

Abstract

This case study examined the self-directed and team-based learning activities of a software quality assurance organization in central Indiana. The skills required to assure a high level of software quality evolve rapidly and software quality professionals must embrace ongoing technology and process changes. The thirty focus group participants performed a variety of quality assurance tasks including configuration management, research, automated test development, test planning and execution, and team leadership. The case study was based on semi-structured interviews of four focus groups of software quality professionals, and explored the learning styles, preferences, and activities deployed to learn new technologies and solve complex software problems.

Software products are becoming increasingly pervasive in our culture. The study of continuing education for the software quality profession is important due to our increased reliance on this profession to meet customer expectations for high-quality software products. The proliferation of software products in our culture has also increased the demand for software quality professionals. Those professionals who have access to continuing professional education to improve and maintain skills have the opportunity to meet customer expectations. There is no mandated certification or licensing for this profession therefore professionals are left to chart their own course of learning. This study sought to understand how these software quality professionals meet their continuing professional educational needs. As well, the study identified key resources required to support such continuing professional education both within the workplace and off the job.

Future study of the role of critical self-reflection in establishing learning objectives could enhance our understanding of how software quality professionals identify and plan their learning activities. Further investigation of the value of computer programming and logic knowledge to the software quality professional would benefit our understanding of baseline skill requirements for the various roles performed in the profession. There are also opportunities to engage in future action research projects on co-location of teams, mentoring, and job rotation strategies, as employees were found to learn effectively from peers.

