



Feasibility of Flipped Classroom Approach at Undergraduate Engineering Courses: Perspective of Engineering Colleges in Bangladesh

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ABSTRACT

CONTEXT

Face-to-face class delivery blended with self-paced interactive learning via online technology has been a well-known and effective teaching and learning practice in different countries. However, due to lack in infrastructure, students from under-developed and developing countries are underprivileged from such an effective teaching and learning strategy. Recent need for delivering online education due to prolonged lockdown during Covid-19 pandemic, it become inevitable to integrate blended learning pedagogy into the learning and teaching unprecedentedly in a developing country such as Bangladesh.

PURPOSE OR GOAL

The specific goal of the study is to analyse the feasibility of Flipped Classroom learning approach for Undergraduate Engineering courses for the Engineering Colleges in Bangladesh. In addition, scopes, facilities, and challenges for implementing Flipped Classroom are being analysed through this study under 04 distinct research questions.

APPROACH OR METHODOLOGY/METHODS

The beneficiaries and experts within 4 Engineering Colleges are identified and considered for data collection. A multi method research involving quantitative and qualitative data has been conducted. Following the principle of purposive sampling, data were collected through Key Informant Interview (KII) with administrative heads of all the institutes, Focused Group Discussion (FGD) with 12 teachers who are subject matter experts in their teaching courses in the undergraduate program and, a survey response to semi structured questionnaires from 160 students in the program.

ACTUAL OR ANTICIPATED OUTCOMES

Data required for this research work have already been collected and from the collected data it can be visualized that all of the Engineering Colleges have technological potentials to implement the Flipped Classroom strategy. However, the concept is new for the teachers and students, they cannot cope with the flow spontaneously. Thus, more motivation and training sessions are necessary to make them accustomed to the process. Moreover, incompetency for using technology has also been found among the beneficiaries which could be one of the leading factors towards blended learning adaptation hesitancy.

CONCLUSIONS/RECOMMENDATIONS/SUMMARY

Based on the preliminary findings from the research, it can be reiterated that despite the concept being new to Engineering Colleges, there is ample opportunities to implement the idea of Flipped Classroom technique in Bangladesh. Hesitancy towards adapting new method and technology in teaching and learning context is quite common in the cultural context of Bangladesh and it can be

readily overcome with appropriate training, campaign, and progressive implementation of the Flipped learning approach.

KEYWORDS

Flipped Classroom; Key Informant Interview (KII); Focus Group Discussion (FGD).