

## **Using Flipped Classroom and Developing an Action Plan for Teaching Macroeconomics at the Government Colleges of Bangladesh**

a. Md. Sajedur Rahman  
Assistant Professor, Department of Economics  
Rajshahi College, Rajshahi  
Email: sajedur.eco.ru@gmail.com

b. Nusrat Zerine Anny  
Assistant professor, Department of Sociology  
Rajshahi College, Rajshahi  
Email: nusratzerin.du@gmail.com

**Abstract:** This paper is based on action research that attempts to minimize the problems of traditional lecture methods by implementing flipped classroom with the support of technology. Lack of interaction between the teacher and the students are identified as the key pedagogical issues in this study where the objectives are to implement flipped classroom with the help of Google Classroom for increasing interaction and expanding the learning hours through the same. Another objective of this study is to formulate an action plan for implementing flipped classroom using Google Classroom at Bangladeshi government colleges. The research site was a government college in the city of Rajshahi, Bangladesh which is the workplace of the authors. An FGD was conducted with the students of Macroeconomics of the same college to get primary data on the situation. Students identify several issues with traditional class and several benefits of flipped classroom. The respondents preferred a blended form of online and face-to-face class rather than a single method. Finally, an action plan has been developed for the government colleges of Bangladesh.

**Keywords:** Flipped classroom, Action plan, Macroeconomics, Bangladesh College Education.

### **Introduction**

Learning is “the process of getting or providing logical tutoring, in particular at a university or school” (English Oxford Living Dictionaries, 2018). The developed nations have altered their age extensive conventional education process called Teacher Centered Teaching (TCT) with a further realistic education technique called Student Centered Teaching (SCT). It is because SCT is more student-friendly that fits with the demands of 21st century learners. This study focuses on the teaching-learning situation of our workplace, a government college in the city of Rajshahi, Bangladesh. We will use the acronym RC to denote our workplace. RC is not unique in case of common features of the college learning scenario of Bangladesh. RC is one of the renowned colleges among all the colleges in Bangladesh. This college has been declared as the best college in Bangladesh for successive four years in the rankings

done by both the Ministry of Education (MOE) and NUB on the basis of its recent performance. At our workplace, that is, in the Department of Economics, RC we enroll 235 students for honors 1<sup>st</sup> year and 400 and 200 students for masters and preliminary leading to masters respectively according to the instruction of the National University of Bangladesh. Moreover, we also teach the Economics course to approximately 50 pass course students and approximately 120 higher secondary (HSC) students. So, the total number of students we have to teach in this department in each academic year is 1830. In this department, there are 12 teaching staff and 3 non-academic staff. However, as a whole, we teach 52 courses in total for the students of different educational levels. Currently, in a week, we conduct 58 classes to cover all the courses. The Department of Economics has 3 class rooms whereas HSC and degree pass students have their own classrooms apart from the classrooms of any department of RC. Furthermore, we can accommodate only 120 students in each room out of 235 honours level students, out of 400 master level students and; out of 200 preliminary students leading to masters and master's level students. Each of the classrooms has a fixed multimedia projector, sound system and a moveable white board. From this department, around 20% students of honours 1<sup>st</sup> year get admission to different public universities by taking the chance of readmission whereas the dropout rate for other years is around 15%. Finally, every year around 160 students complete their undergraduate degree successfully from this department. In RC we teach in the lecture method from the beginning. Both the instructors and the students are well-known with this teaching-learning technique. This teaching method was chosen by the teachers at our workplace as they found only this method applicable in an adverse teaching-learning environment as explained. Another reason for adopting the lecture method is, it is ongoing for years and no one tried to change it. In reality our teaching practice is still conventional and we are not ready at all to accept different modern teaching methods and tools. But, currently the situation is changing slowly where many of our colleagues are trying to make their classes interactive rather than leaving the students as passive listeners. In this regard, this study attempts to overcome drawbacks of the current learning method with the help of Flipped Classroom using Google classroom as a technological tool in teaching Macroeconomics courses in the Department of Economics, RC, Rajshahi, Bangladesh.

### **Flipped Classroom**

Flipped classroom refers to a strategy of teaching learning that reforms the idea of classroom boundary claiming that teaching-learning can take place at any time and anywhere (Thai et al., 2017). The idea of flipped classroom denotes that the teachers will provide necessary reading materials and/or lectures to the students before their class with the intention to make them prepared beforehand. Then, time in the class can be occupied in giving feedback to the students in various ways.

### **Interactive Teaching Using Flipped Classroom**

According to (Faruki et al., 2019) SCT can be referred to as interactive teaching that emphasizes ideas like- knowledge according to students' needs, interests, problems, curiosity and teaching like facilitating, helping or guiding to enhance

learning experience of the learners. Whereas, flipped classroom is a teaching strategy that reforms the ideal of classroom boundary and brings teaching-learning anywhere and anytime (Thai et al., 2017). Key benefits of using interactive flipped classroom teaching technique and Google classroom as technological tool consists of improvements in the classroom atmosphere (increases in attendance, attention levels, involvement and engagement), education (interaction, discussion, conditional teaching, excellence of learning, education performance), and assessment (feedback, formative, normative). On the other hand, the greatest challenge of instructors using flipped classroom teaching technique is finding extra time and workload required to learn and set up technological tool, creating effective questions for student's response, adequate exposure of course material, and talent to take action to instant student's feedback (Gillette et al., 2018). Students' challenges may include adjusting to a new technique of learning, enlarged confusion when manifold perspectives are discussed in addition to negative reactions to individuals being monitored. Van Alten et al.(2019) has described in their paper that in flipped classroom educators provide materials to students before face to face class whereas in non-flipped classroom students do not get teaching materials before class. So, in flipped classroom students' learning seems to be more effective than in non-flipped classroom. According to Nouri(2016), in higher education teaching-learning has been pursued to transfer student-centered teaching strategies towards more efficient, flexible, active, methods that temperate the restrictions of conventional transmittal models of learning. Recently, the flipped classroom model has been recommended to uphold this transition. Limniou et al. (2018) found evidence of getting better learning outcomes from an interactive class compared to a traditional one. Alsancak Sirakaya & Ozdemir (2017) have explained about students-centered teaching learning techniques that learners control their learning environment and how to actively participate in learning problem solving, creativity, critical thinking, information, communication, literacy, teamwork and self- direction skills are incorporated. Nouri (2016) also exhibited a positive attitude towards using technology based flipped classroom to enhance effective learning by ensuring engagement.

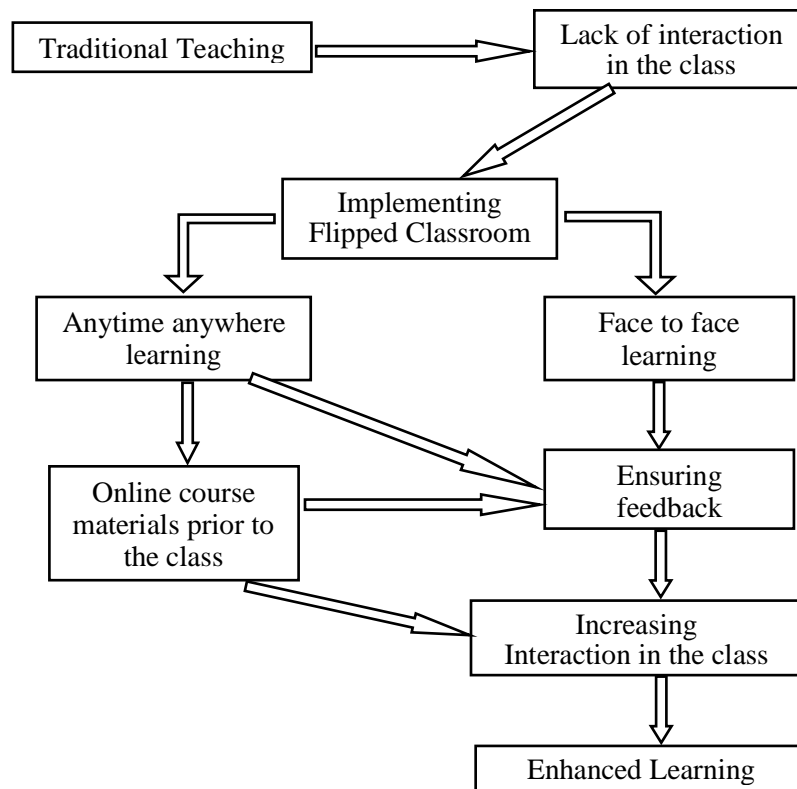
### **Flipped Classroom Practice in Bangladesh**

No evidence of implementing flipped classroom was found in the context of higher education in Bangladesh except the work of Akhter (2015). Akhter (2015) implemented flipped classroom in order to cover her left behind part of the syllabus within a short period of time which she was unable to finish due to the political unrest in the country. While conducting flipped classes, Akhter (2015) found that, while covering huge content within short period of time through interactive activities, her students were quite satisfied as they were well prepared prior to the class whereas she herself was able to observe the students requirements in an interactive class and got the opportunity to ensure more useful feedback to her students compared to her previous traditional classes. Although this is the sole evidence found in the context of Bangladesh of the implementation of flipped classroom, we have found few more papers that support the use of

flipped classroom. Faruki et al. (2019) suggested that ICT based implementation of flipped classroom can be a good choice for the colleges of Bangladesh in providing quality higher education. Likewise, Monowar (2018) also recommended flipped classroom specially for the higher educational institutions as they have to deal with a huge number of students with support of extremely limited resources resulting in a totally unfavorable learning condition. Furthermore, according to Parvin (2019), at present it is the perfect time for Bangladesh to introduce flipped classroom in higher education with the intention to make the learners of Bangladesh able to take new challenges of the twenty-first century by enhancing critical thinking and problem solving skills among them.

In our teaching experience at RC, we always find our classes less interactive which seems to us as the central pedagogical problem in our classes. In this reality, the specific objectives of this study are: (i) to implement flipped classroom with the help of Google classroom for increasing both teacher-student and student-student interaction, and expanding the learning hours despite of poor physical infrastructure; and (ii) to formulate an action plan for implementing flipped classroom using Google classroom at Bangladeshi Government colleges. The flowchart below is the conceptual framework showing the pathway of increasing interaction and enhancing learning through the use of flipped classroom.

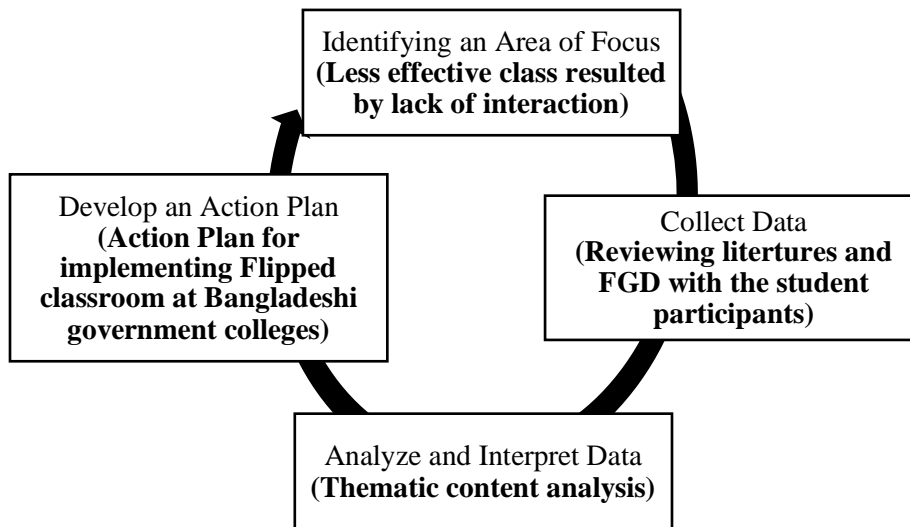
**Figure 1: Increasing Interaction in the Class by Using Flipped Classroom**



Source: Adapted from Thai et al., 2017.

### Methods and Materials

This study is a practical action research where we tried to solve a particular pedagogical problem through a systematic process suggested by Mills (2011). This research design was adopted as it is suitable if a teacher wants to enhance the teaching practice of his/her own classroom (Cresswell, 2012). At first we have pointed out a central pedagogical issue, that is, lack of interaction in the classroom and less effective class due to the same. We have identified this issue from our own teaching experience at RC. Then we have looked into literature to get a possible solution to this crucial issue. From there, we found the implementation of Flipped classroom and use of technology probable solutions. Then we investigated our strengths and available technologies for both of us and our students. Recalling the experience of the lock down situation due to COVID-19, we found Google classroom as a good technological choice to be implemented in our classes. So, we have implemented flipped classroom using the technological help of Google classroom for the course named ‘Macroeconomics’. After that, we have conducted an FGD with 7 students who have attended the classes regularly. Then we analyzed the FGD transcript with technological help of Atlas.ti V 9 and performed a thematic content analysis. We could identify the strength and weaknesses of our flipped classes through this content analysis. After passing through all these steps, we were able to develop and share an action plan for using flipped classroom at Bangladeshi government colleges. At each stage of the study, we were very careful about the ethical issues. The methodological framework is given below:



Source: Adapted from Mills, 2011, as cited in Cresswell, 2012.

## **Results and Discussion**

From the FGD, we were able to develop some themes and sub-themes on the basis of the responses by the participant students. All the findings are discussed based on the themes and sub-themes in this section.

### **Problems of Traditional Class (TCT)**

First of all, students identified several issues with the traditional classes which justifies our attempt to introduce SCT in the form of Flipped classroom. All seven participants of our FGD identified the traditional lecture method as a problematic teaching strategy. The problems of traditional classes are discussed here:

#### **Lack of interaction**

Most of the participants identified lack of interaction as the major problem of lecture method. According to one of them, "... teacher cannot get closer to each student and monitor the individual performance. Moreover, we cannot talk freely with the teachers due to time constraints and crowded situations in the classroom". Zerin et al. (2020) also found lack of interaction as a problem of large class. As a result of this gap, the teacher remains unable to identify all the problems of the students regarding any lesson and fails to solve them as well.

#### **Lack of prior knowledge**

Lack of prior knowledge about the lesson content was identified as another major weakness of traditional classes at RC. According to one participant, "We do not have any idea about what our teacher is going to teach us in the class. That is why we cannot get prepared properly for the class and fail to identify our problems beforehand. This situation is another obstacle to get the highest benefit from a class." The findings of Zerin et al.(2020) also shows that in a traditional classroom students are not well prepared for the class whereas our FGD participants identify lack of prior knowledge as the key cause behind this lack of preparation.

#### **Lack of feedback**

Another central issue of the traditional lecture method is, feedback cannot be ensured for each of the students in the class. According to a student, "due to the time shortage, our teacher cannot focus on each individual student and, on the other hand, each of the students cannot get necessary personalized feedback from the teacher. So, a communication gap still remains between the teacher and the student resulting in a lower level of learning" Faruki et al. (2019) focused on this issue claiming that time constraint limits the scope of feedback in a traditional class with a large number of students.

#### **Management**

Managing the large class in a short period of time was identified as another issue that has several dimensions. As one participant has identified, "What we mean by a traditional class is an overcrowded classroom where students are making noise and the teacher has to control them to be prepared for the lesson. Usually, it takes around 10-15 minutes to make the learners ready for the lesson." So, preparatory

issues like controlling the class and grasping the attention of the students takes a considerable portion of the class time due to the large size of the class. Furthermore, the class time is only one hour, so it is very difficult to cover the lesson as per expectation in a traditional class based on lecture method. The findings of Zerin et al. (2020) justifies participants' this claim too.

### **Real time**

One student identified the binding of joining the class in real time as a problem because many of the RC students are engaged with different part-time jobs and it is very difficult for them to attend all the classes in real time. The work of Tessema et al.(2014) focused on the impact of part-time jobs on college students' studying, where they also found cases of missing classes due to part-time jobs.

### **Benefits of Flipped Classroom**

Students identified several benefits of flipped classes with Google classroom which are divided into some sub-themes.

#### **Getting materials prior to the class**

All the participants identified getting materials before the class as the most important benefit of flipped class. As one of them said, "We can study at home on the basis of lesson plan and find out our problems even before the class. So, we have the opportunity to get the solution of our problems within the time limit of our face-to-face class." Another participant goes further by saying, "Some contents are difficult to understand when hard for the first time. If we have at least the primary idea of a content, it become easier for us to grasp the message from the teacher. It also removes our fear for attending classes regularly." So, getting materials prior to the class enables them to be prepared for the class by identifying the problems in advance and make the class more effective and makes room for better feedback thereby. Lestari & Sundari(2021) in their study on Indonesian students also found getting materials before class as a major benefit of flipped classrooms.

#### **Enhanced teacher-student interaction**

Due to the prior knowledge of lesson content and better preparation for class enables the students to share their thoughts with their teacher, which enhances the interaction between them and decreases the gap between these two groups. The study of Lestari & Sundari (2021) also found enhanced teacher-student interaction in flipped class.

#### **Anytime anywhere learning**

Anytime anywhere learning was identified as another strength of flipped classroom, particularly, they found it very helpful as they get the recorded class and can go through it if they miss the class in real time. Thai et al. (2017) identified anytime anywhere learning as the key character of flipped classroom.

#### **Better management**

The participants found the class management better in the flipped format. It is because they are well-known about the content and it takes less time to cover the same amount of content as in the traditional class. This is also found in the work

of Akhter (2015). Furthermore, the prior knowledge on the content makes the students more attentive in the class as they can relate the content better. Lestari & Sundari (2021) also found students' enhanced readiness in flipped classroom.

### **Online assessment through Google Classroom**

The participants appreciated assessment through Google Classroom a lot. One student said, "As there is a time-limit, we also need to be active and finish our assignments in time." Whereas another goes further, "we can submit our assignments through Google Classroom without any hazard." So, the students were time-bound due to the assessments through Google Classroom compelled the students to stay connected with their academic study on a regular basis. In the study of Choirunnisa & Mandasari (2021), they found students positive towards assessment through Google Classroom. The students consider assessment through Google classroom as easy, realistic, and flexible.

### **Challenges of Flipped Class**

Through the FGD, we also found some challenges of implementing Flipped classroom in our classes. Major challenge here is the reluctant students. Some students are very reluctant to attend the online classes or go through the materials that they get prior to the class. According to the participants, the students can think of not attending the class as they are not accountable or have any punishment from the department for doing so. They also informed us that some students even leave the online session showing the excuse of low speed or no network which is not always true. This tendency of absence of accountability and showing false excuses may be the unique findings from our study. One of the FGD participants identified the challenges in this way, "Lack of keenness, insufficient technical knowledge, cost of hi-speed internet, lack of institutional bindings are the challenges of online class for us."

Although the FGD participants identified several shortcomings of traditional class and several benefits of flipped class, they don't want flipped class in totally online mode. Rather they want a combination of online and face-to-face classes. One of them argued, "Online class is effective, but face-to-face is also very important. We cannot express ourselves in online mode like a face-to-face class. So, we want our classes in both face-to-face and online mode." This expectation of the students supports the claim by Bailey & Smith (2013) that Blended learning has the strength of combining conventional direct teaching environments with online teaching tools and approaches. Blended or mixed form of online and face-to-face enhances both the students and the teachers' learning and teaching experiences through different interactive tasks and enhances students' learning outcomes thereby. At present, a teacher-centered teaching technique is being applied in our college but in this teaching technique, it is not easier to conduct more interactive and effective classes in terms of students' achievement. We want to make lessons more interactive and more significant through the implementation of flipped classroom. Therefore, we want to maximize the output from the lessons and that



is why we have prepared an action plan for implementing flipped classroom to teach our students Macroeconomics through the following steps.

### Implementation Process

Subject: Economics

Course: Macroeconomics (Code: 212203)

Teaching tool: Google Classroom

#### Year: Honours 1<sup>st</sup> year

Particulars	Description	
Summary of the course	Total Students	235
	Duration of Course	24 weeks
	Chapter	07
	In-class activity	2 per week
	Live (online) class	1 per week (2 hours)
Marks distribution	Weekly quizzes	10 marks
	Participating in group discussion in Google forum	10 marks
	Short note writing	10 marks
	Group work/project work	10 marks
	Assignment	20 marks
	Final (summative) assessment	40 marks
Instructor's Activity		
Initial activity	Instruction to all students to create a Gmail account 1. Creating Google classrooms as a teacher 2. Sending invitation via mail to the students in order to make them join Google classroom as students Or Students go to Goole classroom and type code/link to join the desired classroom. 3. Adding course title and creating time schedule 4. Adding instruction and course objectives/outline 5. Adding/uploading course resources (Google drive, YouTube video or a link to a website, e-book, lecture sheets, topic related contents) 6. Adding course activity, fixing live class and recorded class schedule. 7. Creating Drive folders for each assignment for students	
Weekly activity	1. Writing learning objectives of the week 2. Uploading PPT slides and PDF files as course materials. 3. Conducting live class by Google meet for 1 hours 4. Uploading recorded class in the materials section 5. Giving forum discussion on the pre-decided topic of the week. 6. Giving quiz/short note writing task and ensuring feedback as formative assessment. 7. Giving group/project work	

Periodical activity	After each 12 <sup>th</sup> week	<ul style="list-style-type: none"> <li>● Assignment on the discussed topic</li> <li>● Feedback and assessment</li> <li>● Personal contact if necessary</li> </ul>
For students		
Sing up steps	<a href="https://classroom.google.com/c/MjM2MTMxMDk5OTY3?cjc=cndnogi">https://classroom.google.com/c/MjM2MTMxMDk5OTY3?cjc=cndnogi</a> Go to sign up for 235 students Create new account Put tick mark on the check boxes Click next and fill up necessary information Use pass codes to enter	
Weekly activity	Checking the dashboard for percentage of completion Downloading course materials and getting prepare for live class Participating in live class activity Participating in group works by stream and chat Participating in quiz and check feedback	
Periodical activity	Must submit assignment timely Participate in final assignment	

### Lesson Outline (1<sup>st</sup> week)

Chapter: 01(Introduction)

Date: 01.01.2021(uploading time)

Class: 1 <sup>st</sup> Year	Google classroom	Time: 2 hours
<b>Learning Objectives:(written in Google classroom in weekly activity)</b> To identify objectives and instruments of Macroeconomics; To identify the fundamental concepts of Macroeconomics; To learn the ways of calculating Macroeconomic Measures: Output, Price and Employment, Potential GDP/GNP and GDP gap; To learn the ways of explaining Aggregate Demand and Aggregate Supply of any country.		
Activity	Name of place	Time and date
PPT slides/PDF files	Resources section	9:30 am (01.01.2021)
Live class	Big blue button	9:30 am (03.01.2021)
Uploading recorded live class	Resources section	2:30 am (03.01.2021)
Knowledge/opinion sharing topic discussion	Forum	9:30 am (04.01.2021)
Formative assessment	Quiz 10 question regarding topic	9:30 am (06.01.2021)
Group work for Macroeconomics students (5/6 members per group)	Forum/chat for Collaborative and cooperative group work	9:30 am (06.01.2021)

### Problems Solving Steps

Problems	Solving by using Google classroom
Making group [work effectively in such a populated class]	Using forum/chat
Visualizing the whole lecture materials in such short time through writing on whiteboard	PPT/PDF/recorded videos or links
Giving feedback	Forum/quiz
Checking 235 students in class	Assignment submission
Making the voice audible to each of the students	Live class through big blue button

In flipped classroom, learning is a pedagogical approach that will be open to enhance student's engagement and learning outcome by extending the activities beyond classroom boundary as well as enabling the learners to learn at any time from anywhere. However, it will bring some challenges and some opportunities. According to Alebaikan & Troudi(2010), traditional culture of the institution, accurate design of blended learning and the time constraint are considered as important challenges facing blended learning ability.

### Conclusion

In this study, we started with the intention to implement flipped classroom using Google classroom for the Macroeconomics course for 1<sup>st</sup> year honours students and increase effective interaction to expand learning hours thereby. We also tried to develop an action plan for further use. Through the study, we implemented flipped classroom quite successfully in spite of different challenges. We have got highly positive response from the students identifying different weaknesses of traditional classroom such as- lack of interaction, prior knowledge, feedback, management issue and real time nature as well as strengths of flipped classroom such as- getting materials beforehand, enhanced interaction, any time anywhere learning, better management, and online assessment through Google classroom. Although, we have faced some challenges like reluctant students, absence of accountability, low-speed internet connectivity or cost of internet connectivity; we found flipped classroom as a good choice in order to increase interaction and expand learning hours. It is because students were involved with learning even out of the class as they got reading materials before the class followed by in-class activities and online assessment after the class. Finally, we developed an action plan for implementing flipped classroom at other Bangladeshi colleges on the basis of our experience of implementing the same. Further research can be conducted to explore the implications of flipped classroom for different disciplines at different institutions in Bangladesh.

**REFERENCES**

- Akhter, M. (2015). Minimizing Distance Using Just-in-Time Teaching and Flipped Classroom. *Sino-US English Teaching*, 12(1), 20–25.  
[https://works.bepress.com/david\\_pendery/35/download/#page=26](https://works.bepress.com/david_pendery/35/download/#page=26)
- Alebaikan, R., & Troudi, S. (2010). Blended learning in Saudi universities: Challenges and perspectives. *ALT-J: Research in Learning Technology*, 18(1), 49–59.  
<https://doi.org/10.1080/09687761003657614>
- Alsancak Sirakaya, D., & Ozdemir, S. (2017). The Effect of a Flipped Classroom Model on Academic Achievement, Self-Directed Learning Readiness, Motivation And Retention. *Malaysia Online Journal of Educational Techology*, 6(1), 76–91.
- Bailey, R., & Smith, M. C. (2013). Implementation and assessment of a blended learning environment as an approach to better engage students in a large systems design class. *ASEE Annual Conference and Exposition, Conference Proceedings*. <https://doi.org/10.18260/1-2--19706>
- Choirunnisa, M. R., & Mandasari, B. (2021). Secondary Students' Views Towards the Use of Google Classroom As an Online Assessments Tools During Covid-19 Pandemic. *Journal of Arts and Education*, 1(1), 1–9.  
<https://doi.org/10.33365/jae.v1i1.31>
- Cresswell, J. w. (2012). Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research. In *Pearson* (4th ed.).
- Gillette, C., Rudolph, M., Kimble, C., Rockich-Winston, N., Smith, L., & Broedel-Zaugg, K. (2018). A meta-analysis of outcomes comparing flipped classroom and lecture. *American Journal of Pharmaceutical Education*, 82(5), 433–440.  
<https://doi.org/10.5688/ajpe6898>
- Lestari, I. W., & Sundari, A. (2021). *Indonesian EFL Students' Experiences in a Flipped Classroom*. 518(ICoSIHESS 2020), 218–223.  
<https://doi.org/10.2991/assehr.k.210120.127>
- Limniou, M., Schermbrucker, I., & Lyons, M. (2018). Traditional and flipped classroom approaches delivered by two different teachers: the student perspective. *Education and Information Technologies*, 23(2), 797–817.  
<https://doi.org/10.1007/s10639-017-9636-8>
- Mills, G. E. (2011). Action research: A guide for the teacher researcher (with MyEducationLab). In *Upper Saddle River, NJ: Pearson/Allyn & Bacon*.
- Monowar, M. M. (2018, March). Classrooms need a makeover. *Dhaka Tribune*.
- Faruki, M.J.A., Haque, M. A., & Islam, M. M. (2019). Student-Centered Learning and Current Practice in Bangladeshi College Education. *Journal of Education and Practice*, 10(13), 95–107. <https://doi.org/10.7176/JEP>

- Nouri, J. (2016). The flipped classroom: for active, effective and increased learning – especially for low achievers. *International Journal of Educational Technology in Higher Education*, 13(1). <https://doi.org/10.1186/s41239-016-0032-z>
- Parvin, S. (2019, November). Flipped Classroom : Student-centred learning platform. *Daily Sun*.
- Tessema, M. T., Ready, K. J., & Astani, M. (2014). Does Part-Time Job Affect College Students' Satisfaction and Academic Performance (GPA)? The Case of a Mid-Sized Public University. *International Journal of Business Administration*, 5(2). <https://doi.org/10.5430/ijba.v5n2p50>
- Thai, N. T. T., De Wever, B., & Valcke, M. (2017). The impact of a flipped classroom design on learning performance in higher education: Looking for the best “blend” of lectures and guiding questions with feedback. *Computers and Education*, 107, 113–126. <https://doi.org/10.1016/j.compedu.2017.01.003>
- Van Alten, D. C. D., Phielix, C., Janssen, J., & Kester, L. (2019). Effects of flipping the classroom on learning outcomes and satisfaction: A meta-analysis. *Educational Research Review*, 28(June), 100281. <https://doi.org/10.1016/j.edurev.2019.05.003>
- Zerin, N., Kumar, P., & Rahman, S. (2020). Teaching sociology in large classes : Issues and challenges in Bangladeshi colleges. *Research in Business & Social Science*, 9(1), 46–54.