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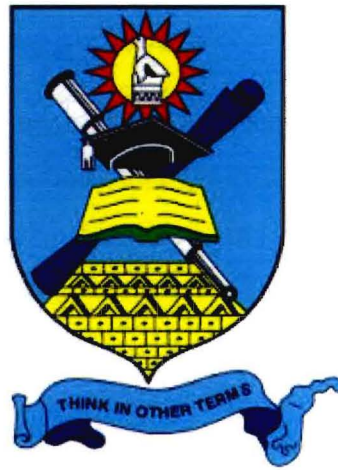
FACULTY OF APPLIED SCIENCES

DEPARTMENT OF COMPUTER SCIENCE

Investigating the adoption of the ISO/IEC 25010 model by software development companies in Zimbabwe

By

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Abstract

With the growing demand for software products, there are worldwide calls for enhancing and assuring quality in software development. Such calls for quality enhancement, self-evaluation, and stakeholders' satisfaction in software development cannot go unheeded in the Zimbabwean context. The aim of this study is to establish the extent to which Zimbabwean software development companies adopt the ISO/IEC 25010 product quality model. To this end, the research questions the product quality characteristics which are addressed by quality models used by software development companies in Zimbabwe; if the product quality characteristics addressed in quality models are the same as those defined by ISO/IEC 25010 standard; and if compliance to adopted quality models by software development companies support delivery of quality as stipulated by those models. In order to achieve this goal, both qualitative (in the form of individual and focus group interviews) and quantitative (through questionnaires) data collection methods were used. The responses received show that software development companies in Zimbabwe are eager to and have benchmarking product quality models they are using besides ISO/IEC 25010 which enable them to design equally good products. To adopt to the ISO/IEC 25010 product quality model, the results propose extending the standard to incorporate new concepts and attributes into a flexible modelling framework, particularly focusing on including information quality, learnability-in-use characteristics, and actual usability and user experience concepts into the framework. On this basis, it is recommended that with regard to future work, national bodies that are members of ISO or IEC, Communications and Product Support Groups, Technical Committees/subcommittees and Working Groups should invite targeted companies to work closely and participate in the field trials to help obtain feedback and validate the approach in order to improve the documents before the standards get published by ISO/IEC.