

## **Impact of Modern Project Management Methodologies and Software Development Life Cycle Models on Software Quality Assurance Success**

**Akmeemana, A.P.<sup>1</sup> and Wickramasinghe, C.N.<sup>2</sup>**

Virtusa Polaris Pvt Ltd. praveenakmeemana@gmail.com<sup>1</sup>

Department of Commerce & Financial Management,

University of Kelaniya, Sri Lanka. nalakacw1@yahoo.com<sup>2</sup>

### **Abstract**

Modern software companies in Information Technology (IT) Industry are giving high importance to Software Quality Assurance (SQA) since low quality software's will put their reputation on the line. Therefore evaluation of software quality has always been prime importance in software industry. Most organizations don't have a dominant Project Management (PM) method & Software Development Life Cycle (SDLC) models to begin with and find it difficult to decide which PM methodology & which SDLC model would be best for their needs. PM, SDLC and SQA are research topics that have been discussed extensively in the literature over the years. But there were no enough literature to discover the relationship between PM and SDLC influence on SQA projects in IT Industry. Therefore this study will provide much needed literature & outcomes which become valuable literature. The SQA success measuring factors will be finalized after reviewing the literature. The data are being collected from software quality assurance professionals on their last completed project by using the survey instrument and will be analyzed using two way Analysis of Variance (ANOVA) to yield SQA success based on the PM methodologies and SDLC models that are been selected for this study. This study will analyze: which PM methodology and SDLC methodology will have more impact on delivering good quality software & eventually the combination of PM methodologies and SDLC models have more impact on delivering good quality software. Outcomes of this research will provide ideas for SQA projects to select appropriate PM methodology and SDLC model. Ultimately this research will help to reduce large amount of software project failures due to quality and eventually will helps to deliver good quality software to customers.

**Keywords:** *Project Management, Software Development Life Cycle, Software Quality Assurance*