# UNIVERSITI TEKNOLOGI MARA

# MAXIMIZING PREFERENCES FOR TEACHER-SUBJECT ASSIGNMENTS USING INTEGER LINEAR PROGRAMMING, P25S23

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# ABSTRACT

The teacher-subject assignment problem is an integral aspect of the broader school timetabling challenge, involving the allocation of teachers to specific subjects while considering various constraints. This study is centered on addressing teacher-subject assignment issues within Sekolah Kebangsaan Sungai Tiram, Manjung, Perak. The primary challenges revolve around achieving a balanced workload and accommodating teacher preferences. To address these issues, an Integer Linear Programming (ILP) model is employed, implemented through Excel Solver. The outcomes reveal that the optimized timetable generated by the ILP model outperforms the initial timetable in terms of satisfying teacher preferences while adhering to specified constraints. A well-optimized teacher-subject assignment is crucial for enhancing the overall teaching experience, benefiting both teachers and students alike.

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IN THE NAME OF ALLAH, THE MOST GRACIOUS, THE MOST MERCIFUL

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# TABLE OF CONTENTS