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The Integration Of Google Classroom As A Flipped Mode For Teaching And Learning Economics In A Government College At Rajbari

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Abstract

In the context of the higher education provision and arrangements of Bangladesh, Colleges under 'National University of Bangladesh (NUB)' are applying traditional teaching and learning techniques for long. We are bound to deliver our lectures in large-sized classes. In large classrooms, however, students' attention and concentration are difficult to retain. For proper delivery of lessons, limited class time is another serious impediment. Since we have to deal with the students who are heterogeneous in terms of their abilities, differentiated nourishment is required to make learning effective. Most of the time, all these shortcomings hinder students from understanding their class lessons properly. It is, therefore, high time that we redesign our teaching techniques for the purpose of ensuring proper and quality education. A technology-supported pedagogy – flipped mode of classroom integrates online and offline altogether. "By this mode, traditional lectures and instructions are sent out of class and free class time is used for practice, problem-solving and interactive learning in groups" (Selwyn, 2007, as cited in Rossing et al., 2012). Students get the vital opportunity to progress in their learning journey at

their own paces which makes them confident and thereby they can put forth their learning responsibility by themselves (Beaumont, 2018; Moffett & Mill, 2014). For this purpose, in this essay, at first our current teaching practices have been reviewed and afterwards the failures of it in achieving teaching and learning objectives along with challenges ahead have been identified. It has been attempted to identify the prospects of flipped approach using Google Classroom in eradicating the problems of prevailing traditional approach of pedagogy. The possible impact of flipped pedagogy using Google Classroom is not only a quantitative improvement like raising the pass rate of the students, but rather it facilitates qualitative achievement in learning. Revising the national education policy is required for the proper implementation of the procedure. We can benefit from flipped classroom approach using Google Classroom even with the prevailing grading system and education policy if we are able to acquire the competency of applying this technique in our education structure.

1.0 Introduction

In the context of the higher education provision and arrangements of Bangladesh, Colleges under 'National University of Bangladesh (NUB)' are applying traditional teaching and learning techniques for long. In achieving learning objectives and in dealing with new challenges, it is needed to evaluate the effectiveness of these techniques (O'Byrne & Kristine, 2015). We are bound to deliver our lectures in large-sized classes. In large classrooms, however, students' attention and concentration are difficult to retain. For proper delivery of lessons, limited class time is another serious impediment. Since we have to deal with the students who are heterogeneous in terms of their abilities, differentiated nourishment is required to make learning effective. Most of the times, all these shortcomings hinder students to understand their class lessons properly. Eventually, they get the inducement to turn to private tutors. Instead of proper learning, these commercial tutors give emphasis on grades which is only one aspect of education. In this way, maintaining quality in education is compromised in the college level education in

Bangladesh (Hossain & Khan, 2014; Islam, 2008). It is, therefore, high time that we should redesign our teaching techniques for the purpose of ensuring proper and quality education.

1.1 Rationale Underpinning the paper

A technology-supported pedagogy – flipped mode of classroom integrates online and offline altogether. “By this mode, traditional lectures and instructions are sent out of class and free class time is used for practice, problem-solving and interactive learning in groups” (Selwyn, 2007, as cited in Rossing et al., 2012). The allocated class time can be utilized more fruitfully with this approach. It has been revealed in different insightful studies that if this flipped approach can be utilized with an expert hand, students can gain higher learning opportunities, their outlook about their learning would be optimistic and teachers’ satisfaction would be enhanced than traditional teaching mode. Moreover, students get the vital opportunity to progress in their learning journey at their own paces which makes them confident and thereby they can put forth their learning responsibility by themselves (Beaumont, 2018; Moffett & Mill, 2014).

For this purpose, in this essay, first our current teaching practices have been reviewed and afterwards the failures of it in achieving teaching and learning objectives along with challenges ahead have been identified. It has been attempted to identify the prospects of flipped approach using Google Classroom in eradicating the problems of prevailing traditional approach of pedagogy. “The teaching techniques using google classroom as a flipped mode appear as better developed, more effective, target-oriented and student-centric” (Hinkelman, 2018; Hwang, Lai, & Wang, 2015).

Therefore, I have realized the necessity of exploring the advantageous aspects and challenges at the time of integrating this new pedagogical approach in our prevailing backward structure. Thereby my expectation is to establish a greater scope and bring more opportunities to the learning environment of our country.

2.0 Context and Current Practice

In this essay, the efficacy of google classroom as a flipped classroom with evidence from available sources has been synthesized. In section 2.1, a brief description of my institution where special emphasis has been put on the description of the prevailing strategy for delivering lessons. Consequently, in the next section (section 2.2), an inquisitive investigation on the integration of flipped mode of pedagogy using Google Classroom side by side with my prevailing practice has been carried out. This investigation will be based on research findings as well as other available evidence from literature. Finally, a comparative analysis of the prospects flipped pedagogy using Google Classroom has been conducted.

2.1 The institutional and instructional context

2.1.1 A Brief Description of My Institution

I have been engaging in teaching in a good district-level college of Bangladesh, namely Rajbari Government College. Currently, Higher Secondary, Degree (Pass) Certificate, Undergraduate and Post-graduate level of education are provided in my institution. There remain 14 departments in my college. More than 10,000 students are enrolled in my institution at present. 70 teachers are appointed through 'Bangladesh Public Service Commission (BPSC)' for serving teaching services here. The students come here to learn from 5 Upazilas of Rajbari Districts as well as from other adjacent districts of Rajbari. The college has a vast influence in various socioeconomic contexts (Website, Rajbari Government College).

2.1.2 Prevailing Teaching Approach of My College

In four phases, education is being conducted in my college at present. The intervened program of this paper is Undergraduate Economics Program which is controlled by National University of Bangladesh (NUB). The duration of the Undergraduate Program is four years. Students are required to study in total 24 courses during their whole undergraduate program. The weight of 100 marks or 4 credits are assigned for each of the 24 courses. The maximum portion of the total marks, i.e., 80% marks of the whole program are assigned to the one-time year-end

examination. National University conducts the year-end final examination at a time in the whole country. Students' attendance in the class carries 5% of the total marks. In-course examinations carry the remaining 15% marks. For each course, the concerned department independently arranges two or three in-course examinations. Finally, they have to take part in a viva-voce that carries 100 marks. The in-course examinations, attendance of every year can only be controlled by the concerned department. Although the concerned department bears the evaluation authority for in-course examinations, attendance, and viva-voce, it carries through the activities of the program targeting mostly to prepare the students for taking part in the year-end final examination. The educational institutions run their learning operations with such traditional teaching and learning arrangements where knowledge and information dissemination occur in the direct way from teacher to students. Here teacher is the unique and foremost actor, and he maintains a high degree of his direction. The role of the teacher is to tell and advise, and passive listening to the teacher is the most dominant way of students' acquiring knowledge (Islam, 2008; Islam, 2016).

2.2 Prevailing mode of teaching and Flipped mode of teaching using Google Classroom

In connection to this, I have realized the necessity to make a comprehensive comparison between the two approaches - the prevailing teaching approach and flipped teaching approach (using Google Classroom). I have carried out the comparison by conceptualizing the two approaches with evidence from the literature in the following two subsections:

2.2.1(a) Prevailing Traditional Teaching Approach

In different educational institutions, the approach of 'Traditional Classroom Teaching' can be termed as the procedure of the usual form of knowledge transmission (Sherrow, Lang, & Corbett, 2016). This framework can be viewed as a historic and long-established one. The entire process is led by the teacher. For the creation of the learning environment, students are arranged in a disciplined manner. The main target of the teacher is to conduct the class in the

lecturing delivery mode where he wishes to achieve the maximum learning outcome level within the short and stipulated class duration. The teacher demands the full attention of the students. As the sole dominant player, the teacher tries to disseminate his knowledge and information stream to the class. As a quite passive learner, students try to acquire knowledge by silently listening to the teacher. Through memorization of texts, imitation, recitation and further compulsory readings, the teacher subsequently proceeds to the more insightful and conceptual learning space (Dimitrios, Labros, Nikolaos, Maria, & Athanasios, 2013).

2.2.1 (b) Flipped Classroom Approach of Teaching (using Google Classroom)

"A nice alternative to traditional pedagogy in achieving learning objectives can be Flipped Classroom like Google Classroom" (Sherrow et al., 2016). Here the terminology "Flipped" carries the meaning of reverse teaching. Flipped Classroom Mode is considered as a very effective latest form of teaching and learning for ensuring quality education. "It is termed as a pedagogical movement and a technique of innovative educative method by the researchers where the role of teachers and students are inverted while technology playing role between them and conveying the revolutionary changes through widening the scope of knowledge transmission mechanism" (Flores, Del-Arco, & Silva, 2016). Instead of direct lectures in the classrooms, teachers use different technological tools for making learning materials available to their students. Various technological tools and online platforms jointly give access to the learning materials instantly. The learners can grasp those on their own where direct support from their teachers is not so necessary. After that, further practices and tasks based on learners' pre-class learning can be arranged in the classrooms by which learners will be able to intensely analyze and interpret the contents (Sherrow et al., 2016). in this way, learners' competency stimulated and uplifted.

According to Unal & Unal (2017), "Flipped Classroom approach is the technology-infused learning mode where new ideas are introduced and generated out of class, and the complex tasks like problem solving, practicing etc. are accomplished with the help of teachers in classrooms". The proximity to technology benefits millennial students to take part in their learning process very

actively and thereby an active learning environment can be established. "The issues and expectations of active learning, such as - achieving deep learning from memorization, moving to student-centered approach from teacher-centered approach, inverting learning pedagogy for student engagement and thoughtful participation- all these can best be satisfied with flipped setting such as the integration of Google Classroom" (Roehl, Reddy, & Shannon, 2013).

2.2.2 (a) Positive Sides of Prevailing Traditional Teaching Approach

While considering the facilities of implementation, we can get some advantages of Traditional Teaching Approach. Of these, one notable is that it can be implemented in the prevailing structure without the intensive use of progressive technologies like computer, laptop, internet usage, smart phone and other such technological devices and tools. Another benefit of this approach is that students from impoverished and low-income families can run easily to their learning journey. With simple logistics like white-board and markers, teacher can conduct lectures. To continue the class, it is sufficient alone teachers' resourceful knowledge and competency. In case of continuing learning in Traditional Teaching Approach, comparatively lower investment on infrastructure is required. Finally, it provides the opportunity of face-to-face learning. So, there occurs direct and immediate interaction with the teacher. In the context of Bangladesh-like developing countries where resource constraint is a natural phenomenon, it is practically justified to continue the learning activities with this traditional teaching and learning approach (Islam, 2008; Islam, 2016).

2.2.2(b) Positive Sides of Flipped Classroom Approach of Teaching (using Google Classroom)

Researchers asserted in favor of flipped strategy that it has the vital potential to work for uplifting learning outcomes to the desired level. "It allows learners to learn independently with their own pace which makes them responsible to their learning process" (Sherrow et al., 2016). Learners can benefit from the easy interaction with the learning materials. As students get the video lectures at hand outside of class hours, they can take it as an advantage to watch the video lectures repeatedly so long as it requires to understand the learning materials fully. "Those

students who lack in confidence and do not feel free to ask questions in traditional setting, can have the advantages of replaying lecture as many times as they want" (Sherrow et al., 2016). This view was also supported by Roehl et al. (2013). "Squandering of class time for lecture replication can be saved in this way. Learners can attempt to practice pre-class lessons anywhere as technology is mobile friendly" (Sherrow et al., 2016).

"Teachers can provide immediate feedback after monitoring and assessing the learner. As homework is accomplished in class, teacher can provide instant support directly in need of students. It enhances student-teacher and peer connectivity with the help of diversified modern technology" (Unal & Unal, 2017). "Students are highly motivated and engaged in the learning process. Learning can also be continued in the absence of teacher and students. Distant students can be in touch with the teacher. Teacher can also send the course material irrespective of his physical presence to the learners" (Roehl et al., 2013). "Group work and team-based learning make the teacher conscious and committed. Most interestingly, assessment system in different phases raises the attendance in the class" (Sherrow et al., 2016).

2.2.2 (c) Challenges Encountered for Adopting Flipped Classroom Approach

"The first drawback of this approach is its slow implementation due to lack of required access to advanced technology and supportive infrastructure. The pre-condition for executing a flipped class like Google Classroom is to have the required technology and reliable internet connection" (Moffett & Mill, 2014). According to the view of Roehl et al. (2013), resource limitations that have to face by students and teachers altogether might be emerged as a major challenge for implementing this approach. They pointed out, "For implementing flipped classroom, the institutions must have various forms of technological supports. These includes – sufficient computers, extensive and strong internet coverage, even the financial ability of students in getting adequate and incessant attachment with computer and online platforms". Another issue, according to Roehl et al. (2013), "If learners cannot be accustomed with this new flipped pedagogy, implementation of the approach will not be satisfactory. As students are settled in

traditional learning mode, they can feel discomfort in proceeding with the new approach". This issue was also supported in literature by Unal & Unal (2017), "Students can have some discomfort in video learning at home. Besides, video lectures can be boring and unattractive. Adequate time should also be allocated for watching video lecture". Therefore, adequate training for both students and teachers is needed for efficiency in handling this issue. Once again, limitations in allocating public budget for this purpose might emerge here as a major difficulty.

A high initial cost is needed to convert prevailing traditional teaching into a flipped setting like Google Classroom (Vazquez & Chiang, 2015). "Creating and compiling the learning material require substantial time" (Unal & Unal, 2017). "Those materials are also required to organize virtually, adjust and update time to time which is a complex task too. Instructor has to bear the time and expenditure of handling technology or working with video, audio, PowerPoint slides, images etc. They may face the lack of opportunity, enthusiasm, and incentive to carry out the complex job" (Roehl et al., 2013). "The worst thing is to compel learners to watch video truly and effectively. They are usually reluctant to prepare lesson even with watching videos" (Unal & Unal, 2017).

2.2.3 Effectiveness of Flipped Classroom like 'Google Classroom'

In the findings of some quality studies, it has been identified the flipped classroom as very effective. Olitsky & Cosgrove, (2016) revealed that, "Flipped strategy can contribute more to bring a large number of students simultaneously under better learning outcome even with low fund and limited classroom time and space". Other than any negative outcome from flipped approach like 'Google Classroom', these researchers found 6.1% higher achievement of students as compared to traditional setting. They pointed out that, "Student become self-dependent and active from face-to-face problem solving. This learning gain can outweigh the cost of video lecture or any other expenses that he may incur in flipped setting". Using a cognitive load scale Turan & Goktas (2016) declared firmly that, "The cognitive load level of students in flipped class is significantly different and lower in extent than traditional teaching approach".

On intermediate level information literacy course, Lag (2016) conducted his study where he confirmed that "Students of flipped class are strongly confident, thoughtful, specific, and concerned about their learning. Flipped teaching in this way ensures students' effective engagement in the learning process. Students' satisfaction develops and teachers can also move more conveniently in the learning process".

Flores et al., (2016) revealed that the degree of students' attention increased with this approach and the students did not claim their learning contents as overloading to them. Teachers perceived that students' interaction scope inside and beyond classroom widened and thereby students' confidence developed. This approach made the students enthusiastic in their learning and they tried to attend their classes more than before. Wilson (2013) identified that, "Course standard developed with this structural change. It removes negative feedback for teachers mostly. It develops perception to learning and to instructor. Scope of getting immediate feedback from teachers eliminates the panic for complex courses". Therefore, this approach can remove the dissatisfaction that students bear for their teachers. Nguyen et al. (2015) examined the effectiveness of flipped pedagogy by reflecting the perceptions of the students in three dimensions. According to them, "First - Student in this setting has felt that quality of video lecture favors fairly more than face to face learning. Any further question can be addressed at the time of preparation and then can be raised in the next class. Secondly-study revealed that roughly all students become interactive in reverse teaching that is possible in case of Google Classroom. All becomes inquisitive and can question frequently in the class. They equally obtain teachers' support for which student- teacher relation becomes interactive and cooperative. Finally, students observe that students' learning level and engagement in the process develops because of effective feedback from teacher and better student-teacher relation. Students finally find the complex problems as more interesting from class discussion and teachers' support". Overall, from the above findings, I can claim that students can achieve a convenient and high understanding level from flipped approach.

3.0 Critical Reflection

In the forthcoming section (section 3.1), I have carried out an analysis of the rationale of my prevailing practice first. Afterwards I have attempted to give an outline of my prevailing practice. Consequently, in the upcoming section (section 3.2), I have tried to make an evaluation of the fruitfulness of my prevailing practice and thereby I have tried to justify my ideas in the way to put forth a structural change in our prevailing practice.

3.1 My Current Practice

3.1.1 Rationale

Since the prevailing traditional teaching approach has been dominating the teaching practice in Bangladesh for a long period of time, I am bound to follow the approach. In case of the college level education in Bangladesh like my institution, the education authority is initiating some sorts of qualitative trainings at home and abroad on the application of technology in education. I have also got the vital opportunity to take part in some good training programs at home and abroad. Having gained insights on effective pedagogy and technology incorporation from these training programs, I am attempting to adopt such a teaching approach that is blended with modern pedagogy and prevailing strategy. "For implementing any advanced teaching technique, we have limitation in terms of financial and technological support, infrastructure, sufficient training, and teaching material. The most crucial factor is that this procedure is supported by a national curriculum and syllabus" (Islam, 2008; Islam, 2016).

We are bound in such a system where we are unable to go beyond what is provided to us on our own. Grading, exam, and assessment are the most crucial aspects of students' motivation. For motivating students toward any new approach, it is needed first to explain to them the contribution of a new system to their examination, assessment methods and above all grading attainment. I adopt the traditional method relevant to it because I am forced and guided by our

concurrent syllabus and curriculum aligned teaching and assessment framework (Islam, 2008; Islam, 2016).

I am presenting a short description of my teaching practice here.

3.1.2 My Anecdote

even though I bear the independent control in designing and implementing my class, most of the times I continue the class with the prevailing traditional teaching approach for some reasons that I mentioned earlier. In accordance with syllabus and text, I prepare a class note before the class. In some instances, I take the advantage of PowerPoint slides, audio, video incorporation in preparing my lecture note targeting to enhance further attention of the students. Time to time I try to update my lecture note. Sequentially following syllabus, I deliver my lecture and give instructions to the students. Students listen to me, watch the PowerPoint presentation, and try to take notes. They are encouraged to ask questions if they find anything unclear. They are also encouraged to participate in interactive-fashioned discussions with me and among themselves. After completing the class activities, I give some Homeworks to the students prior to next class. Homeworks include problem solving tasks, reading necessary text, assignment etc. These tasks are designed in such a way that will assist them in understanding the ideas fully that I demonstrate in the class sessions.

At the beginning stage of the next class, I will encourage the students to ask questions on the unclear parts of their learning materials of the previous class. As well as this, I give feedback to their homeworks. Then I turn to delivering the topics of the new class. Other than these, time to time I try to go through with some different strategies including assigning them to prepare brief questions and answers beyond the class time on such topics that were discussed in the class. In some instances, I engage them in reading text instantaneously in a few minutes inside of the class. Sometimes I keep the provision of individual or group presentation covering a topic that I specify before commencing the class.

3.2 Evaluating Existing Practices based on literature

It is essential to evaluate the positive sides and downfalls of the prevailing traditional approach of teaching and learning for the purpose of addressing the issues that are constrains for effective learning. When I have analyzed the available data about students' performance and learning outcome regarding their year-end final examination, I have got a very good picture of their achievement. But it is poorly reflected here the degree of effective learning of students. When I have compared their depth of learning, the extent of their learning attainment, their class attendance rate, their attentiveness to the class lectures, their attraction to learning, with the results of their year-end final examination, I have got a contradictory and challenging picture.

During my more than 13 years of teaching career, I have been noticing that students remain enthusiastic in their learning, and they feel excited to attend the classes at the very early stage of any education program. This enthusiasm and excitement, however, are observed to be faded in a gradual manner when the program progresses. In the grading calculation, attendance bears some weight though, but the percentage of attendance weight is very insignificant. It is also not strictly applied at the time of grade calculation. Class attendance and participation are considered by the students as frivolous because the same level of learning can be attained without attending classes by taking help from some ready-made notes and texts or even going to the private coaching centers. Therefore, most of the students are feeling demotivated in attending their class sessions regularly. On the other hand, when they can obtain a good grade in their year-end final examination without attending classes, they become inspired more to their learning.

Homeworks such as the practice of regular reading, assignment preparation, problem solving, project work etc. are not encompassed in this existing system. These sorts of brainstorming, advanced, and critical thinking activities are remained out of assessment. As a result, students only rush for a conventional year-end exam. The questions lack creativity and for this reason, it has been observed that sometimes the meritorious students who maintain higher understanding level perform poorly in the year-end final examination. The in-course examinations that we

operate do not cover the entire syllabus and therefore we are unable to measure the students' in-depth comprehension to their course contents. Since the class size is very large, it is also impossible to address the problems of all the students. Large class size also hinders the students to become interactive with the teacher altogether. Thus, the students remain dissatisfied. They also do not feel any attraction to their teachers and learning materials. As a consequence, they fall in a tremendously stressful situation when they have to sit for the final examination. The prevailing assessment system also creates obstacles to spread the cognitive load throughout the year (Islam, 2008; Islam, 2016).

4.0 My Action Plan

From the findings of the studies that I have reviewed so far, it can be obviously claim that the flipped approach of teaching and learning (that is possible using Google Classroom) is effective in uplifting learning outcome. My action plan of integrating this new approach will be to utilize its various strategies first (in section 4.1). Consequently, I will outline the implementation requirements and strategies, challenges encountered at the implementation stage and finally possible solutions for the successful implementation of this new approach (in section 4.2).

4.1 Strategies to be Applied in Flipped Setting like Google Classroom

4.1.1 Teacher's Planning and Arrangement

Before the execution of this new approach, the assigned course teacher should take a comprehensive planning and arrangement. According to Flores et al. (2016), "It is advisable to prepare a lesson plan by which education materials would be provided to students timely". Establishing a virtual campus by which learning materials could be immediately deliver to the students would be very helpful in this regard. In case of web-based instructions, having a wide range of internet access was emphasized by Roehl et al. (2013). "This practice can be expanded further with the use of TED Talks, Google Docs, Google Drive and YouTube" (Sherrow et al., 2016). Therefore, my plan is to attempt foremostly in establishing a strong and wide-ranging

online platform by which students could be easily joined and instructed. Additionally, I have decided to prepare video lectures with the help of TED Talks and then upload those in Google Classroom. According to the experience of Roehl et al. (2013), "For creating video lectures, teachers need to spend around two hours per topic. This includes videotaping lectures, preparing digital slide presentations with voiceovers etc.". When I prepare video lectures with the help of TED Talks, I will arrange the videos sequentially with some phases that includes introductory session, video presentation, quiz, supportive materials, sharing discussion and so on. Then I will upload all these materials in Google Classroom.

The duration of the video lectures is a debated issue. It is suggested to keep the video lectures within 15 minutes, and to include multimedia slides and formative assessment section in the form of MCQ by Turan & Goktas (2016) and Vazquez & Chiang (2015). I have got something different recommendation from Lag (2018) whose suggestion was to keep it within 25 minutes. He recommended to send the video lectures to the students at least 2 weeks before arranging the class. Thereby, getting insight from the literature, my plan is to prepare such video lectures whose duration will be 20 to 25 minutes. In the video lectures, I have decided to incorporate a lecture as well as a quick assessment. Turan & Goktas (2016) incorporated 8 scenes in making a video lecture where he added an assessment part in the form of MCQ after each two or three scenes. He incorporated some bridge questions and provided space to put reasoning in favor of a particular answer. Therefore, my idea is to divide my video with necessary sections and add assessment part in the interval of each section. As well as these, I have decided to add some in-depth analytical assessment with bridge questions.

4.1.2 Pre-Class Strategies

When proper planning and arrangement will be considered, Nguyen et al. (2015) suggested to inform the students about the learning materials of the next class via email or social media. I will use Google Classroom for this purpose as the contents can be uploaded in its domain. I will ask the students to watch the instructional video uploaded in Google Classroom and then attempt

to solve the included assessment. They will be asked to attempt to answer the quiz and create notes. It is emphasized on reading text materials and participating in online discussion additionally by Unal & Unal (2017). From the domain of Google Classroom, students will be able to read thoroughly the uploaded text materials and take part in online discussion. To compel them to read the textbooks, Wilson (2013) felt that it would be necessary to discuss the text materials thoroughly and to keep a 10-minute-long reading quiz before commencing the next session. It is recommended to design and structure this quiz in a way that will compel the students to go through their textbooks. It can be hope that the students will spontaneously study their assigned texts in order for participating in the quiz. However, the success of this sort of quiz will be strengthened if it could be included in overall grade. According to the recommendation of Wilson (2013), the weight of the quiz could be 10% of the overall grade. Although such grading really influences students' learning motivation, I am out of control on setting a certain weight on quiz. My plan is to present my proposition to higher authority so that they can consider setting a certain weight on quiz.

4.1.3 In-Class Activities

In accordance with the ideas of Turan & Goktas (2016), I have organized the in-class activities by dividing these into two sections. These are – (1) 'Review' section and (2) 'Gained Knowledge Application' section. In the 'Review' section, I will encourage the students to ask questions on the pre-class assigned topic and provided video lectures. Then the teacher will answer students' questions as well as review and summarize the contents of the video lectures. In line with the recommendation of Lag (2016), I have decided to keep 5 minutes for organizing students' participation. The foremost goal of this section will be to illustrate the participatory potential of the students based on watching videos prior to the class. The total duration of the 'Review' section will be 10 minutes. In the remaining 5 minutes, for the students I will assign a problem to solve or a project to accomplish. To resolve the problem, I will help each of the students individually. Thereafter my plan is to divide the students of the whole class into some groups. Engaging in these groups, Students will get the opportunity to discuss, explore, present, and

compare their findings. In the setting of flipped classroom, it is suggested to spend much more time on group engagement and group sharing. According to Unal & Unal (2017), "Students will get the opportunity to experience advance application of knowledge acquired from video lectures as well as the support from teachers and their peers".

My idea is to organize the in-class activities as follows-

- Review
- Group Formation
- Demonstration of the problem or project
- Time allocation for individual reading
- Group discussion and sharing among group members
- Inter group sharing of findings
- Analyzing all findings
- Compile and conclude

4.1.4 Post Class Evaluation

Despite having the provision of post-class activities is not suggested in flipped classroom settings, post class evaluation seems useful (Unal & Unal, 2017). After accomplishing class activities, it is necessary to arrange a self-reflection or evaluation as suggested by most researchers. Turan & Goktas (2016) suggested to arrange question-answer session in kahoot. The special feature of Google Classroom here is that these sorts of session can be arranged in its domain. Again, they suggested that students would upload their completed homework files in moodle and then get assessed through rubrics. My plan is to use Google Classroom for this purpose. In this respect, my idea is to keep the provision of submitting an assignment by the students after three or four sessions in a week. This provision will be helpful for ensuring students' comprehensive reflection on the overall activities and referring to students' clarity of the learning materials and analytical rigor.

4.2 Implementation

4.2.1 An outline of my class in flipped setting (using Google Classroom)

Here I am explaining my plan of designing one learning session in flipped setting for first year undergraduate students' Microeconomics course on the topic of 'Market'. In order to cover the broad topic of 'Market', I have decided to divide it in four sub-topics that includes – Concept of Market in Economics, Classification of Market, Perfect Competition and Monopoly.

I have divided the whole activities into three parts which are as follows -

Part-1: Pre-class arrangement

At the very beginning, I have decided to create a video lecture on the topic of 'Market' whose duration will be 25 minutes. I will attach necessary images and PowerPoint slides in the video lecture. Necessary and relevant reading materials, e-books, and link of various learning sites will also be incorporated in this video lecture. The video will be organized in different phases and each of the different phases, I will attach MCQ and open-ended questions. The students will be encouraged in attempting to answer the attached questions with providing proper justification and analysis. The objective of attaching the questions will be to compel the students to go through carefully the provided learning materials for making them able to answer the attached questions. I will upload my created video lecture in Google Classroom and inform students about it by attaching a notifying message in Google Classroom at least one week before their next class.

Part-2: In class arrangement

For conducting an effective 45-minute-long class session, I have made my mind to prepare a 'Lesson Plan' first. According to the lesson plan, I have decided to cover the following activities sequentially within the stipulated 45-minute time frame:

- Review - For recalling and reviewing videos, I will keep the first 5 to 10 minutes. First, I will review the content briefly and then allow students to ask questions where they find confusion or any vague part of the content of their assigned topic- 'Market'.

- Problem Demonstration- I will demonstrate the following questions to them in the next 2 to 4 minutes as follows-
 1. What do you mean by Market in Economics? Explain and give real-life examples.
 2. What are the different Market Structures? Give definition and example of each of the different Market Structures?
 3. How would you determine the Short-run and Long-run Equilibrium of a firm/industry under Perfect Competition?
 4. Do you think Perfect Competition is better than Monopoly for the welfare of the consumers? If yes, state how. In which situations Monopoly can be a desirable market solution?
- Reading time for each individual student - For searching the answers, I will allow 10 to 15 minutes for students to go through the text. I will facilitate them in understanding the questions and finding the correct answers while they will engage in reading.
- Formation of the groups and engagement of teamwork – Meanwhile, at the time of students' engagement in reading, my plan is to formulate some separate groups for teamwork. After finishing the reading time, I will engage them in discussing the questions in their specific groups. Thereafter I will guide them to write the findings of their group discussion in bullet points on my supplied large paper with different color markers. I will invite the representative of each group to present their outcome. The duration of this teamwork will be around 10 minutes.
- Inter-group sharing of findings - In less than 5 minutes, the students will be guided to share each individual group's findings with the findings of their other groups. Then again, they will be invited to present their outcome. I will also analyze the findings of different groups one by one promptly.
- Compilation and conclusion – At last, my plan is to compile various findings and arrange the conclusive part of the class session in the remaining 3 minutes.

Part-3: Post class task

It will be needed 3 to 4 class sessions like this for me to complete the learning contents of the entire 'Market' topic. Thereafter I will instruct each group to submit an assignment covering the entire learning contents of the topic in Google Classroom within two or three weeks.

4.2.2 Teaching Aids

It can be started with the teaching aids at hand such as white-board, marker, and normal papers at the very beginning. The necessary sitting arrangement for this approach cannot be made instantaneously. So, at the preliminary stage, I have made my mind to go through with this approach with traditional sitting arrangement in long benches. I have decided to use laptop and make the arrangement of internet connection in the classroom. I will inspire the students to get the facility of internet access. Initially I will progress with this sort of flipped-structured classroom and gradually I will try to incorporate other advanced technological tools and methods.

4.2.3 Timeline

Proper implementation of this approach requires enough time. According to some researchers, the target of short-term implementation might be responsible for the unfruitfulness of this approach. Therefore, to have significant impact, my plan is to take at least one education year.

There prevails, however, some fundamental challenges that need to be addressed for the proper implementation of this approach.

4.2.4 Challenges encountered

The first and foremost challenge might be students' lack of motivation in arranging pre-class, varied in-class and post class activities. Unless it is included in grading, students will be reluctant to get the task done. A further problem will be their unfamiliarity with the system. The second challenge might be to set forth the necessary infrastructural and technological reform of the classroom for the successful implementation of the new flipped setting using Google Classroom.

Another challenge is the large number of students to deal with at a time. Additional fund will be required to establish group-wise sitting arrangement. More funds will also be required for strong and wide range internet coverage. Last but not least, it is needed for the teachers to be adept in handling various technological tools and methods. To be skilled in making effective video lectures is also challenging for the teachers.

4.2.5 Possible solutions

If it can be kept the provision of assessing the students with some types of tests and assignments, the lack of motivation problem can be reduced to some degree. Formulating the assessment procedure will not be so tough, but it will be really challenging to compel the students to follow the assessment procedure as long as it will not be included in their overall grade calculation. This task is really challenging as it demands fundamental reforms in the central education policy of the nation. What we can do here is to try to convince the education policy makers to make it possible by showing them the effectiveness of this new approach. The job skill requirement is another area to focus on. If employers deserve competency regarding insightful understanding and depth of learning materials, the students will be motivated to in-depth learning for making them fit for their desired jobs. In such a scenario, flipped mode of teaching can be incorporated even with unchanged prevailing grading system.

To make a change to some extent of infrastructural setting, it is needed to negotiate with the college administration. Consistent efforts in this regard will be helpful in familiarizing of the new system. The students will gladly accept the new approach when they will get it as beneficial for them. For bringing comfort in handling technology, creating video lecture, editing and managing online space, questioning and assessing etc., a comprehensive training for teachers on technology and new pedagogy will be functional. Lastly, it is needed to initiate negotiation with the education authority to allocate sufficient budget so that a large-scale reform can be carried out in our prevailing learning system.

5.0 Conclusion:

The possible impact of flipped pedagogy using Google Classroom is not only a quantitative improvement like raising the pass rate of the students, but rather it facilitates qualitative achievement in learning. Revising the national education policy is required for the proper implementation of the procedure. We can benefit from flipped classroom approach using Google Classroom even with the prevailing grading system and education policy if we are able to acquire the competency of applying this technique in our education structure. Students' cognitive load needs to be kept within their tolerance level by making the video lectures short and attractive (Unal & Unal, 2017). "Teacher's expertise in technology and pedagogy needs to be evaluated and further programs on this issue should be adopted in this respect" (Roehl et al., 2013). For this structural shift, both the students and the teachers need to be committed to their individual roles. It is essential to set the implementation target of this approach over a prolonged period of time. Initially we might proceed with the simplest changes without any fundamental shift in financial and policy issues. My utmost hope is that the ongoing drive of our government regarding digitalization will provide the necessary technological infrastructure in the upcoming days.

6.0 References

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