Impact of Developer Experience in the outcome of Software Projects

Anders Nylund

School of Science

Thesis submitted for examination for the degree of Master of Science in Technology.

Espoo TBA

Supervisor

Prof. Pirjo Professor

Advisor

Dr Alan Advisor



Copyright © 2019 Anders Nylund



Aalto University, P.O. BOX 11000, 00076 AALTO www.aalto.fi Abstract of the master's thesis

Author Angers nyigh	ithor ${ m Anders} \; { m N}^{3}$	vlunc
---------------------	-----------------------------------	-------

Title Impact of Developer Experience in the outcome of Software Projects

Degree programme Computer, Communication and Information Sciences

Major Software and Service Engineering

Code of major SCI3043

Supervisor Prof. Pirjo Professor

Advisor Dr Alan Advisor

Date TBA Number of pages 14 Language English

Abstract

Your abstract in English. Keep the abstract short. The abstract explains your research topic, the methods you have used, and the results you obtained.

The abstract text of this thesis is written on the readable abstract page as well as into the pdf file's metadata via the \thesisabstract macro (see above). Write here the text that goes onto the readable abstract page. You can have special characters, linebreaks, and paragraphs here. Otherwise, this abstract text must be identical to the metadata abstract text.

If your abstract does not contain special characters and it does not require paragraphs, you may take advantage of the abstracttext macro (see the comment below).

Keywords Developer Experience, Software Projects



Aalto-universitetet, PB 11000, 00076 AALTO www.aalto.fi Sammandrag av diplomarbetet

Författare Anders Nylun	d			
Titel Impact of Developer Experience in the outcome of Software Projects				
	nputer, Communication an	v		
Huvudämne Software an	d Service Engineering	Huvudämnets kod SCI3043		
Övervakare Prof. Pirjo Professori				
Handledare TkD Alan Advisor				
Datum TBA	Sidantal 14	Språk Engelska		

Sammandrag

Sammandrag på svenska. Try to keep the abstract short. Abstract explains your research topic, the methods you have used, and the results you obtained.

Nyckelord Nyckelord på svenska, temperatur

Preface

I want to thank Professor Pirjo Professori and my instructor Dr Alan Advisor for their good and poor guidance.

Otaniemi, Date to te announced

Anders Nylund

Contents

A	bstract	3			
A	Abstract (in Swedish) Preface Contents				
Pı					
C					
\mathbf{T}	hesis dictionary	7			
1	Introduction1.1 Motivation1.2 Research questions and problem1.3 Scope and focus1.4 Structure of the thesis	8 8 8 8			
2	Background and literature review	9			
3	Research material and methods	10			
4	Results 4.1 Validity of results	11 11			
5	Summary	12			
6	Conclusions	13			
\mathbf{R}	eferences	14			

Thesis dictionary

DX Developer Experience UX User Experience

1 Introduction

1.1 Motivation

Developers in software projects are in a crucial role when considering the success of software projects.

The same way as User Experience (UX) is considering the user of a system or tool, Developer Experience (DX) can be seen as the experience that developers have as users of a system. Here the system however includes the tools, frameworks, processes that the developer is the user of when developing software.

Developer experience has not been studied that much previously. There has been a doctoral thesis published about the topic recently [1]. In this thesis

DX has been studied previously, but is still lacking the focus

Currently a quick search for Developer Experience on google gives as a result mostly articles on how framework and library authors should consider their users (developers) experience with using the product (tool, library, framework). However, DX is something more and includes also the feelings and perceptions of the developers. In [2]

1.2 Research questions and problem

The research problem is finding out *How the developer experience in software projects* can affect the outcome.

Table 1: The research questions

- **RQ 1** How is Developer Experience defined in software projects?
- **RQ 2** What aspects of Developer Experience are currently being considered in software projects? What aspects of Developer Experience do developers see as valuable?
- **RQ 3** Can the results of software projects be improved by investing in a better developer experience?

1.3 Scope and focus

1.4 Structure of the thesis

1. Background and literature review

2 Background and literature review

This section includes the background and literature review of the topic. The background of the topic should be covered equally from all points of view.

3 Research material and methods

What material will be used in the reserarch and what methods/methodologies will be used to study the problem. What kind of approach to research will be used in the thesis.

4 Results

Answer the research questions and problem.

4.1 Validity of results

Tässä osassa on syytä myös arvioida tutkimustulosten luotettavuutta. Jos tutkimustulosten merkitystä arvioidaan »Tarkastelu»-osassa, voi luotettavuuden arviointi olla myös siellä.

5 Summary

6 Conclusions

References

- [1] F. Fagerholm. Software Developer Experience: Case Studies in Lean-Agile and Open Source Environments. PhD thesis, 2015.
- [2] F. Fagerholm and J. Münch. Developer experience: Concept and definition. CoRR, abs/1312.1452, 2013.