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Analysis of ICT Implementation in Teaching and Learning using Analytic Hierarchy Process (AHP): A Comparison of Rural and Urban Areas in Kedah

ABSTRACT

Nowadays, digital technology has been increasingly ubiquitous, particularly in teaching pedagogy. Digital technology-based teaching has the potential to significantly increase the students' learning outcomes as well as their critical thinking and problem-solving skills. As a result, the Ministry of Education has initiated, supported, and promoted the incorporation of information and communications technology (ICT) into educational policy, as well as infusing classrooms with digital learning tools and resources. The Ministry of Education believes that implementing ICT into teaching and learning processes could assist and improve educational standards. However, due to some barriers, ICT integration in teaching has not yet been effectively adopted in Malaysia's secondary schools. The aim of this study was to analyze and rank the factors that impede the implementation of ICT in urban and rural secondary schools using the analytic hierarchy process (AHP) approach. A t-test analysis is also carried out to determine the significant difference between factors from both urban and rural areas. The finding shows that there is no significant difference between factors from areas. The new mean values have been computed for each factor in order to determine the new ranking for each factor. The workload, lack of accessibility and network connection, and lack of support assistance are the top three factors that impede the ICT adoption in secondary schools in Kedah according to the new mean values obtained. In contrast, a lack of confidence has the least impact factor in this issue, accounting for only 3.5% of the total.

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