Implementation and Prospect of Flipped Classroom in Government Rajendra College, Bangladesh

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Abstract: The flipped classroom is a prospective blended instructional approach that can provide tremendous opportunities for technology adoption in learning. This study is a critical reflection on adopting a flipped classroom model at a tertiary college in Bangladesh. The aim was to investigate existing teaching practices by identifying their limitations. It also intended to introduce the flipped classroom model in the existing setting, specifically evaluating its strengths, challenges and effectiveness. The study employed a qualitative research approach and investigated the first research question using narrative analysis, the second research question using systematic literature review and conceptual content analysis and finally, the third one using thematic analysis of FGD. The study confirmed students' increased engagement and satisfaction in the learning process despite the unfamiliarity of the approach, increased workload and infrastructural inadequacies for effective implementation of the system. The investigation opened new opportunities for a pedagogical shift of the focus from quantitative to qualitative achievement of learning. Finally, as prescribed by the study, the implementation of the flipped approach requires substantial adjustments to existing teaching practices followed by the changes in the national education policy of Bangladesh.

Keywords: Flipped classroom, traditional learning

Introduction

Traditional teaching techniques, while prevalent in colleges under National University, Bangladesh, may not fully meet the evolving educational demands and challenges of higher education. These challenges include managing large class sizes, maintaining student engagement, accommodating the diverse abilities of students, and delivering comprehensive lessons within constrained class hours. Consequently, students often resort to private tutors focused more on grades than genuine learning, potentially degrading educational quality.

The flipped classroom model, which integrates technology-supported pedagogy by reallocating lecture time to interactive, problem-solving classroom activities, presents a promising alternative. This approach not only enhances the use of class time but also supports differentiated learning paces and responsibilities, potentially increasing student confidence and satisfaction. Previous studies, such as those by Akcayir & Akcayir (2018) and Ozdamli & Asiksoy (2016), have

documented the positive impacts of this model on student learning outcomes, perceptions, and teacher satisfaction.

However, the adoption of the flipped classroom in Bangladesh's higher education remains in its nascent stages, with its practicality and potential benefits yet to be thoroughly explored. As Bangladesh is poised to introduce a new college curriculum, understanding the flipped classroom's applicability and effectiveness becomes crucial. This study aims to assess the current learning environment at Government Rajendra College and explore the potential and challenges of the flipped classroom approach. Specifically, it seeks to answer the following research questions:

1. What is the current status of learning in the studied college?

2. What are the potentials, challenges, and effectiveness of the flipped classroom model?

3. How do students perceive the flipped classroom approach?

The purpose of this paper is to critically reflect on the existing teaching practices, identify their shortcomings in achieving educational objectives, and compare traditional methods with the flipped classroom model, focusing on their strengths, challenges, and effectiveness. It also aims to gauge student perceptions following the implementation of the flipped classroom strategy in the college.

Research Methodology
This study employed a qualitative research methodology to thoroughly address the formulated research questions. This choice was driven by the subjective nature of the data, relying heavily on the researcher's views and reflective experiences. The methodology is structured as follows:

1. **Narrative Analysis:** Employed to address the first research question, this approach involved narrating the specific context and reflecting on the existing instructional practices of the researcher. Observations and contextual documents were utilized as primary data sources.

2. **Systematic Literature Review and Conceptual Content Analysis**: These methods were implemented to answer the second research question concerning the effectiveness of the flipped classroom model. They provided a foundation for the action plan by justifying the pedagogical strategies through evidence gathered from existing literature.

3. **Thematic Analysis of Focus Group Discussions (FGDs):** To explore the third research question regarding participants' perceptions, two FGDs with eight randomly selected participants from the flipped sessions were conducted. This analysis highlighted student responses and experiences post-implementation.

Action Plan

The flipped teaching approach was segmented into four key components to ensure a comprehensive educational strategy:

- **Instructor's Planning and Arrangement:** Preparation included setting up a digital learning environment where students could access educational materials through platforms like YouTube, Google Docs, and a Facebook group for instructional guidance. The preparation of video lectures, which included segments for interactive quizzes and discussions, was aimed at fostering a conducive learning environment (Flores et al., 2016; Rohel et al., 2013; Sherrow et al., 2016; Turan and Goktas, 2016; Vazquez and Chiang, 2015).

- **Pre-Class Strategies:** Involved informing students of upcoming content through emails and social media, encouraging them to engage with the material through structured pre-class activities like quizzes and note-taking. This aimed to ensure that students were well-prepared before each class, enhancing the in-class learning experience (Nguyen et al., 2015; Unal & Unal, 2017; Wilson, 2013).

- **In-Class Activities:** The classroom time was strategically used for deeper engagement through problem-solving and group discussions. This part of the session focused on applying knowledge from video lectures, allowing for practical and analytical discussions among students and the instructor (Turan & Goktas, 2016; Lag, 2016; Unal & Unal, 2017).

- **Post-Class Evaluations:** Designed to assess student understanding and gather feedback on the learning materials and overall classroom experience. This component was critical for ongoing adjustments to the teaching strategy and materials (Unal & Unal, 2017; Turan & Goktas, 2016).

Implementation

The implementation of this model was detailed through a one-day session outline for an international economics course, focusing on various theories of international trade. The session was divided into three segments:

1. **Pre-Class Preparation:** Included the development of comprehensive video lectures supplemented with quizzes and e-books to guide the students' learning before class.

2. **In-Class Activities:** Structured to maximize student interaction and application of the pre-learned concepts, focusing on collaborative problem-solving and discussions.

3. **Post-Class Task:** Aimed at consolidating the learned material through group submissions, encouraging reflective learning and comprehensive understanding of the trade theories discussed.

Challenges and Limitations

The study acknowledges the infrastructural and technological challenges inherent in implementing such a transformative educational model. Additionally, the limited number of sessions conducted posed challenges in fully assessing the long-term impact of the flipped classroom. However, the similarity in educational contexts across government colleges in Bangladesh supports the potential generalizability of the (Moffett & Mill, 2014).

Findings and Discussion
Research Question 1: Current Status of Learning at Government Rajendra College Context and Current Practice
At Government Rajendra College, the prevalent teaching methodology aligns with the traditional format predominantly seen across Bangladeshi higher education, particularly within the Honors and Masters' Programs regulated by National University. The curriculum is designed to prepare students primarily for year-end examinations with minimal continuous assessment, which potentially stifles creative and critical engagement throughout the learning process.

Critical Reflection
The existing pedagogical approach, while robust in its adherence to national educational standards, shows significant limitations in fostering an engaging and interactive learning environment. Despite incorporating modern technological aids and sporadic interactive sessions, the teaching model primarily revolves around direct instruction with a heavy focus on exam preparation. This approach has been found to marginally address the diverse learning needs of students, particularly in fostering sustained engagement and deep understanding.

Research Question 2: Potentials, Challenges, and Effectiveness of the Flipped Classroom Model Traditional vs. Flipped Classroom Approaches:
The traditional teaching model at Rajendra College has been characterized by its straightforward, lecture-based format where the instructor plays a central role. In contrast, the flipped classroom model reimagines this dynamic, emphasizing pre-class preparation through digital means and using class time for deeper exploration and problem-solving, thereby potentially enhancing learning outcomes and student engagement (Sherrow et al., 2016; Dimitrios et al., 2013).

Effectiveness of the Flipped Classroom
Studies and initial implementations suggest that the flipped model can significantly enhance student performance and satisfaction. The approach allows for varied learning paces, fosters greater interaction with content through technology, and enhances the opportunities for active learning during class sessions. However, the transition to this model presents notable challenges, primarily due to infrastructural and technological limitations, as well as resistance from students accustomed to traditional learning methodologies (Flores et al., 2016; Sherrow et al., 2016; Unal & Unal, 2017; Roehl et al., 2013).

Research Question 3: Student Perceptions Post-Implementation Student Feedback on the Flipped Classroom
Feedback gathered from focus group discussions revealed a mixture of enthusiasm and skepticism among students. While many appreciated the dynamic and interactive nature of the flipped classes, challenges such as lack of familiarity with the format, inadequate technological resources, and the perception of increased workload were frequently cited. These factors contributed to a varied

response to the new model, highlighting the need for comprehensive training and infrastructural improvements to fully realize the benefits of flipped learning.

Key Themes from Student Feedback
1. **Benefits and Strengths:** Students reported increased engagement and satisfaction with the learning process, noting that the use of multimedia and interactive tasks helped alleviate the monotony of traditional lectures.

2. **Challenges and Disruptions:** The primary concerns included unfamiliarity with the flipped model, perceived increase in workload, and infrastructural inadequacies that hindered effective implementation.

3. **Possible Solutions:** Recommendations for improvement focused on enhancing technological support, modifying assessment strategies to include continuous evaluation, and reducing class sizes to manage interactive sessions more effectively.

Conclusion
The investigation into the flipped classroom model at Government Rajendra College highlights not just the potential for quantitative improvements, such as increased pass rates, but more importantly, qualitative enhancements in student learning outcomes. This model promotes deeper engagement and understanding among students, a shift from traditional rote learning methods.

Implementing the flipped classroom effectively, however, requires more than just minor adjustments to teaching practices; it calls for substantial changes in the national education policy and curricular frameworks to support new modes of learning and assessment. Despite these challenges, initial steps toward this pedagogical shift can be made without immediate changes to grading systems or overarching educational policies. By focusing on creating engaging and cognitively appropriate materials—such as concise, compelling video lectures—and enhancing teacher competencies in both technological and pedagogical domains, institutions can begin to harness the benefits of flipped learning.

Further, the commitment from both educators and students towards this educational reform is crucial. Without a strong commitment to budgetary and policy reforms, progress may be incremental and slow. However, even gradual implementation can yield substantial benefits, especially as national digitalization initiatives continue to expand technological accessibility and infrastructure.

Ultimately, the successful adoption of flipped classrooms in Bangladesh will depend on strategic, sustained efforts to align educational practices with contemporary learning needs and technological advancements. This approach not only supports improved academic performance but also prepares students for a dynamic and evolving future.

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