

## OPTIMIZATION OF STUDENT'S ACADEMIC PERFORMANCE IN A WORLD-CLASS UNIVERSITY USING OPERATIONAL RESEARCH TECHNIQUE

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### ABSTRACT

Studies carried out by researchers and University ranking agencies, using different methods, including step-wise multiple regression model, show that the following factors influence the academic performance of student's in a world-class university: Student's Entry Points, students/staff Ratio, Library Spending, Student's Accommodation, Teaching Assessment, Firsts, Research Rating, Value Added, Overseas Students, Employments, Emotion and More. In this paper we offer another simple approach – Linear Programming model, to analyzing and optimizing, the effects of these factors on the academic performance of students in a world-class university. The resulting model was standardized and simplex method was used with the aid of MAPLE14 to solve it. It was observed that some factors were significantly critical than the others in maximizing student's academic performance. In particular teaching assessment is a major factor in maximizing the academic performance of students. Also students' entry points are very crucial.

**KEYWORDS:** Word Class University, Linear Programming Model, simplex Method, Optimization, Operational Research