices better suited to them, is also supported by the research, as the effectiveness of this pedagogical model is reflected in students' better achievements in all the four skills of the target language. The post-test achievement results of the treatment group show a marked improvement in comparison to the post-test marks of the control group participants who show no improvement as they are taught in a conventional manner.

CONCLUSION

The current research was designed to answer two research questions. The first question, i.e., 'does partially flipped mode to teach English to high school students generate more student motivation and better student achievement compared to conventional fully teacher-fronted classroom setting?' is answered in the affirmative as the students taught using partially flipped model for two weeks displayed enhanced motivation to learn English in comparison to the students taught in a conventional method displayed no change in their motivation level. The second research question, i.e., 'is partially flipped classroom a better pedagogical model to teach English to school students?' is also answered in the affirmative as the students' achievements in four skills have improved since they were taught using FCM, though partially flipped course.

Measurement of pedagogical practices is a difficult and controversial subject since teachers may adopt different practices at different times, for different topics, with different students, even being idiosyncratic in their approach. Some scholars believe that idiosyncratic practices or their effects on students' learning cannot be measured since there is no standard of judgment in such cases, and therefore, what is there to measure at the end of the day? The other aspect of the concept of pedagogical practices is their multidimensional nature that hinders quantitative measurement. Whereas, other researchers believe that pedagogical practices and their impact on learner motivation and achievements can be measured using certain psychometric tools and tests. (Siraj-Blatchford, 2010; Rowan, B. et al., 2001). Nevertheless, the advent of digital technology and its huge impact on pedagogy has changed everything. Teachers' idiosyncrasies do exist, yet a teaching model like (partial) FCM has almost levelled the field for all, and moreover, the approach is more learner-oriented. At school level, fully flipped classroom model doesn't work, but a partially flipped classroom shows better results in terms of student motivation and achievement in English, and probabilities are high for its success in other courses too.

Strength and Weaknesses of the Study

The present study was primarily an experiment in finding out an effective pedagogical method to teach English to school students in Kashmir Valley. FCM is very contemporary concept in teaching, and its implementation in some institutes of higher education shows good results. But research in school contexts is still wanting. So, the major strength of the present study lies in its opening up a new field of research, especially in the Kashmir region. Partial flipping of a teaching course is also a novel experiment in itself. The success of the experiment may encourage further research in the area and thus build a knowledge repertoire.

The major weakness of the study, as the researchers see it, is its limited scope. The study was conducted at just one school and with a small number of participants. The issue of better pedagogical model bears significance for the larger population of students, and definitive conclusions cannot be drawn from a small experiment. The results obtained from the study are merely indicative of a probable trend in the future pedagogy of English. The researchers hope that this gap in the research can be filled by future researchers.

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APPENDIX

Survey Questionnaire for Treatment Group Participants

Please circle the most relevant response

	Pre-class activities for the lessons (reading, lesson videos, quizzes, workbook):	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	Were helpful to my learning	1	2	3	4	5
2	Motivated me to learn more	1	2	3	4	5
3	Enabled me to learn at my own pace	1	2	3	4	5
4	Prepared me for in-class activities	1	2	3	4	5
	The in-class sessions (solving puzzles, working in group, etc.) helped me:	1	2	3	4	5
5	Clarify what I had learned in pre-class activities	1	2	3	4	5
6	Apply what I had learned in pre-class activities	1	2	3	4	5
7	Develop problem-solving skills	1	2	3	4	5
8	Improve my group-work skills	1	2	3	4	5
9	Develop better learning and study skills	1	2	3	4	5
10	Improve my communication skills	1	2	3	4	5

Survey Questionnaire for Control Group Participants

Please circle the most relevant response

	Pre-class activities (homework, assignments):	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	Were helpful to my learning	1	2	3	4	5
2	Motivated me to learn more	1	2	3	4	5
3	Enabled me to learn at my own pace	1	2	3	4	5
4	Prepared me for in-class activities	1	2	3	4	5
	In-class activities (learning lessons, reading, grammar rules, etc):	1	2	3	4	5
5	Clarify what I had learned in pre-class activities	1	2	3	4	5
6	Apply what I had learned in pre-class activities	1	2	3	4	5
7	Develop problem-solving skills	1	2	3	4	5
8	Improve my group-work skills	1	2	3	4	5
9	Develop better learning and study skills	1	2	3	4	5
10	Improve my communication skills	1	2	3	4	5