

Use of Non-IT Testers in Software Development

Vineta Arnicane

University of Latvia, Raina blvd. 19, Riga, Latvia
vineta.arnicane@lu.lv

Abstract. Because of a shortage of IT specialists, many companies which are not involved in software development business are forced to use employees who have minimal or no any knowledge about software development and IT as testers (let's call them non-IT testers). The author of this paper has used years of experience in working with such testers to provide a description of them, looking also at their most typical testing styles and the problems which occur for testers, their colleagues and bosses, and the overall software development processes. Non-IT testers often feel like second-class employees, because they are forced to work in an environment in which they do not have sufficient skills. This paper reviews issues which should be taken into account when training these testers, including the question of what exactly they should be taught. Examples and conclusions are used to provide advice on the more effective use of non-IT testers to achieve positive results.

Keywords: Software testing, testing process improvement, tester training.

1 Introduction

In recent years, greater and greater attention in the world of software development has been devoted to testing. At higher education institutions, testing-related training has not attracted sufficient focus, however. Software design companies usually try to deal with the issue of training testers on their own. Various educational programs have been designed by software development companies. Alternatively, training services are offered by specialized organizations or companies.

Companies at which software design is not the basic area of operations (non-IT companies) lack professional testers. Often they lack well-qualified IT specialists as such. Many companies hold on to the myth which says that testing is easy and uncomplicated, that it can be handled by any employee [1]. Even software development companies sometimes use beginners in the field as testers.

Non-IT companies often bring in non-IT testers - people who know nothing about testing and, in some cases, nothing about IT as such or their knowledge is very weak. However often they come from ranks of users and domain experts [2, 3]. Non-IT testers are trying self-educate in testing, but it is very hard issue to them because there are very few sources of information suitable for them. Most of literature requires some IT background for reader.

When testing does not yield the expected results, companies find themselves ready to pay for the training of these individuals in the field of testing.

This article is based on the author's more than 10 years of experience in various jobs in the industry. She has worked with non-IT testers and dealt with their training. This paper reviews the most important observations and conclusions vis-à-vis issues such as things which non-IT testers understand intuitively and without training, the things about testing which they must be taught, the testing methods which they are able to comprehend and apply, and the way in which non-IT testers should be managed.

The author of the paper has conducted several training sessions for non-IT testers, both informally and individually, and by developing training courses and teaching specialized lessons for client organizations (the most detailed course involved 6 working days of study).

Section 2 of this paper characterizes non-IT testers, their advantages and disadvantages. Section 3 shows the testing style of non-IT testers if they are not trained in testing. Section 4 describes some lessons learned about training of non-IT testers. Section 5 deals about some managing aspects of non-IT testers. Section 6 presents results of case studies and Section 7 summarizes conclusions and suggests future work.

2 Non-IT Testers

People who are used as testers by companies can have different levels of knowledge in the area of IT and testing, as well as in the area of the relevant company's business. Companies lack professional testers, and it is hard to find people with good IT skills to work as testers [4] – even if they have little or no knowledge about the software development process as such. This means that companies are forced to turn to people who know about the company's business but have weak or no knowledge about testing or IT as such.

Non-IT people engage in testing on the basis of various circumstances. Sometimes they are given full-time jobs at company IT departments as testers. Other times testing is just a part of a broader set of duties.

The advantage of non-IT people is that they can have in-depth knowledge about the area of business for which IT software is being designed [3]. Such employees often have years of experience in the relevant area, but they have little knowledge about the technologies that are used in system development and the architecture of the resulting system. They don't know much about testing methods and they may have difficulties in preparing of good reports on problems that have been identified.

Deep knowledge about a company's business allows non-IT testers to do good work at the highest level of testing, where functional testing or usability testing must be conducted – acceptance testing and system testing. If the non-IT tester has to do low-level testing such as unit testing or low-level integration testing, however, serious problems may very well occur. It would be equally complicated for that person to make use of specific testing techniques such as performance testing. In regression testing it is hard for them to analyse which areas of the system are functionally linked to software improvements or additions and to test those areas.