# ASSESSING THE SATISFACTION OF MALAYSIAN UNDERGRADUATE STUDENTS IN VIRTUAL FLIPPED CLASSROOM (VFC) DURING COVID-19 PANDEMIC

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### **Abstract**

The move towards virtual education due to the COVID-19 pandemic has led to various studies searching to improve the new learning environment. This study investigates the student satisfaction determinants in a Virtual Flipped Classroom (VFC) setting and explores the mediating effects of skills on student satisfaction. The data were collected through an online survey among business management undergraduate students and examined the learner-content interaction, learner-instructor interaction, learner-learner interaction, access to information and learning resources, learning effect, and learner skills. Based on the Structural Equation Model (SEM) analysis, the study found no determinants of student satisfaction and no mediating effects of skills on student satisfaction. Conversely, a significant effect was found between VFC and skills. This study will aid educators to enhance student satisfaction in online classes, particularly during the pandemic.

Keywords: virtual flipped classroom (VFC), student satisfaction, interaction, access to information and learning resources, learning effect.

## 1 INTRODUCTION

Flipped classrooms can be applied in teaching and learning. Flipped classrooms have been implemented in various disciplines (social sciences, engineering, and technology) and different education levels (schools, higher education institutions). According to [1], flipped classrooms are an instructional strategy that applies constructivism and active learning principles. Flipped classrooms differ from conventional classrooms as elements commonly performed outside class are conducted during class. Previous studies have demonstrated various benefits of flipped learning. For example, [2] concluded that flipped classrooms are more effective than other approaches, particularly for secondary and higher education learners. Similarly, [3] received positive feedback from learners that flipped classrooms increases their achievement.

In the higher education setting, the outstanding effects of flipped classroom have been highlighted by [4]. Flipped classrooms are seen as an indicator of learners' skills and knowledge and enhance competency. Compared to the traditional approach, flipped classrooms can bring more benefits than harm to student learning. Consequently, flipped classrooms will create positive outcomes and encourage more engagement [5]. Despite the advantages of flipped classrooms, there are also implementation challenges. Firstly, flipped classrooms require more time and effort from learners than traditional classrooms, as learners feel obliged to perform better during in-class activities [6]. Despite being positively perceived, some learners faced higher anxiety and struggled to adapt to the flipped classroom concept [3]. Previous studies have revealed that flipped classrooms entail prospects and challenges. Currently, there are limited studies on the implementation of the flipped classroom in virtual learning. Therefore, further investigation on how the VFC can be applied in learning and teaching, particularly during the COVID-19 pandemic, can widen the scope for future research and development and recommend best practices. This paper is organised into several subheadings: literature review, research methodology, results and discussion, and conclusion and limitations.

## 2 LITERATURE REVIEW

# 2.1 An Overview of Flipped Classroom Research

In recent years, flipped classrooms have drawn the extensive interest of higher education educators. Due to the COVID-19 pandemic, instructors have been forced to transform their conventional teaching methods into virtual learning and the applied flipped classroom approach. Various studies have been