Challenges of Mobile Application Testing in Small Scale Software Industries of Pakistan

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01-244151-037

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ABSTRACT

The growth of software industry in Pakistan is very impressive from the past decade. However, to sustain this growth and to deliver high quality software, software development organizations need to follow rigorous quality assurance practices. The primary purpose of this research is to assess the current quality assurance practices in the Pakistani software industry and to try find out the solution. The most important, software testing phase, is usually compromised by the lack of resources and planning in software development industries. This may risk the quality of the derived products. Another dimension to contention is that we have research and development for larger setups and for more matured software development practices. The main growth is in the small and medium sector enterprises where software testing is carried out as an ad-hoc or an add-on activity. Existing TMMi, is hard to use by most small software development organizations in Pakistan. Moreover, some companies do not have their own teams in charge of testing. To solve this issue, we proposed a simplified test maturity model for small Scale software development organizations in local environment. To overcome the issues, we have proposed a lighter version for Small Scale enterprises, by conducting three surveys on different times, first was conducted to find out the current position of software enterprises and to extract the small-scale companies. Then the main survey of this research was conducted, through an online research tool (Google forms), to check the knowledge of these Small-Scale Enterprises about TMMi and to find out which key practice areas may be useful for such companies. Then, a model was proposed and given to different companies to check how useful it is, by conducting a third survey.

DEDICATION

I dedicate my thesis to my father, who always supported me and encouraged me to work hard. My mother, without her support it was not possible for me to even think of starting my degree, who sacrificed her desires to look after my kids.

My dear husband, with his trust and support it couldn't have been done. After that my respected teachers for making me able to do so.

To my family for their love and support

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TABLE OF CONTENTS

COPYRIGHT STATEMENT ..... **i**
Approval Sheet ..... **ii**
Certificate of Originality ..... **iii**
ABSTRACT ..... **iv**
DEDICATION ..... **v**
ACKNOWLEDGMENTS ..... **vi**
LIST OF FIGURES ..... **xi**
LIST OF TABLES ..... **xiii**
1. INTRODUCTION **1**
1.1 Motivation 1
1.2 Problem Statement 2
1.3 Objectives 2
1.4 Research Process 2
1.5 Structure of a Thesis 3
2. BACKGROUND **5**
2.1 Quality 5
2.1.1 Components of Quality 5
2.2 Software quality 6
2.3 Software testing 6
2.3.1 Mobile application testing & desktop testing 7
2.3.2 Types of testing 8
2.3.2.1 Unit Testing 8
2.3.2.2 Integration Testing 8
2.3.2.3 System Testing 8
2.3.2.4 Regression Testing 8
2.3.2.5 Stress Testing 8
2.3.2.6 Performance Testing 8
2.3.2.7 Black-box Testing 8
2.3.2.8 White-box Testing 9
2.3.2.9 Grey-box testing 9

2.3.2.10 GUI Testing 9
2.3.2.11 Compatibility Testing 9
2.3.2.12 Security Testing 9
2.3.2.13 Penetration testing 9
2.4 Testing levels 10
2.4.1 Test Case & Test Plans 11
2.4.1.1 Test Plan 11
2.4.1.2 Test Case 11
2.4.2 Software test process 11
2.5 Test process improvement methods 12
2.5.1 TMMi 13
2.5.2 CMMi v/s TMMi: 13
2.6 Software testing and SDLC 13
2.7 Small Scale Enterprises 15
2.8 Summary 16
3. LITERATURE REVIEW 17
3.1 Testing in small scale enterprises 18
3.2 Problems identified in the literature 19
3.3 Solution to the identified problems 21
3.4 Successful testing factors 22
3.4.1 Test Training 22
3.4.2 Test Planning 22
3.4.3 Test Case Definition 22
3.4.4 Test Selection Method 23
3.4.5 Test Automation 23
3.4.6 Test Policy 23
3.4.7 When to Start Testing 23
3.4.8 Time Required for Testing 24
3.4.9 Test Case Selection and Prioritization 24
3.4.10 Test Documentation 24
3.4.11 Test Tracking and Recording 25
3.5 Summary 25
4. RESEARCH DESIGN AND MODELS 26
4.1 Research methodology 26

4.2 Survey....26
4.3 Questionnaire....27
4.4 Summary....30
5. RESULTS AND ANALYSIS....30
5.1 Survey-1 analyses....30
5.1.1 Enterprise & Respondent Demographics....30
5.1.2 Current Testing Process....33
5.2 Survey-2 Analysis....33
5.2.1 TMMi Level-2....34
5.2.1.1 Test planning....34
5.2.1.2 Test monitoring and control....37
5.2.1.3 Test environment....38
5.2.1.4 Test design and execution....39
5.2.1.5 Test policy and strategy....40
5.2.1.6 Proposed practice areas for level-2....42
5.2.2 TMMi Level-3....43
5.2.2.1 Test Training....43
5.2.2.2 Test integration and lifecycle....44
5.2.2.3 Peer Review....46
5.2.2.4 Non-functional testing....47
5.2.2.5 Test organization....48
5.2.2.6 Proposed practice areas for level-3....50
5.2.2.7 Proposed Light-weight TMMi version....51
5.2.3 Survey-3 results....51
5.3 Light weight version of TMMi....54
5.5 Summary....56
6. CONCLUSION AND FUTURE WORK....56
REFERENCES....58
1. Appendix-A MANUAL TMMi....65
1.1 Test planning....65
1.1.1 Test approach....65
1.1.1.1 Identify features to be tested....65
1.1.1.2 Define test approach....65
1.1.1.3 Define entry criterion....66

1.1.1.4 Define exit criterion 66
1.2 Test estimates 67
1.2.1 Estimate test effort, cost and labour 67
1.2.2 Establish work breakdown structure 67
1.3 Develop test plan 67
1.3.1 Establish test schedule 67
1.3.2 Stakeholder's involvement 68
1.3.3 Test project risks 68
1.3.4 Establish test plan 68
1.3.5 Review test plan 69
1.4 Test design and execution 69
1.4.1 Test design techniques 69
1.4.1.1 Prioritize test conditions 69
1.4.1.2 Prioritize test cases 70
1.4.1.3 Identify test data 70
1.5 Test implementation 71
1.5.1 Develop and prioritize test procedures 71
1.5.2 Schedule test execution 71
1.6 Test execution 71
1.6.1 Execute test cases 71
1.6.2 Write test log 71
1. Test training program 72
1.1 Establish an Organizational Test Training 72
1.1.1 Identify the strategic test training needs 72
1.1.2 Establish an organizational test training plan 72
1.1.3 Provide Test Training 73
1.1.3.1 Deliver test training 73
1.1.3.2 Establish test training records 73
1.1.3.3 Assess test training effectiveness 73
1.2 Test lifecycle and integration 73
1.2.1 Establish Organizational Test Process Assets 73
2. Appendix-B QUESTIONNAIRE-2 79

LIST OF FIGURES

Figure 1.1 Research Process 3
Figure 1.2 Structure of a Thesis 3
Figure 2.1 levels of testing[34] 10
Figure 2.2 generic testing process[26] 12
Figure 2.3 TMMi Model[18] 14
Figure 2.4 V-Model[13] 15
Figure 2.5 W-Model[14] 15
Figure 4.1 Research methodology 26
Figure.5.1 employee details 31
Figure.5.2 type of certifications and development 32
Figure 5.3 experience of testers 32
Figure 5.4 current testing process 33
Figure 5.5Testing basics 34
Figure 5.6 time in days to complete a project 35
Figure 5.7 when is testing started 35
Figure 5.8 when you know it is sufficiently tested? 36
Figure 5.9 Who creates test plan? 36
Figure 5.10 test-plan details 37
Figure 5.11 test process monitor 38
Figure 5.12 test environment 39
Figure 5.13 Test design and execution 40
Figure 5.14 test plans 41
Figure 5.15 testing & debugging 42
Figure 5.16 test plan documentation 42
Figure 5.17 testing trainings 44
Figure 5.18 Technical training programs 44
Figure 5.19 Assets for testing 45
Figure 5.20 Integrating testing to SDLC 45

Figure 5.21 Reviews 46
Figure 5.22 when are reviews taken? 46
Figure 5.23 test cases stored or not for regression testing 47
Figure 5.24 Non-functional testing performed 48
Figure 5.25 test organization 49
Figure 5.26 control & monitored testing process 49
Figure 5.27 light weight TMMi 51
Figure 5.28 effect on time, cost, labor 53
Figure 5.29 effect on quality 54

LIST OF ACRONYMS

SDLC	Software Development Life Cycle
ISO	International standard organization
SSEs	Small Software Enterprises
SME	Small & Medium Scale Enterprise
SDM	Software Development Model
STP	Software Testing Process
SDD	Software Design Document
SRS	Software Requirements Specification
TMMi	Test maturity Model Integration
CMMi	Capability maturity model
ISTQB	International Software Testing Qualification Board

LIST OF TABLES

Table 2.1 CMMi v/s TMMi 13
Table 3.1 Problems identified in literature 20
Table 4.1 Questionnaire Summary S1 27
Table 4.2 Questionnaire summary S2 28
Table 4.3 Questionnaire summery S3 29
Table 5.1 Proposed areas for level 2 43
Table 5.2 Level-3 50
Table 5.3 Survey 3 Results 52
Table 5.4 Light weight TMMi 55