

AN EXPLORATORY STUDY OF STUDENTS' LEARNING PERFORMANCE IN FLIPPED CLASSROOM USING DECISION TREE



By

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A thesis submitted to the Bahria University, Karachi Campus
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**DEPARTMENT OF COMPUTER SCIENCE
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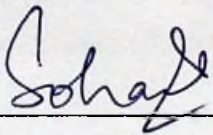
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Abstract

With the advancement in technology, educational systems have paved the way in order to provide effectiveness in classroom learning environment. Flipped Classroom model is one of the most effective and influential methods that follows student-centered approach. It enhances students' learning outcomes and create a motivational level through conducting learning activities during in-class sessions.

This study is divided into two segments, to accomplish predictive analysis of students' performance based on overall assessments and to explore effectiveness of two models by comparing students' learning outcome through both flipped and traditional classrooms and evaluate which model help students more to captivate during the course. To perform predicative analysis, we have implemented decision tree classifier that help instructor to evaluate and predict student's learning outcomes based on their overall performance before final exams.

The focus group during this study were student of MBA enrolled in strategic management course. The focus group was further divided into experimental and control groups representing both teaching learning environment, flipped and traditional classroom respectively. The results found in this study reflects that students learning capability increased though the flipped learning approach as compare to traditional way of teaching. To further support our experimental results a questionnaire was conducted with experimental group that reflects promising results. Predictive analysis performed during our experimental study produced satisfactory results with effective accuracy.

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