Service Quality of Information Systems Development: 
Its Impacts on System Success and an Initial Attempt
to Develop a New Measurement Instrument

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ABSTRACT

With the rapid development of information technology, the role of information systems becomes very important and critical within an organization. It has been recognized in past studies that the system development process is an important determinant of system success. This study argues that system development can be treated as a service delivery process and the concept of service quality can be applied to study the impacts of this process on the success of the system being developed. Integrating the Technology Acceptance Model and Seddon’s IS Success Model, system development service quality and information quality are added as antecedents to the TAM to generate the research model for the current study. Through mail survey, data were collected from users of information systems who have been involved in system development. Confirmatory factor analysis and structural path analysis using LISREL were performed to analyze the data collected. The results show that system development service quality has significant direct positive effects on perceived ease of use and information quality, and a significant positive indirect effect on perceived usefulness and user satisfaction. Perceived ease of use and perceived usefulness have significant positive effects on user satisfaction. These results support the extension of the Technology Acceptance Model.

To measure service quality of system development, a scale modified from SERVQUAL, a widely used measurement scale of service quality, for the context of system development (ISDEV-SERVPERF) was developed. Using confirmatory factor analysis, the validity of the scale as a measure of system development service quality is supported, and resulted in a four-dimension scale. These dimensions include reliability, responsiveness, assurance
and empathy. In addition, a new domain-specific scale for measuring system development service quality, ISDEV-STAGE-SQ, was developed in this study. It is a stage-based measurement, which measures the service quality of each stage of the system development. The result also supports its reliability and validity. ISDEV-STAGE-SQ includes the dimensions of professionalism, informativeness, reliability, responsiveness and communication effectiveness.

By conceptualizing system development as a service delivery process, it provides a new theoretical perspective in studying the impacts of system development process. The extension of the Technology Acceptance Model further supports the usefulness of the construct of system development service quality. The extended TAM also provides better understanding of the factors that lead to user satisfaction. Moreover, both measurement scales, ISDEV-SERVPERF and ISDEV-STAGE-SQ, can be used in future study of service quality of system development or as a diagnostic device for practical purpose.
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