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SELECTION OF STUDENTS RETURNING TO THE CAMPUS
DURING MOVEMENT CONTROL ORDER (MCO) BY USING
FUZZY ANALYTIC HIERARCHY PROCESS (FAHP)

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TABLE OF CONTENTS

ACKNOWLEDGEMENTS	ii
TABLE OF CONTENTS	iii
LIST OF FIGURES	v
LIST OF TABLES	vi
ABSTRACT	vii
1 INTRODUCTION	1
1.1 Research Backgroud	4
1.2 Problem Statement	5
1.3 Research Objective	6
1.4 Significant Of Project	6
1.5 Scope Of Project	7
2 LITERATURE REVIEW	8
3 METHODOLOGY	13
3.1 Basic Definition	14
3.2 STEP 1 : Selection of an Expert Group and Data Collection (Questionnaire)	15
3.3 STEP 2: Generating The Pair-wise Comparison Matrices	15
3.4 STEP 3: Calculation of Geometric Mean	16
3.5 STEP 4: Calculation of The Value of Fuzzy Synthetic Extent	16
3.6 STEP 5: Calculation of The Sets of Weight Values of Fuzzy AHP	16
3.7 STEP 6: Aggregate The Relative Weight of Decision Elements	18

ABSTRACT

Recently, the world was affected by the Coronavirus disease (COVID-19), which caused major disruptions in every sectors including the education sector. Most of the education systems in the world had to shift to full online learning. In line with this, Universiti Teknologi MARA (UiTM) has decided to execute Open and Distance Learning (ODL) during the outbreak of the pandemic. However, numerous challenges occurred during online learning. In response to that, UiTM has opened an application for students to return to their campus. The current method that UiTM Cawangan Kelantan (UiTMCK) used in the student selection is a manual method that tends to be bias and time-consuming. Therefore, the purpose of this study is to develop a more systematic decision-making technique by using the Fuzzy Analytic Hierarchy Process (FAHP) in selecting students to return to the campus during Movement Control Order (MCO). The criteria involved were learning requirement and family capability. For sub-criteria, it involved practical and workshop course (FSSR), MUET, internet accessibility, co-curricular activity (Commander), family income (B40, M40, T20), number of family dependent and environment factor. For data collection purposes, ten experts from UiTMCK have been requested to complete a fuzzy questionnaire. According to the findings of this study, practical and workshop course (FSSR) has the highest global weight compared to the other criteria. Besides, the result shows a difference in the students' selection between Fuzzy AHP method and the manual system. However, the result obtained by using Fuzzy AHP method able to reduce biasness and fairer to all students because the method provides systematic calculation by calculating the total score for each student. Hence, the qualified student will be selected based on the rank.

1 INTRODUCTION

Coronavirus disease (COVID-19) has shaken the entire world in late 2019. COVID-19 is known as a deadly infectious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). This newly identified virus was first reported in December 2019 at Wuhan, Hubei Province in China. However, after a few weeks, this infectious virus has widely spread across China and all the countries around the world (Zu et al., 2020). On 11th March 2020, the World Health Organization (WHO) has announced COVID-19 as a global pandemic (WHO, 2020). In response to that, most governments in the world including Malaysia have taken strict action to curb the spreading of COVID-19 from getting worse. Therefore, on 18th March 2020, Malaysian Prime Minister Tan Sri Muhyiddin Yassin has declared Movement Control Order (MCO) as an emergency step to prevent the spreading of the deadly virus, which led to the closure of all public schools and higher education.

In effect of this pandemic, all universities in Malaysia, including Universiti Teknologi MARA (UiTM), had to shift from face-to-face to 100% online learning. Thus, UiTM has introduced Open and Distance Learning (ODL) on 13th April 2020 to all students. ODL enables students to access the teaching materials at any time, and any place, following the students' convenience. Due to this online learning environment, most lecturers use free and more user-friendly online platforms such as Google Classroom, Google Meet, Webex, and also some of social media such as Telegram, WhatsApp, and YouTube to deliver the lessons (Chung et al., 2020). According to Dhawan (2020), online learning provides advantages in developing new skills and independent learning. Similar research was reported by Ana et al. (2020), who added that online learning also enables flexible time to study.

However, online learning comes with numerous challenges. According to Chung et al. (2020), the biggest challenges of online learning among university students in Malaysia are poor internet connectivity and limited broadband data. Besides that, Selvanathan et al. (2020)