

# A PLC for implementing the Flipped classroom strategy to enhance learning outcomes.

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**Abstract**— In this 21st century, the world has been changing rapidly. The international education system also has been transforming using a new strategy in the teaching and learning process to meet the demand of the era. Several types of research highlighted challenges faced by university students in the institutions of higher education such as limited self-regulated learning strategies, low degrees of connectedness, lack of leisure, lack of motivation, and low achievement in academia (Zorofi, Gargari, Geshlagi, & Tahvildar, 2011; Ozben, 2013; Geduld, 2016; Turki, Jdaitawi, Sheta, 2018). The main criticism has cast light on the following: students are passive in traditional lectures due to the lack of mechanisms that ensure intellectual engagement with the material, student's attention wanes quickly, the pace of the lectures is not adapted to all learners needs and traditional lectures are not suited for teaching higher-order skills such as application and analysis (Cashin, 1985; Bonwell, 1996; Huxham, 2005; Young, Robinson, & Alberts, 2009).

Technological advancement and the limitations of traditional teaching led to finding out new approaches to improve and update the teaching-learning process which will be learners centered. Flipped classroom strategy is the opposite of a traditional lecture-based system. The flipped classroom work can be categorized into three phases namely, pre-class learning preparation, in-class learning activities, and post-class learning consolidation (Kong, 2014, 2015). First, in the pre-class learning preparation phase, students go through the material at their own pace employing learning platforms provided online. This is followed by in-class learning activities, where the students and teacher go through participatory learning activities by discussing, debating, presenting, and simulating the content of the lesson (Estes, Ingram, & Liu, 2014; Tucker, 2012). This strategy aims to enhance the quality of teaching and the efficacy of learning (e.g., Baepler, Walker, & Diressen, 2014; Demski, 2012; Sparks, 2011).

As it is evident that flipped classroom is effective for enhancing learning outcomes, we decided to establish this strategy in our respective department under five colleges (Rangpur Government College, Govt. Akbar Ali College, Moheshpur Government Degree College, Nagarpur Government College, Government Azizul Haque College). It is a new concept for all departments; therefore, it is needed to form PLC to handle all obstacles.

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## 1 INTRODUCTION

Rangpur Government College is situated in Radaballav, within one kilometer from the town center, Rangpur, Bangladesh. This college provides educations for Higher Secondary (HSC) and Higher Education levels. Here, higher education is affiliated with National University, Bangladesh. There are three main groups of study at higher secondary level: science, arts, and commerce. In higher education, this college offered fourteen subjects those are given below: Physics, Chemistry, Mathematics, Zoology, Botany, Bengali, English, Political Science, History, Economics, Islamic History, Philosophy, Accounting, and Management. The college administration sometimes arranged in-house training for their teachers. Although at present, there are no continuing professional development activities in this college, many teachers are personally doing the different courses in different training institutes in Bangladesh.

Govt. Akbar Ali College is situated at Ullapara in Sirajganj under the Rajshahi division. It is almost 35 km away from Sirajganj district headquarter. It is in the heart of Ullapara town. The college provides both Higher Secondary Education and Higher Education. Higher Secondary section has three groups named Science, Humanities, and Business Studies. Higher Education is provided through two sections. One is Honors for four years another is Degree (Pass) for three years. Higher Education is affiliated with National University. In the higher education section, there are 14 departments which are Bangla, English, Economics, History, Islamic History & Culture, Political Science, Philosophy, Accounting, Management, Physics, Chemistry, Mathematics, Zoology, and Botany.

Government Azizul Haque College is situated in Bogura under the Rajshahi division. It offers higher secondary school (HSC) and higher education. Its college section is affiliated with the National University of Bangladesh. This college offers 23 courses at the graduate level and postgraduate level are Bangla, English, Economics, History, Islamic History & Culture, Political Science, Philosophy, Accounting, Management, Physics, Chemistry, Mathematics, Zoology, sociology, social work, marketing, finance, geography and environment, Islamic studies and Botany. Postgraduate diplomas in information and communication technology (PGD in ICT) and foreign language learning courses are available.

Moheshpur Government Degree College is situated at Jhenaidah in Bangladesh. Nagarpur Government College is located in Tangail, Bangladesh. In both colleges, there are three branches at Higher Secondary (HSC) level. They are Arts, Commerce, and Science. Although currently, very few professional development activities are going on at these colleges, teachers are striving to develop their skills through personal initiatives.

#### **Setting up PLC:**

#### **Steps to form PLC:**

Five group members (Group-2A) made five PLCs in their respective departments under five colleges and every PLC consisted of five members. Mir Masud Rana, Lecturer, Dept. of Management, Rangpur Government College, talked to his five colleagues -Md Rafikul Islam, Associate Professor (Head of the department), Dhiraj Sarker (Associate Professor), Md. Shahaduzzaman (Lecturer), Md. Sohel Rana (Lecturer) regarding PLC on flipped classroom for enhancing learning outcome. Similarly, the other four members Bulbul Ahmed, Md. Yahia, Kazi Khurram Hossain, Md. Motahar Hossain Sarker talked with their colleagues about PLC.

Firstly, they gave their colleagues an idea about PLC that it is a team of teachers who shares their ideas or concept that enhance their teaching practice and create a congenial learning environment where all students can reach their fullest potentials. Secondly, they told them to set up a PLC from where we will attain mainly two purposes- one is improving the knowledge and skills of teachers through collaborative study, expertise exchange, and professional dialogue, and another purpose is to develop the educational aspirations,

achievement, and attainment of students through stronger leadership and teaching.

#### **Reactions from colleagues and new learnings:**

In the beginning, the colleagues of Mir Masud Rana (Dept. of Management) and Md. Yahia (Dept. of English) were reluctant to be involved with such a community due to their ego or any other problems but realizing the benefits, they became agree to form PLC. Not only that the Head of both departments announced that they will give all technical support with the departmental laptop, internet and even if any students face any internet problem, they will get financial assistance.

On the other hand, the colleagues of Bulbul Ahmed (Dept. of Bangla), Kazi Khurram Hossain (Dept. of Management), Md. Motahar Hossain Sarker (Dept. of Management), their colleagues were very cordial from the beginning to establish PLC in their department. All five (5) PLCs decided to sit every 10 days. As a teacher, our main target is to give the best for our students and their success means our achievement which brings pride for all. We should give this message to our colleagues to motivate them to form PLC in the future also, we believe it will be fruitful.

#### **Instructional Issue:**

Members of 5 (five) PLCs decided to work for the poor academic performance or learning outcome among graduates or honors students.

#### **Sources of data to choose the instructional issue:**

To identify the instructional issue, PLCs of all five (5) colleges has collected data from the following sources-

- the performance on in-course (Mid-term) and test exams under the respective department,
- the final CGPA of the students under the National University,
- the class response experience of PLC members,
- student's attendance records, and
- viva voce performance of students.

#### **Reasons for choosing the instructional issue:**

#### **Part-1:**

Firstly, members of the PLCs observed their students' performance on the last year's in-course marks. Generally, we give 2 (two) in-course exams for 10 marks each but the frustrating thing is only 20% of students got about 40% marks and about 80% students got below 40 percent. Secondly, they have analyzed the result of last year's final exam published by the National University. Here, only 40% of students got GPA 3.0 to 3.25 (out of 4), and the rest 60% got below GPA 3.0. Furthermore, students' attendance is also a matter of concern for PLC members because attendance report shows that only 30% students averagely attend in the class. Lastly, in the meeting, almost all PLC members agreed that the performance of the regular students is also pessimistic.

#### **Part-2:**

During the discussion, the members of PLCs noticed that students are inattentive to their class, weak in presentation, shy to express their views, dependent on guide books, weak in creative thinking, poor eagerness for any type of excursion or co-curricular activities, and unwilling to apply their knowledge in the development of the country.

#### **Summary for pre-intervention data:**

Considering the above scenario, PLC members thought that poor academic performance or learning outcome is the main problem of our students. It might happen for traditional teaching strategies which are not enjoyable and its evaluation processes are not effective. So, all five PLCs decided to work for addressing this (poor learning outcome) issue.

#### **Instructional intervention:**

##### **Intervention that applied:**

Flipped classroom strategy was used to address the issue. Because different research shows that flipped classroom strategy is much more engaging, active, practical, participative, and enjoyable than traditional classroom strategy. Therefore, the learning outcome of the students of the flipped classroom is always higher.

#### **Literature related to this intervention:**

The classroom activities in the flipped classroom take place outside the classroom and students use the class time for the use of active learning strategies such as problem-solving and discussion between

students in the presence of the lecturer (Jamaludin & Osman, 2014). According to Marca and Longo (2017), it is crucial for the learning space to motivate learners and promote their learning activities by supporting collaboration and offering a flexible, personalized, and inclusive environment to handle constant changes. In the context of institutions of higher learning, the expected learning outcomes include cognitive competencies and collaborative skills (Ewell, 2001). As a result, flipped learning model plays a crucial role in determining the expected learning outcomes (Jdaitawi, 2019).

#### **Steps of implementing the intervention in 5 (five) colleges:**

##### **College-1: Rangpur Government College.**

To implement the intervention, PLC members sat to discuss how they can communicate with their students in this Covid-19 situation because it was impossible to conduct classes in person. Then they collected the phone numbers of 20 students and contacted them. After that, they created a WhatsApp group (Appendix-3) with the name of Honors 2nd year (MGT) and added their students. Mir Masud Rana conducted his class on Human Resource Management (HRM). He divided his students into two groups, one is the control group and another is the experimental group (each group consists of 10 students). He conducted a traditional class with the control group and flipped class with the experimental group.

The flipped class was a new concept for the students of the department of management. To make it effective, **firstly**, Mir Masud Rana made an objective to teach the first chapter (Introduction) of the course Human Resource Management (HRM) through 4 (four) classes. In addition, He made a plan on how to teach and thought about what materials will be useful and easy for his students.

**Secondly**, he made PowerPoint slides (appendix-7) on a specific topic. Adding voice to those slides, he turned it into video. Besides this, he searched different beneficial websites (Ex-Indeed career guide) and pdf files for his students on that specific topic. Then he sent these materials to his students before the class.

**Thirdly**, as his students of the national university were not habituated and willing to study prior to the class, for motivating he told them to be prepared for quiz tests and oral tests during the class. He emphasized that these marks will be added to the final exam.

**Fourthly**, due to the covid pandemic, Mir Masud Rana conducted his all classes through Zoom apps. In the first class, he gave a clear concept about the flipped classroom to the students of the experimental group. From the next class, he tried to judge his students by asking one to one short questions at the beginning. Basically, it was the review of the pre-class activities. In fact, very few students would do their pre-class activities. As a result, during his class, there were many questions from students. Answering their questions and engaging them, he used polls everywhere and Kahoot (Appendix-4) for quiz tests and asking oral questions sometimes. He gave the floor to the students for sharing and exchanging knowledge among their peers. In this way, he tried to ensure an active learning environment.

**In the fifth stage**, at the end of his every class, he informed students about the next topic and tried to relate with the todays listen so that the learning experience can be long lasting. He arranged exams after every 4 (four) classes for ensuring practice and revised the previous topic.

**Finally**, he prepared questions for the test using a google form (Appendix-5) to assess the learning outcomes and students' attitudes toward the flipped classroom. In this way, the member of PLC tried to implement their intervention (flipped classroom strategy) to address the issue (learning outcome).

#### **College-2: Govt. Akbar Ali College.**

Flipped Classroom is the modern way to teach students. In this process, teachers and students are connected with digital media including messenger, WhatsApp, Viber, etc. we decided to use messenger as it is very much popular with our local students. For this purpose, we created a messenger group for Honors Second Year Students. We included all the ten students of the experimental group in the messenger group. We first briefed the students about the features of Flipped Classroom. We instructed them that in this type of classroom, the lessons are given in three ways. Firstly, before the class, tutors send any type of video, documentary, worksheet, links to learn or to get the primary knowledge of the topic. Secondly, tutors discuss the topic in the class and ask some questions about their topic. Sometimes tutors allow them to conduct peer discussion, group discussions to share their knowledge with one another. Sometimes teachers instruct them for a presentation. Finally, tutors relate a topic for the next class and allow them to ask any questions that are related

to the topic. We conducted 10 classes with the experimental group. We conducted our classes in the zoom app. We informed them that we would give them the link in your messenger group just before starting the class. First, we gave a link to the topic to watch before the class. In the class, we discussed the topic, and then we tried to make them free with their classmates and teachers. We conducted peer/ group discussion, presentation, open question answer, sharing one's view, etc. sometimes students knocked at our walls to take help, as they felt shy to ask during the class. To remove their monotony, sometimes we play with Poll Everywhere. We also tested them through Kahoot by MCQ and Fill in the Blanks. We instructed them that there would be a written exam and a viva after completing those 10 classes. We put two board questions in the written question paper and they submitted the answer in the messenger group by taking a photo of their copies.

#### **College-3: Nagarpur Government College.**

Nagarpur Government College authority has an official 'Facebook Group' to communicate with students. The mentioned media was used for both the control group and experimental group to conduct classes due to the Covid-19 situation. Before one or two days of the scheduled class, Different photos, text, and videos were uploaded on a Facebook group for experimental group students to link with the topic of the next class.

For both groups, classes were taken on 'Standard Bangla spelling rules, and the topics of four classes were (1) Standard spelling rules of Sanskrit words in Bangla (2) Standard spelling rules of non-Sanskrit words in Bangla (3) Standard spelling rules of Bangla letter ञ and ञ in Bangla words (4) Standard spelling rules of Bangla letter ঞ in Bangla words.

Beginning of each class, Students prior Knowledge was checked (based on uploaded text or photos, or videos) by asking a simple question and requested them to write down the answer in the comment thread. At the end of the class, the same question was asked to students. After completing four classes, I requested both groups' students to give an assignment.

#### **College-4: Moheshpur Government Degree College**

After getting the training I am practicing flipped classroom strategy to get the best result. In this method, students are being active and

spiritual to learn. Actually, they are being thoughtful. They also can share their views among themselves. Nevertheless, they are getting engaged strongly in class.

The flipped classroom is mainly self-directed learning. In this system firstly I show a video. Then I deliver my speech for 5 minutes. After that give different website links. I tried to use Kahoot.

**College-5: Government Azizul Haque College.**

He took classes with the 2nd year students and divided the 20 students into two groups, one is a control group and another is an experimental group. He conducted a traditional class with a control group and flipped classroom with an experimental group. The duration of the intervention was one month. He gave a clear concept about flipped classrooms to the students of the experimental group. He prepared different materials for conducting class, for example, PowerPoint slides, quiz by-poll everywhere, and Kahoot, using google form prepared questions for the test to know the learning outcome and students' attitudes toward the flipped classroom.

**The effectiveness of the intervention**

**College-1: Rangpur Government College.**

**Effect of the flipped classroom on learning outcome:**

Mir Masud Rana used formative assessment tools in the flipped classroom for ensuring more learning outcomes but to compare with the students of a traditional class, he conducted summative assessment tools using google form.

**Posttest Performance:**

After teaching one chapter, PLC members of the dept. of Management arranged a posttest with five (5) MCQ questions. They observed that the students who were taught by flipped classroom strategy got a higher score than the students who got class under the traditional classroom system.

**Comparative performance of the students of Management:**

Comparative performance of all five questions between the two groups of students of Human Resource Management (HRM) has been presented through a bar chart (appendix-1). 80% of students of the flipped class gave the right answer for the first question, where it was 60% for the students of a traditional class (Table-1). In the sec-

ond question, the percentage of giving the right answer by the experimental and control groups were 70 and 50 respectively. Following the above trend, in the other three questions, students of flipped class corrected 30%, 10%, and 30% more than the students of a traditional class.

It is observed that students of HRM under flipped classroom were able to correct approximately 72% of questions, whereas an average of 50% of questions was corrected by the students of the traditional classroom. The performance of the students of a flipped class is 22% more than a traditional class.

Table:1: Comparative performance between experimental and control group.

Group/Questions	Q-1	Q-2	Q-3	Q-4	Q-5	Average
Experimental	80%	70%	80%	50%	80%	72%
Control	60%	50%	50%	40%	50%	50%
Performance higher	20%	20%	30%	10%	30%	22%

**Students' attitudes toward flipped classroom:**

In addition, to measure academic achievement, students were given another survey. Students were asked how much they agree with various statements regarding the flipped class teaching strategy. The results of that survey are presented by the pie charts that have been included in appendix-2. Here, in the first questions, 60% of students are strongly agreed and 40% are agreed. In response to the second question, the percentage of strongly agreed and agreed are equal. They have shown similar feedback in the next two questions but in the last questions, 20% told that they are agreed and 80% are strongly agreed. So, all students either agreed or strongly agreed with statements that indicate a positive outcome to the flipped classroom teaching strategy.

Table:2: Students attitudes towards statements of flipped classroom teaching strategy.

Statement	Strongly agree	Agree	Neither agree or disagree	Disagree	Strongly disagree	Number of students	Exam type	Positive side(s)	Negative side(s)
1. The flipped classroom strategy helps me to study more.	60%	40%	-	-	-	10	Board questions	Informative, imaginative, constructive, be able to use update data, involve personal opinion in the answer scripts.	Mixing information that is not related with the topic. Cannot complete answer within given time to add more information.
2. The flipped classroom strategy facilitates me to learn more than I would have during my straight lecture.	50%	50%	-	-	-				
3. The in-class practice has cooperated me to understand that I need to study more.	60%	40%	-	-	-	10	Viva	Confident, quick, be able to answer from memory, give data from different sources.	Give unnecessary information on the topic.
4. It is helpful to do an activity when classmates and teachers are available to answer questions.	50%	50%	-	-	-	-	-	-	-
5. The in-class practice has helped me do better in exam.	80%	20%	-	-	-	-	-	-	-

**College-2: Govt. Akbar Ali College.**

After conducting 10 classes with the experimental group, we find that there is a tremendous difference in the result with the controlled group. Two board question is given to their written question paper and we conduct a viva with those 20 students. In the written exams, the scripts of the experimental group are much enriched with a new idea, good vocabulary, enough information, a clear understanding of the topic, and their knowledge of the topic. But the controlled group has only copied from a selected notebook. No creativity is shown here. In the written exam, the average marks (Table-1) of the experimental group are 57% on the other hand the controlled group is 53%. There is a difference of 04% marks after implementing the flipped classroom. We also observe differences in the viva. The controlled group can only answer what they memorize from the notebook. They have no idea about the text. But the experimental group can answer the ins and outs of the topic. They learn more than the controlled group. The controlled group answered only from the book and the lectures of their teachers. But the experimental group can learn from the documentary, video, lectures of the teachers, peer/group discussion also from the internet. In viva, we also notice the difference in marks (Table-2) between the two groups. The average marks of the experimental group are 68% but the controlled group got only 56%. Students can enrich 12% of their knowledge after implementing Flipped Classroom. In this way, we can observe that the implementation of Flipped Classroom is an important idea. We also give the experimental group an evaluation form of Flipped Classroom. From the responses of the students, we can also get their attitude about Flipped Classroom.

**Table-1: The comparison of marks in the written exam:**

Marks of Question No-01: (Compare Songs of Innocence with the Songs of Experiences of Blake’s poems.)

Group	Mark										Average
Experimental	06	07	05	06	06	06	05	06	05	06	58%
Controlled	04	06	05	05	06	06	04	07	05	06	54%

Marks of Question No-02: (Write a note on Blake’s criticism of society in the Songs of Experiences.)

Group	Mark										Average
Experimental	05	08	04	06	05	05	07	04	06	06	56%
Controlled	06	05	04	05	07	05	06	04	05	05	52%

Difference of two groups:

Group	First question	Second question	Average	Difference
Experimental	58%	56%	57%	4%
Controlled	54%	52%	53%	

**Here some observations on students’ performance after implementing Flipped Classroom:**

**Table-2: The comparison of marks in the Viva exam:**

Group	Mark										Average	Difference
Experimental	07	07	08	06	06	07	05	08	07	07	68%	12%
Controlled	05	08	05	06	04	06	06	05	05	06	56%	

ly. Therefore, flipped classroom strategy had become an effective and useful method for the students of the experimental group.

**In conclusion:**

**Project achievements:**

In fact, five PLC wanted to observe the effects of flipped classroom strategy on the learning outcome of the students. During the intervention, it had been evident that flipped class is very effective in improving the self-regulation of the students and it ensures good coordination among students and teachers which mainly enhance more learning outcome. The noticeable positive performance in the posttest among the students of the experimental group of all five colleges proved that this intervention was right and fruitful.

**Limitations:**

During the intervention, there were different drawbacks to implement it. For example, insufficient time to ensure improvement, do not have a clear idea about PLC and flipped classroom strategy among stakeholders, egoism among colleagues, fondness of traditional teaching system, and lack of cooperation from the college administration.

**Recommendations:**

To form the PLC and implement the flipped classroom strategy, firstly, all members should be active and enthusiastic. Secondly, there should have co-operation from the administration. Thirdly, students should be given clear ideas regarding the use of information technology (IT) resources and teach them the manner of the flipped classroom and finally, to ensure students completing their homework before class.

**College-3: Nagarpur Government College.**

Comparison (based on our intervention) between traditional and flipped Classroom are given below

- Students feel more engaged with the topics.
- Grow interested to know the new thing.
- Teaching-Learning environment becomes more flexible and effective.

The percentage of both groups' students' prior knowledge, understanding and assignment submission are given below

Groups Name	Before Class	After Class	Assignment Submission
Control group	30%	60%	50%
Experimental group	50%	80%	70%

**College-4: Moheshpur Government Degree College**

PLC we can get significant results through the use of flipped classroom strategy. They are:

- Reflecting dialogue
- Focus on students learning
- Interaction among students
- Collaboration
- Shared values and norms.

**College-5: Government Azizul Haque College.**

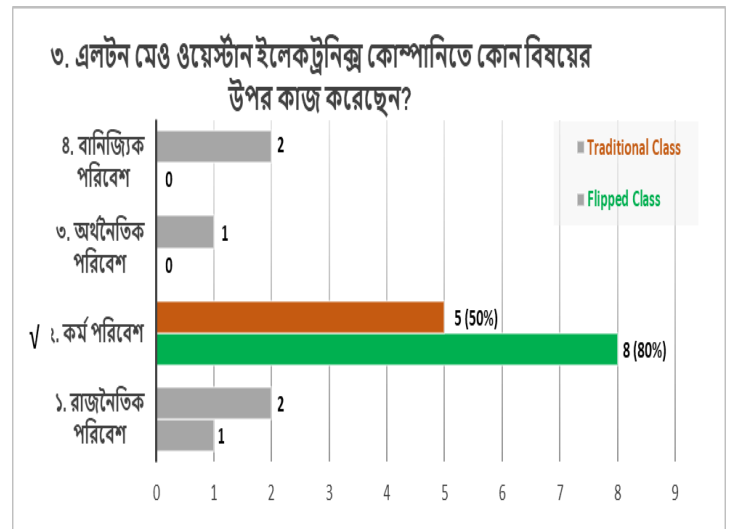
We could see dramatic changes in the academic performance of the students. It has ensured students' active participation in the class and they solved their problems within-group discussion. They told that if they faced any problem, teachers as a coordinator solved that instant-

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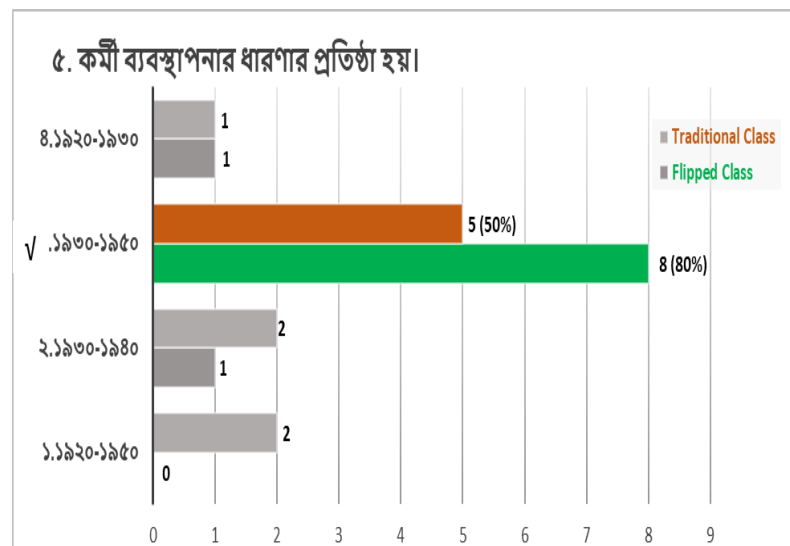
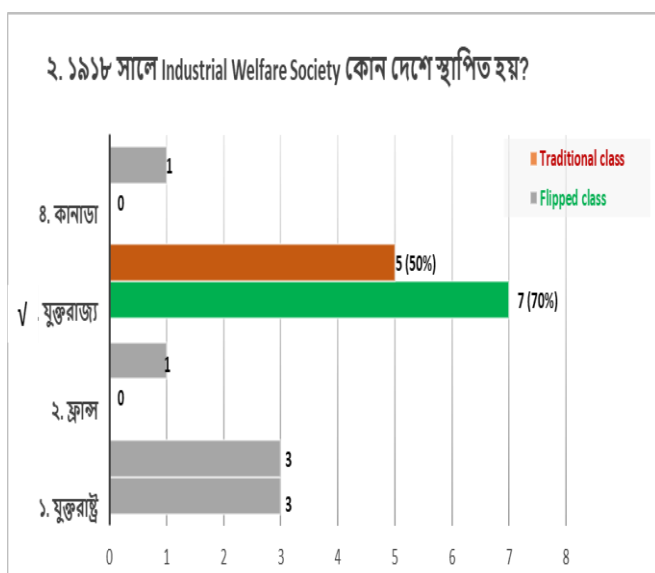
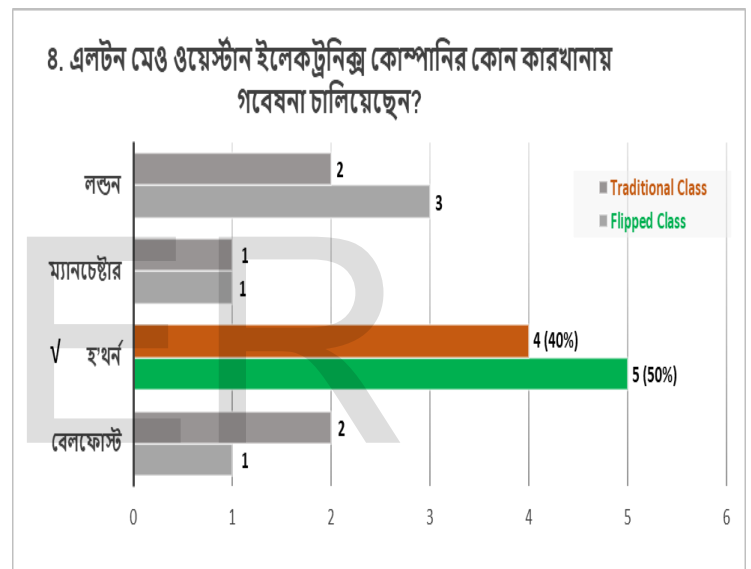
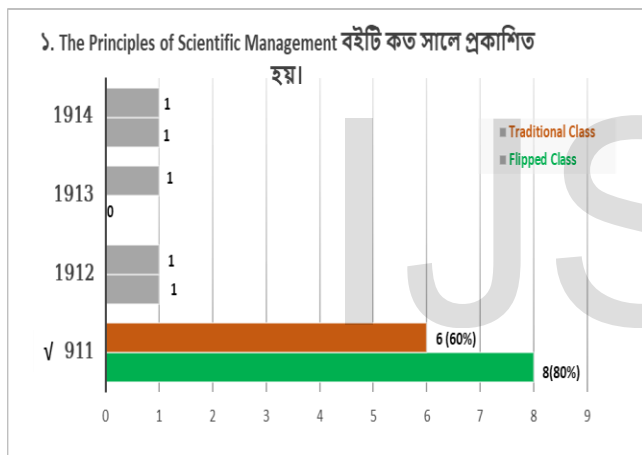
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**Appendix-1:**

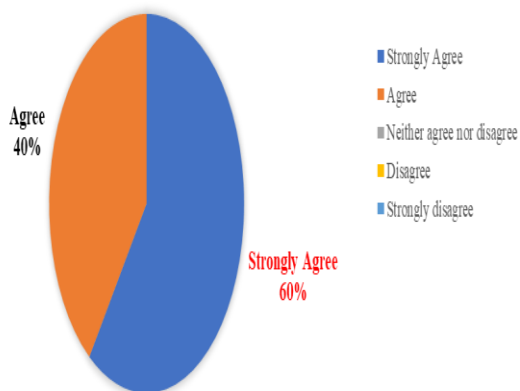
**Learning Outcome between flipped classroom and traditional classroom:**



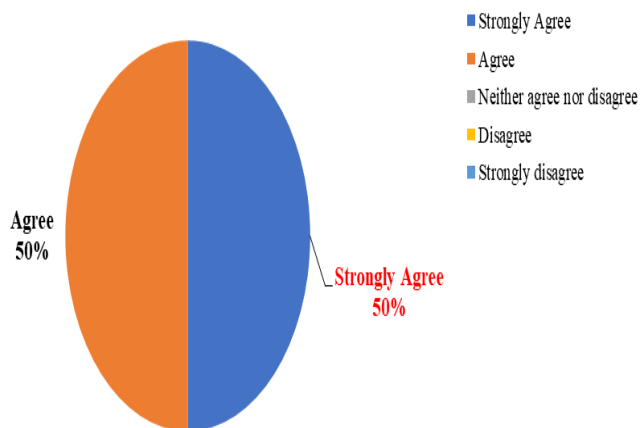
**Appendix-2:**

**Students' attitudes toward flipped classroom:**

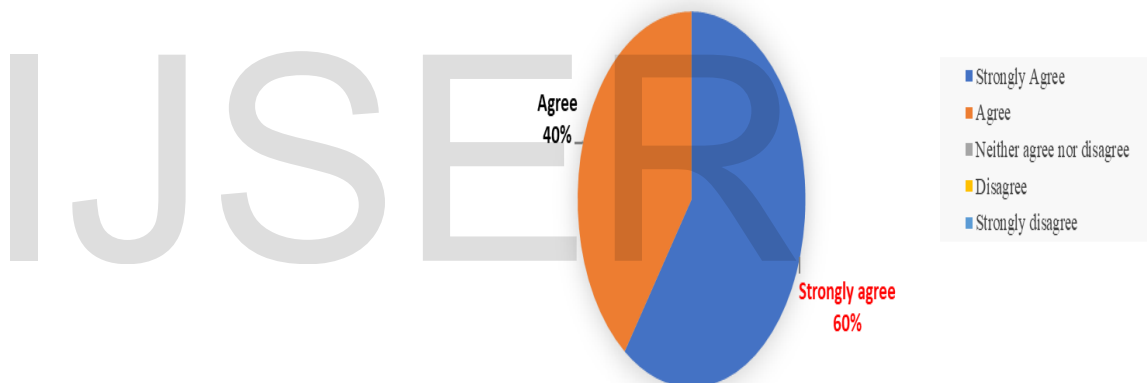
1. The flipped classroom strategy helps me to study more.



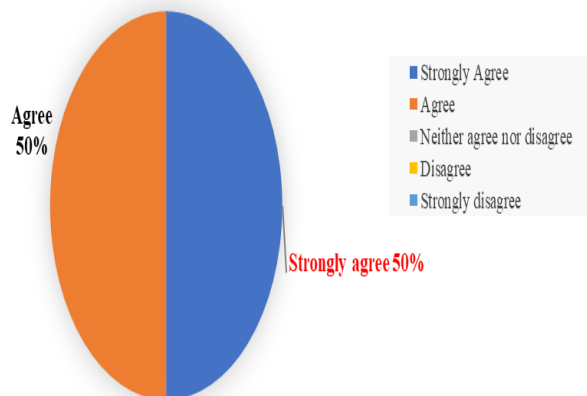
2. The flipped classroom strategy facilitates me to learn more than I would have during my straight lecture.



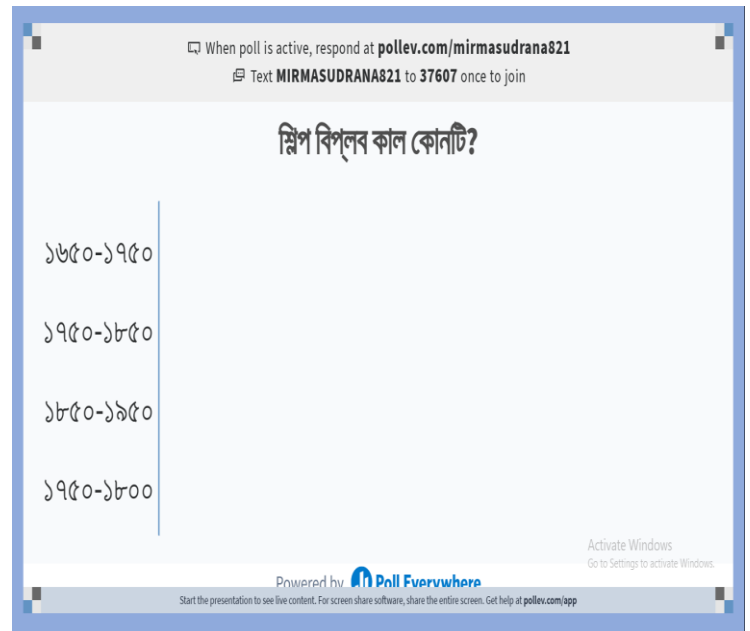
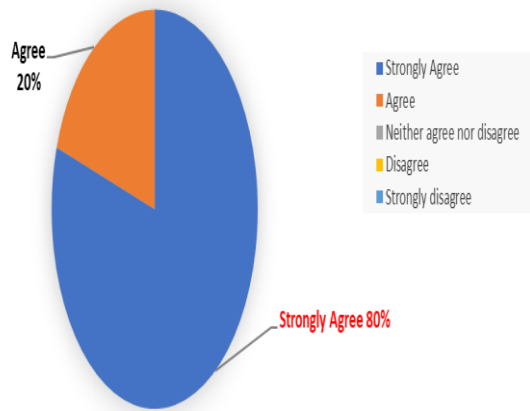
3. The in-class practice has cooperated me to understand that I need to study more.



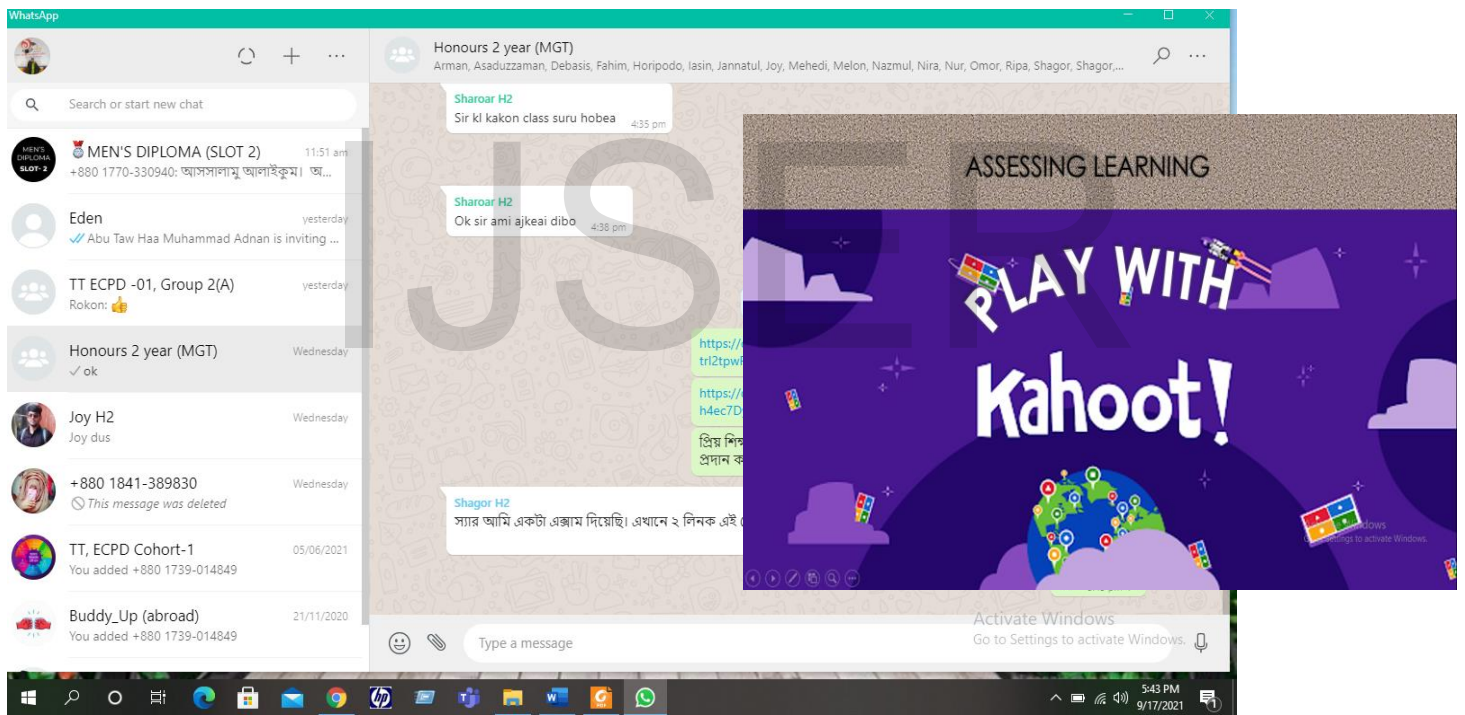
4. It is helpful to do an activity when classmates and teachers are available to answer questions.



### 5. The in-class practice has helped me do better in exam.



### Appendix-3:



### Appendix-4:

### Appendix-5:

### মানব সম্পদ ব্যবস্থাপনা (HRM)

MCQ Test

masudmgt.rana@gmail.com (not shared) [Switch account](#)

Students Name

Your answer

Class Roll

Your answer

১. The Principles of Scientific Management বইটি কত সালে প্রকাশিত হয়। 1 point

১৯১৪

১৯১৩

Human Resource Management (Response) - Excel (Product Activation Failed)

Timestamp	Score	Students Name	Class Roll	1. The Principles of Scientific Management	2. The Principles of Scientific Management	3. The Principles of Scientific Management	4. It is helpful to do an act	5. The in-class practice has helped me to do better in
9/13/2021 16:27:40	5/5	Md saju ahmed	30	1911	৩. যুক্তরাজ্য	২. অর্থ পরিশোধ	হর্ন	৩.১৯০০-১৯৫০
9/13/2021 16:32:27	4/5	Shahbul Islam	56	1911	১. যুক্তরাজ্য	২. অর্থ পরিশোধ	হর্ন	৩.১৯০০-১৯৫০
9/13/2021 16:33:30	5/5	MD. Mehad Hasan Mridul	131	1911	৩. যুক্তরাজ্য	২. অর্থ পরিশোধ	হর্ন	৩.১৯০০-১৯৫০
9/13/2021 16:35:13	3/5	Debasish Boman	60	1911	১. যুক্তরাজ্য	২. অর্থ পরিশোধ	লন্ডন	৩.১৯০০-১৯৫০
9/13/2021 18:26:50	0/5	শ্যে মিনন মিয়া	130	1912	৩. অর্থ পরিশোধ	ম্যানহ্যাটন	হর্ন	৩.১৯০০-১৯৫০
9/14/2021 8:31:15	2/5	Utshab Chandra	49	1911	৩. যুক্তরাজ্য	৪. বিনিয়োগ পরিশোধ	লন্ডন	২. ১৯০০-১৯৫০
9/14/2021 10:34:20	4/5	Mohammad Sagor	100	1911	৩. যুক্তরাজ্য	২. অর্থ পরিশোধ	লন্ডন	৩.১৯০০-১৯৫০
9/15/2021 11:53:09	5/5	Md Arman miah	73	1911	৩. যুক্তরাজ্য	২. অর্থ পরিশোধ	হর্ন	৩.১৯০০-১৯৫০
9/15/2021 12:25:32	5/5	Joy dus	128	1911	৩. যুক্তরাজ্য	২. অর্থ পরিশোধ	হর্ন	৩.১৯০০-১৯৫০
9/15/2021 17:34:16	3/5	Md Asadujaman Nur	06	1914	৩. যুক্তরাজ্য	২. অর্থ পরিশোধ	লন্ডন	৩.১৯০০-১৯৫০
9/15/2021 17:56:40	1/5	Mohammad Yeesin ali	45	1914	১. যুক্তরাজ্য	৪. বিনিয়োগ পরিশোধ	লন্ডন	৩.১৯০০-১৯৫০

### Students attitudes test

Questions about Flipped Classroom

masudmgt.rana@gmail.com (not shared) [Switch account](#)

Student Name

Your answer

Class Roll

Your answer

1.The flipped classroom strategy helps me to study more.

Strongly Agree

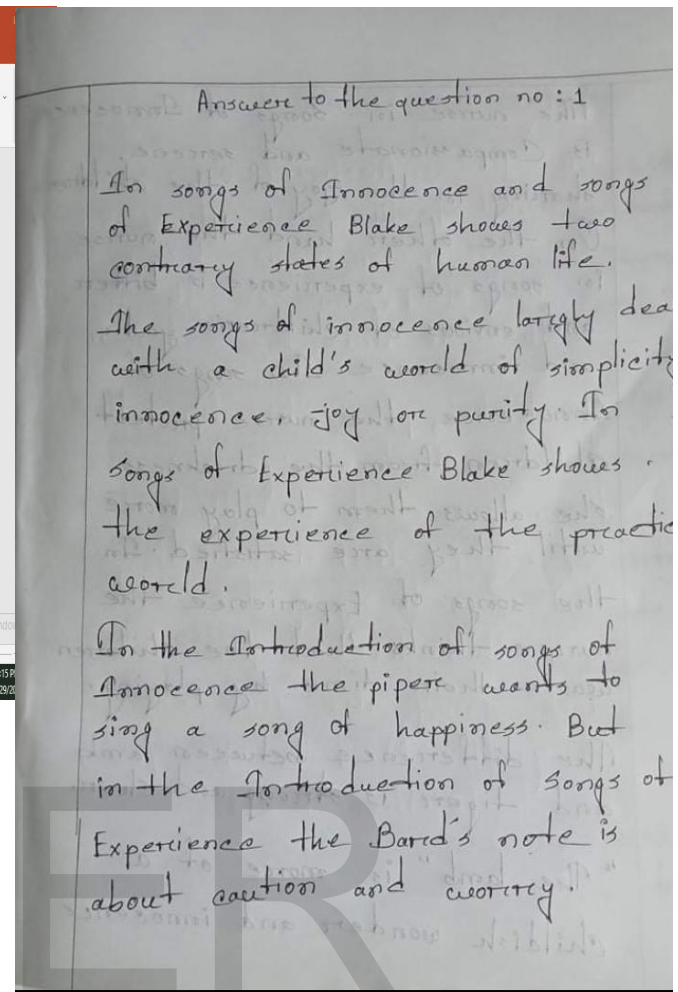
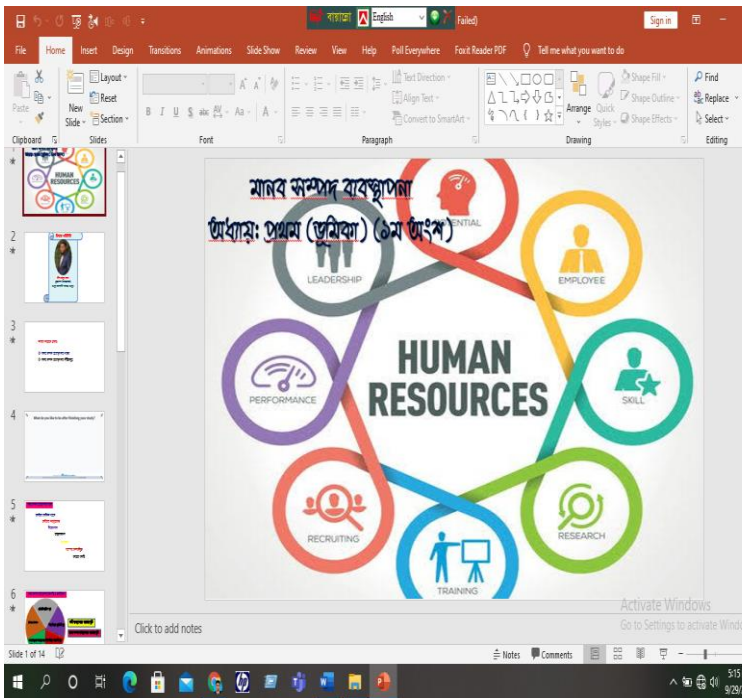
Agree

Students attitudes test (Response) - Excel (Product Activation Failed)

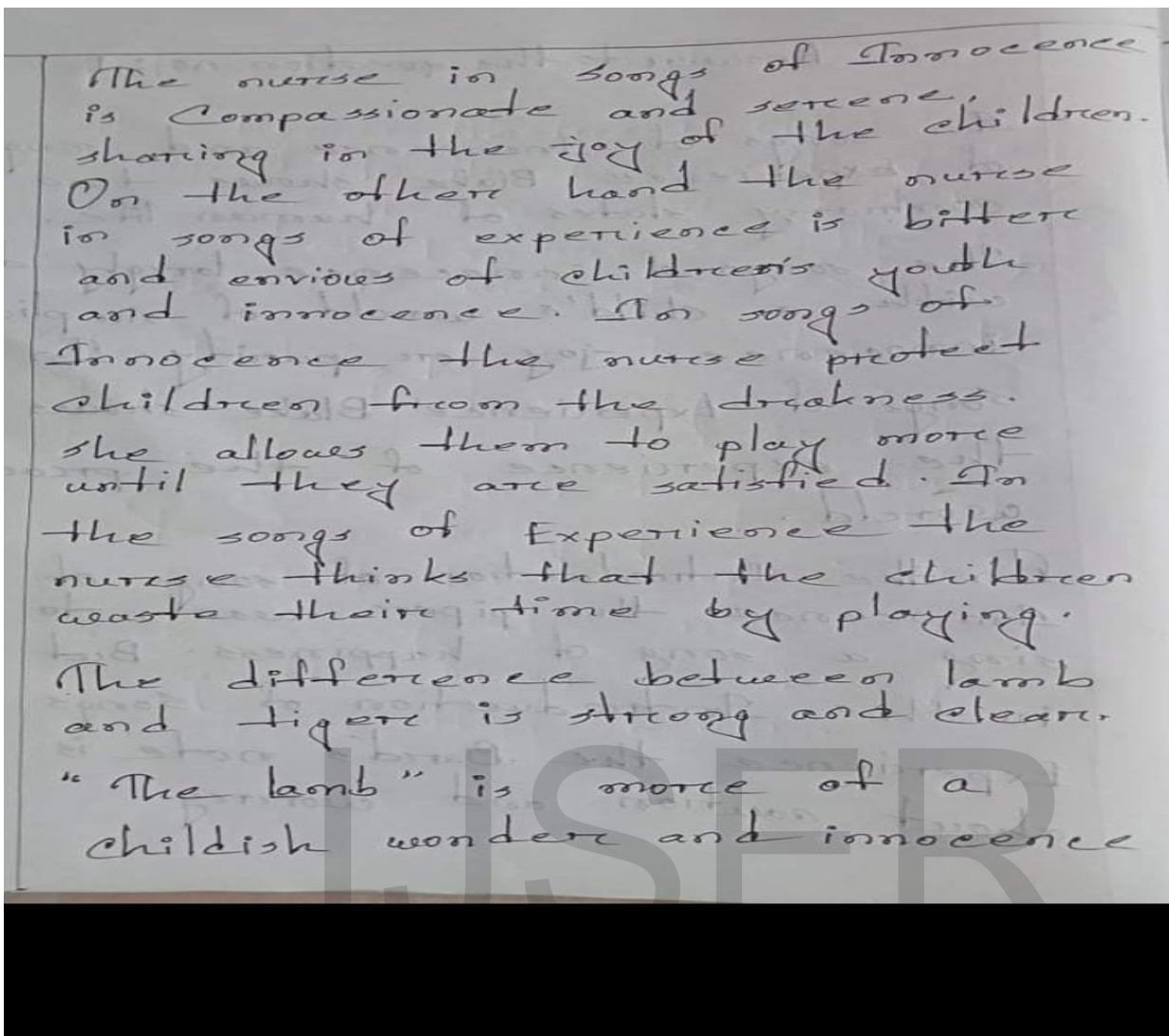
Timestamp	Score	Student Name	Class Roll	1.The flipped classroom	2. The flipped classroom	3. The in-class practice	4. It is helpful to do an act	5. The in-class practice has helped me to do better in
9/13/2021 16:16:52	0	Md Saju ahmed	30	Agree	Agree	Strongly agree	Strongly agree	Strongly agree
9/13/2021 16:19:35	0	MD. Mehad Hasan Mridul	131	Strongly Agree	Agree	Strongly agree	Agree	Strongly agree
9/13/2021 16:26:07	0	Mohammad Sagor	100	Strongly Agree	Agree	Agree	Strongly agree	Strongly agree
9/13/2021 16:29:29	0			Strongly Agree	Strongly agree	Strongly agree	Agree	Strongly agree
9/13/2021 16:29:22	0	Debasish Boman	60	Strongly Agree	Strongly agree	Strongly agree	Strongly agree	Strongly agree
9/13/2021 16:22:17	0	শ্যে মিনন মিয়া	130	Agree	Agree	Agree	Agree	Agree
9/14/2021 8:19:36	0	Utshab Chandra	49					
9/14/2021 10:49:54	0	Md Sarwar hosen	53					
9/14/2021 20:10:03	0	Mohammad Yeesin ali	45	Agree	Agree	Agree	Agree	Agree
9/15/2021 12:02:42	0	Md Arman miah	73	Agree	Strongly agree	Agree	Agree	Strongly agree
9/15/2021 17:06:40	0	Md Asadujaman Nur	06	Strongly Agree	Strongly agree	Strongly agree	Strongly agree	Strongly agree

Appendix-6:

Appendix-7:



**Appendix (8): A copy of Board question No- 01:**



while in "The Tyger" is more of an adult and experienced being. Blake uses happy, delightful and bright words in "The Lamb".

In "The Tyger" words like "burning dreadful and fear". "The Lamb"

celebrates the divinity and innocence not only the child but also of

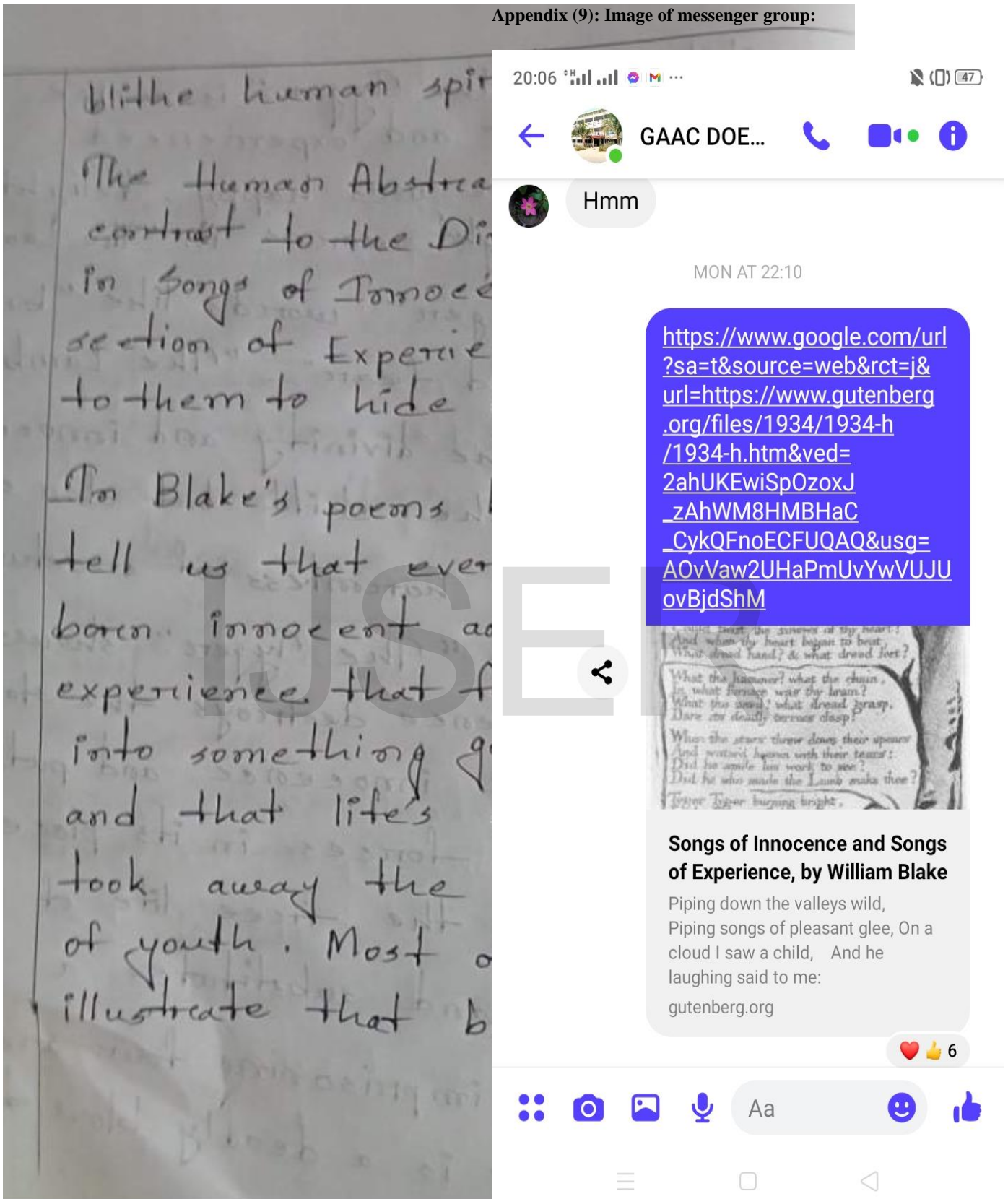
the least harmless of creatures on earth. "The Tyger" shows

how experience destroys the state of childlike innocence and puts destructive forces in its place.

It breaks the free life of imagination and substitutes a

dark, cold, imprisoning force and the result is a deadly blow to

Appendix (9): Image of messenger group:



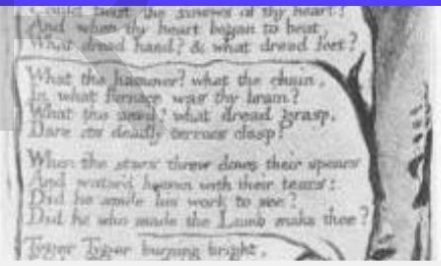
blithe human spirit  
The Human Abstract  
contrast to the Divine  
in Songs of Innocence  
section of Experience  
to them to hide  
In Blake's poems  
tell us that even  
born innocent and  
experience that fall  
into something good  
and that life's  
took away the joy  
of youth. Most of  
illustrate that birth  
is a process.

20:06 47% GAAC DOE...

Hmm

MON AT 22:10

[https://www.google.com/url?sa=t&source=web&rct=j&url=https://www.gutenberg.org/files/1934/1934-h/1934-h.htm&ved=2ahUKEwiSpOzoxJ\\_zAhWM8HMBHaC\\_CykQFnoECFUQAQ&usg=AOvVaw2UHaPmUvYwVUJUovBjdShM](https://www.google.com/url?sa=t&source=web&rct=j&url=https://www.gutenberg.org/files/1934/1934-h/1934-h.htm&ved=2ahUKEwiSpOzoxJ_zAhWM8HMBHaC_CykQFnoECFUQAQ&usg=AOvVaw2UHaPmUvYwVUJUovBjdShM)



**Songs of Innocence and Songs of Experience, by William Blake**  
Piping down the valleys wild,  
Piping songs of pleasant glee, On a  
cloud I saw a child, And he  
laughing said to me:  
gutenber.org

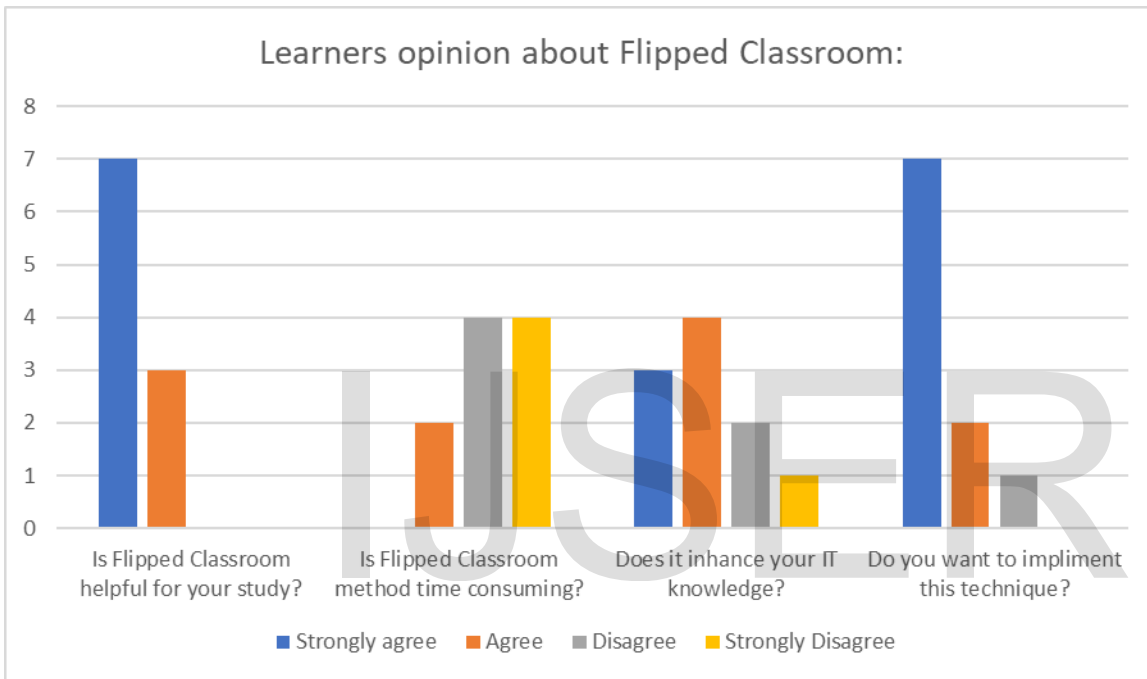
6

WhatsApp input bar with icons for gallery, camera, attachments, voice recording, text formatting (Aa), emojis, and a thumbs up icon.

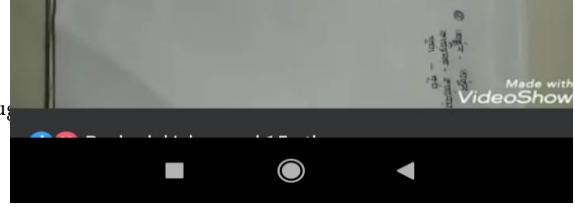


- a) What does Lamb symbolize?
- b) What does Tiger stand for?
- c) The poem “The Tiger” is a companion poem to?
- d) When did Blake complete his Songs of Innocence?
- e) In “The Chimney Sweeper” when does the father sell his son?
- f) What cathedral is featured in the poem “Holy Thursday”?
- g) Where are the child’s parents in “The Chimney Sweeper”?

**Appendix (11): Learners opinion about Flipped Classroom:**



Appendix-12:



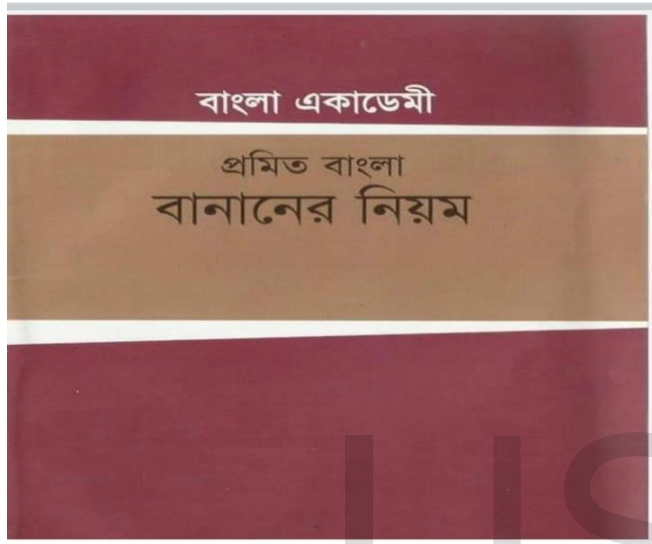
11:54 4G 77%

**নাগরপুর সরকারি কলেজ, টাঙ্গাইল।**  
Bulbul Ahmed · 3 Sep ·

একাদশ শ্রেণির প্রিয় শিক্ষার্থীরা, আশা করি তোমরা ভালো আছো। 'প্রমিত বাংলা বানানের নিয়ম' - এ বিষয়ে আমি তোমাদের চারটি ক্লাস নিবো। আলোচনার শিরোনামসমূহঃ  
ক)... See more

Apurba Karmakar and 23 others


Like Comment



IJSER

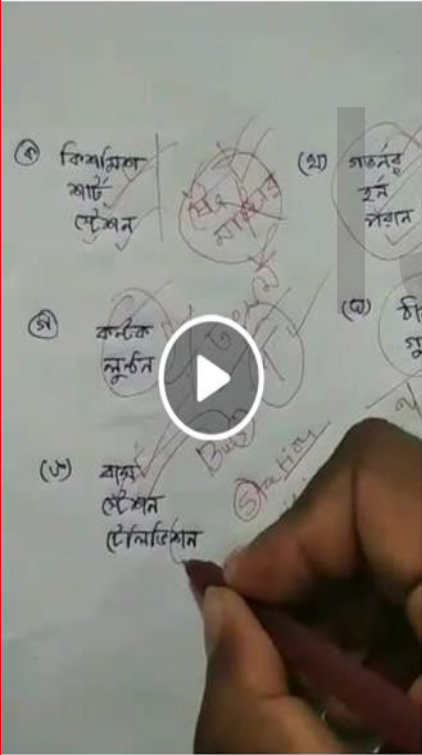
11:53 4G 78%


← নাগরপুর সর... 🔍 📤 ⋮

 **Bulbul Ahmed**  
11 Sep • 📍


একাদশ শ্রেণির প্রিয় শিক্ষার্থীরা, আশা করি তোমরা ভালো আছো। আজ তোমাদের সঙ্গে আলোচনা করবো শ/স/ষ এবং ণ/ন এর নিয়ম -

ক) বিদেশি শব্দের ক্ষেত্রে 'ষ' ব্যবহারের প্রয়োজন নেই।  
খ) অতৎসম শব্দের বানানে 'ণ' ব্যবহার করা হবে না।  
গ) তৎসম শব্দে ট ঠ ড ঢ - য়ের পূর্বে 'ণ' হয়।  
ঘ) অতৎসম ট ঠ ড ঢ - য়ের পূর্বে 'ন' হয়।... See more





 Rupa Islam and 13 others

11:53 4G 77%

 **নাগরপুর সরকারি কলেজ, টাঙ্গাইল।**  
Bulbul Ahmed • 5 Sep • 📍

একাদশ শ্রেণির প্রিয় শিক্ষার্থীরা, আশা করি তোমরা ভালো আছো। আগামীকাল তোমাদের সঙ্গে 'অতৎসম শব্দের বানানের নিয়ম' বিষয়ে কথা হবে। সংযুক্ত ছবি তিনটি একটু দেখে বোঝার চেষ্টা করো। শুভকামনা সকলের জন্য।

 Md Rasel Mahmud and 29 others

 Like  Comment

**অতৎসম শব্দ**

২.১  
ই, ঈ, উ, ঊ

সকল অতৎসম অর্থাৎ তত্ত্ব, দেশি, বিদেশি, মিশ্র শব্দে কেবল ই এবং উ এবং এদের কারচিহ্ন ি ব্যবহৃত হবে।  
যেমন :

আরবি, আসামি, ইংরেজি, ইমান, ইরানি, উনিশ, ওকালতি, কাহিনি, কুমির, কোরামতি, খুশি, খেয়ালি, গাড়ি, গোয়ালিনি, চাচি, জমিদারি, জাপানি, জার্মানি, টুপি, তরকারি, দাড়ি, দাদি, দাবি, দিঘি, দিদি, মানি, নিচু, পশমি, পাখি, পাগলামি, পাগলি, পিসি, ফরাসি, ফরিয়াদি, ফারসি, ফিরিসি, বর্ণালি, বাঁশি, বাজালি, বাড়ি, বিবি, বুড়ি, বেআইনি, বেশি, বোমাবাজি, ভারি (অত্যন্ত অর্থে), মামি, মাগি, মাসি, মাস্টারি, রানি, রুপালি, রেশমি, শাড়ি, সরকারি, সিদ্ধি, সোনালি, হাতি, হিজরি, হিন্দি, হেঁয়ালি।

চুন, পুজো, পূব, মুলা, মুলো।

পদাশ্রিত নির্দেশক টি-তে ই-কার হবে। যেমন :