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Understanding Critical Success Factors of Cloud Computing Implementation in Higher Education Institutions: Consensus Evaluation in Delphi

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Abstract:
Cloud computing is becoming more apparent in the realm of network technology to ensure the availability and sharing of resources through virtualization. Despite its attractiveness and benefits, the higher education institutions (HEIs) are still hesitant to implement cloud computing services due to insufficient details on issues and priorities in implementing cloud computing services. Therefore, this study aims to evaluate the factors of cloud computing implementation in HEIs, propose the cloud computing implementation model, and encourage the research community to explore more research in cloud computing implementation. By synthesizing the literature from various industries, this study proposes a conceptual model-based cloud computing implementation for HEIs and integrates it into the technological, organizational, and environmental (TOE) framework. The research methodology consists of rigorous data collection and analysis that allows for more substantive conclusions to enable viable CC-LMS operation. The Delphi technique was adapted in the data collection and judgment process. The two-round Delphi survey has been conducted with 18 (1st round) and 13 (2nd round) cloud computing technology and LMS experts from local HEIs and service vendors to assist in the judgment process. This analysis resulted in a consensus after the second round of the Delphi survey with suggestions on the high importance of several factors in implementing a cloud computing system for LMS in HEIs. Finally, the study is expected to provide HEIs decision-makers with a better understanding and guidelines of cloud computing implementation characteristics with the relevant perception of current services.