

Study on Theory and Practice in Software Quality Assurance (With Special Reference to Information Technology Professionals in Colombo, Sri Lanka)

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A software product is developed or engineered by a set of professionals, and they support and maintain it over a long period of time. Software Quality Assurance (SQA) plays an imperative role in achieving high quality software. SQA process should be carried out from the inception of the project till its maintenance. This research is expected to study the gap between the theories and practical approaches related to SQA by refereeing to Information Technology (IT) professionals in software firms in Colombo, Sri Lanka. Further, it was aimed to explore the differences in SQA activities performed, and perception of IT professionals related to testing and SQA, while identifying the reasons to have/not to have a separate SQA section. The study was conducted as a descriptive study, and the selected sample size was 40. Major reasons identified for not having the SQA section were, the company being small scale with few projects (47.1%) and to reduce the cost (29.1%). The Activities that are performed by companies with a separate SQA section and without a separate SQA section are far too different. Testing programs and retesting them after correction were most popular among both types. The companies enriched with SQA section performed various other activities apart from testing. A significant proportion of the respondents (50%) were not even aware of the SQA standards, and among them, the largest proportion (82%) did not have a separate SQA section. In considering the perception of the professionals with regard to SQA and testing, there is a significant difference among both groups. Furthermore, largest proportion (39%) of the professionals agreed that more up-to-date knowledge regarding the entire process is required, which can cover all the activities and scenarios, while having the presence of SQA from the very beginning to the end of the project. Finally, having a separate SQA section would greatly benefit the companies, and it will contribute to improve the quality, with enriched set of activities. A gap truly exists in between what is emphasized in theories and the way they have been implemented practically in SQA.

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