

FUZZY MULTI CRITERIA EVALUATION FRAMEWORK FOR E-LEARNING SOFTWARE QUALITY

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ABSTRACT

Quality of software is one of several key factors for successful e-learning implementation. Evaluation of e-learning software is a vital stage in deploying e-learning within an organization and it involves broad view and various perspectives which might be considered as a case of multi criteria decision making (MCDM) problem. Such evaluation based on MCDM perspective still left a gap in recent literature which mostly provide qualitative analysis. This study aims to fill the gap by developing a new methodology to evaluate the quality of e-learning software from both qualitative and quantitative analyses. The study proposes the applicability of ISO 9126 software quality metrics as the basis of evaluation framework. It is then extended with MCDM methodology by combining Analytic Hierarchy Process (AHP) and Fuzzy Set Systems to provide an evaluation framework that capable in tackling inconsistency and vagueness of human judgement during evaluation processes.

Keywords: E-learning software, software quality, ISO 9126, fuzzy set theory, analytic hierarchy process.