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Model to Cope With Requirements Engineering Issues for Software Development Outsourcing

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Abstract
The anticipated benefits of Software Development Outsourcing (SDO) are not achieved in case of several projects because of the issues that emanate from Requirements Engineering (RE) process. This research work presents a Requirements Engineering Practices (REP) model to cope with the customarily occurring issues of the RE process for SDO. To formulate the model, five workshops have been conducted and Root Cause Analysis has been performed by considering 43 commonly occurring SDO RE process issues, and 147 RE practices to tackle the issues. To discover the root causes for commonly transpiring issues, 5-Whys technique has been employed. The relevant RE practices that can be used to deal with the root causes, have been endorsed by applying Brainstorming technique. For the 43 frequently occurring issues, 89 root causes have been discovered. Afterwards, 124 relevant RE practices have been recommended to eradicate the root causes and hence to address the corresponding issues. Thus, REP model postulates the root causes for commonly occurring issues of the SDO RE process, maps the root causes to the best relevant RE practices to address the corresponding issues. The model has been evaluated by an expert panel and evaluation results have been analysed through Inter-Rater Reliability analysis and Analysis of Means. The REP model supports the RE process for SDO by i). evading the adoption of random and inappropriate RE practices for dealing with the common issues of the process, ii) helping to attain the expected benefits of SDO.

Keywords
Author Keywords: Software; Stakeholders; Requirements engineering; Outsourcing; Cultural differences; Global communication; Standards; Software development outsourcing; requirements engineering issues; requirements engineering practices; global software development; requirements engineering; root cause analysis

Keywords Plus: CHANGE MANAGEMENT; EXPERT PANEL; CHALLENGES; QUALITY; PRIORITIZATION; VALIDATION; MITIGATION; GUIDELINES; AGREEMENT; VENDORS

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