Abstract

Inspection is a proven approach that is commonly used to manage software quality. To this end many inspection techniques such as Checklist-Based Reading (CBR), Perspective-Based Reading (PBR), Usage-Based Reading (UBR), and Defect-Based Reading (DBR) have been proposed in the literature. Unfortunately, plethora of empirical studies carried out to evaluate these reading techniques have produced inconsistent and conflicting results. Consequently, ad hoc reading and CBR still remain the standard reading techniques in software organizations. This paper investigates the performance of ad hoc and CBR techniques in a traditional paper-based environment. Seventeen undergraduate students of computer science majority of whom are in their final year were used as subjects in a controlled experiment. Results of the experiment indicate that CBR is significantly superior to ad hoc reading in terms of effectiveness, efficiency, effort, and number of false positives. On the average, 4 faults were detected in 69 minutes using ad hoc reading while 11 faults were detected in 42.5 minutes using Checklist-based reading. Also the average number of false positive is about 3.13 in checklist-based approach as against about 6.44 in ad hoc approach.
On Empirical Comparison of Checklist-based Reading and Adhoc Reading for Code Inspection


Index Terms
Keywords

Checklist-Based Reading  Ad hoc Reading  Inspection Techniques  Code Inspection