

Special Issue in Applied Science & Mathematics

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Abstract: This special issue publishes six articles that were written by 20 authors. They are Fridelina Sjahrir, Hafizan Hashim, Hajijul Radin, Hanita Hashim, Krudharshaini Nagapan, Mohd Rafi Mohd Solleh, Noor Asiah Hassan, Noor Halini Baharim, Nor Hasnida Che Md Ghazali, Norakma Mohd Nor, Norazlina Idris, Nurhafizah Ibrahim, Nurul Ashikin Yadri Shah, Rahmad Mohd Taib, Rodiah Mohd Hassan, Sauntaria Subramaniam, Siti Hawa Mohd Yusoff, Tuan Azmar Tuan Daud, Yati Ashikin Abdul Wahab and Zuraini Ayop.

Editorial

The first article was written by Yati Ashikin Abdul Wahab, Noor Asiah Hassan, Hanita Hashim, and Sauntaria Subramaniam entitled Assessing the Effect of Work from Home On Employee Motivation During Covid-19 Movement Control Order. They examined the factor that contribute to employee motivation during movement control order. They concluded that the employee has a high motivation level towards technical support, training support, human resource support and manager's trust. High motivation of the employees towards the factors will lead to high motivation when work from home. The Covid-19 outbreak was declared as a public health emergency worldwide (WHO, 2020) which led the Prime Minister to announce a Movement Control Order (MCO) in Malaysia on March 18, 2020. The objective of this study is to determine the best fit model of employee motivation.

The second article in this special issue is an article that looks at the elements that determine customer satisfaction with Malaysia internet service providers by Hanita Hashim, Hafizan Hashim, Yati Ashikin Abd Wahab, Siti Hawa Mohd Yusoff, and Krudharshaini Nagapan. The article entitled Assessing the Service Quality and Customer Satisfaction Towards Internet Provider Using the SERVQUAL Model. They found that a total of 42.7% of Celcom users stated they were 'satisfied' with the service provided. 33.3% of users indicated they were only 'moderately dissatisfied'. The internet service provider should consistently monitor their internet strength and the quality of the network. In recent years, establishing a network access provider has been a significant endeavour in Malaysia. This research aims to identify the service quality elements that have the most significant impact on customer satisfaction. According to the study findings, customer satisfaction and service quality have a significant correlation.

The third article entitled Exploratory Factor Analysis (EFA) of assessment practice skill among lecturers in Malaysia was written by Noor Asiah Hassan, Nor Hasnida Che Md Ghazali and Rodiah Mohd Hassan. They summarized that different contexts may have varied dimensionality of a single construct. The objective of their study is to use the Exploratory Factor Analysis (EFA) method to adapt the Assessment Practices Inventory Modified (APIM) questionnaire to lecturers in Peninsular Malaysia. The communality of the retained items is between 0.6 - 0.8 which is above the value of acceptance. APIM questionnaire was developed

by Matovu and consists of a 50-item questionnaire scored on a 5-point Likert scale from 0 to 5.

The fourth article was written by Rodiah Mohd Hassan, Noor Asiah Hassan, Norakma Mohd Nor, Norazlina Idris and Nurhafizah Ibrahim entitle Effects of Different Mordanting Techniques on Fabrics Dyed with Coconut Husk Dye and Colour Fastness Properties. Since prehistoric times, natural dyes have been used to colour food substrates, leather, and natural protein fibres such as wool, silk, and cotton. The Na_2CO_3 dye extract had more affinity for lycra than cotton and crepe when meta-mordanted with tannic acid. The effects of NaOH and Na_2CO_3 on dye extraction from coconut husk on cotton, crepe, and lycra fabrics were investigated. It is hoped that natural colourants can be modified to meet the stringent functional characteristics of synthetic dyes. They concluded that the colour strength of all fabrics dyed with Na_2CO_3 and NaOH dye extracts is in the following order: meta-mordanting > post-mordanting > pre-mordanting.

The fifth article entitled Removal of Copper Ion from Aqueous Solution Using Biosorbent Derived from Banana Pseudo Stem was written by Noor Halini Baharim, Fridelina Sjahrir, Rahmad Mohd Taib, Norazlina Idris, Tuan Azmar Tuan Daud, Mohd Rafi Mohd Solleh, Hajjil Radin. Their findings show that the maximum removal efficiency of the adsorption of copper ions from the aqueous solution is 99.97%. Moreover, Copper is known to be one of the most toxic of heavy metals which can spread through living organisms and mostly spread in the environment. This research is attempted to investigate the potential of the banana pseudo stem as a biosorbent for the removal of copper ions from an aqueous solution. The percentage removal of copper ions increased with an increasing initial concentration of the metal.

The sixth or last article revealed that the linear programming approach is one of the best methods for optimization problems. The article entitled a Linear Programming Approach in Profit Maximization for Food Production was written by Nurul Ashikin Yadri Shah and Zuraini Ayop. In their article, Delek Frozen Food company sells a variety of homemade frozen foods such as *karipap*, *apam*, *keria*, *pau* and *cucur badak*. They produced each product due to limited raw materials and demand. The data is modelled by using linear programming approach. Linear programming helps to find an optimal solution such as maximizing profit or minimizing cost. The analysis was performed, and the results revealed that 962 units of a small loaf, 38 units of the big loaf, and 0 units of a giant loaf should be produced in order to make a profit of N20385.