Towards enhancing graduate employability in Information Technology industry in Sri Lanka: An ontological approach

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Abstract

Skilful graduates are an asset to a country, as the primary supplier for the workforce of the industries. Having an abreast set of industry-required skills implies employability regardless of the nature of the job or the field of employment. In a Sri Lankan context, the demand for graduates has exponentially increased over the past few years, specifically in the field of Software Engineering. The requirement for entry-level jobs depends on the skills possessed by employees. Thereby, the university curricula play a substantial role in the skills of the fresh graduates' skills, accentuating the need to design the university curricula to match the industry requirement. It is identified that the key stakeholders contributing towards this is the employees (who are graduates with a degree related to software engineering), the universities offering degrees in software engineering discipline and the statutory bodies who validate, standardize, and moderate such programs and the software engineering businesses in Sri Lanka. The study will focus on different attributes and relationships of the above stakeholders and detect the gaps in the employability skills provided by the university curricula and the anticipation of the employers through an ontological approach.

Subject Descriptors: I.2.4 Knowledge Representation Formalisms and Methods, I.2.6 Learning, K.3.2 Computer and Information Science Education

Key Words: Information Technology, Ontology, Education, EdTech

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List of Abbreviations

Abbreviation	Meaning
IRQUE	Improving Relevance and Quality of Undergraduate Education
ICT	Information Communication Technology
QEF	Quality Enhancement Fund
IT	Information Technology
CS	Computer Science
RO	Research Objective
RQ	Research Question
OWL	Web Ontology Language
RDF	Resource Description Framework
SLASSCOM	Sri Lanka Association for Software and Services Companies
LO	Learning Outcome
ICTA	Information and Communication Technology Agency of Sri Lanka
UGC	University Grants Commission
CSSL	Computer Society of Sri Lanka
ICTA	Information and Communication Technology Agency of Sri Lanka
FCA	Formal Concept Analysis

Declaration

I declare that this thesis is my own work and has not been submitted in any form for another degree or diploma at any university or other institution of tertiary education. Information derived from the published or unpublished work of others has been acknowledged in the text and a list of references is given.

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Dedication

“To my support system who has endured everything and more to see me succeed in life.”

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