Mobile Technology in Training Micro Businesses: Users’ Requirements and Architectural Design

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ABSTRACT

This paper establishes users’ requirements and develops architectural design for mobile training platform between Micro Finance Institutions (MFIs) and Micro Businesses (MBs). Users’ requirements and architectural design for mobile training platform will set a base for the development of application mobile technology in training MBs. This finding responds to the existing challenges facing trainings Micro business vendors which are learning coverage and ubiquitouness, caused by physical contact as model of deliverance. Subsequently this study create base for development of mobile training application for MFIs and MBs. The study was conducted through literature review, in-depth interview, focused groups, observation and tasks analysis. User requirement and architecture design was established and presented to match specifications, characteristics and working environment of both MBs and MFIs.

KEYWORDS

Micro Businesses, Micro Finance Institutions, Mobile Technology, Mobile Training, Users’ Requirement

1. INTRODUCTION

Micro Businesses (MBs) characterised by having small capital, informal business and low level of education. Due to MBs characteristics, Micro Finance Institutions (MFIs) offer loans and training to MBs (Rusdy, 2007) through seminars and workshops. However, training offered to MBs, is inadequate in terms of coverage and continuity due to model of deliverance (Gomera & Mikko, 2015) which is physical contact.

On the other hand, mobile training context has been characterised by learners’ mobility, possibility of having localized data and information, large amount of data be collected during a learning session, affordances provided by technology and social dynamics (Fulantelli, Taidi, & Arrigo, 2015; Fotiadis & Sigala, 2015; Yi-Sheng, Yongfu, & Cheng, 2010). Therefore, application of mobile technology can assist MFIs to offer, and MBs receive training any time at any place. Furthermore, mobile training is viable because of the availability of internet and ownership of mobile phone by MBs (Fotiadis & Sigala, 2015; Buabeng-Andoh & Yidana, 2014). Also has supported learning experiences both formal and informal context, whereby, trainees can access personalized training materials and develop learning activities such as exploring, investigating, discussing etc. (Fulantelli et al., 2015; Hardaker, Dockery, & Sabki, 2007; Reis, Escudeiro, & Escudeiro, 2012; Xhevrie, 2015).

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Number of mobile training researches and systems has been applied in different level of education (S’anchez, Miguel’anez, & Garcia, 2013; Marzouki, Idrissi, & Bennani, 2013; Chang, Chen, & Hsu, 2011; Villier & Harpur, 2013; Scholtz & Kapeso, 2014), however, current research have not covered all classes as it leaves out the lower class of people. There is a clear gap that small to micro firms’ workers or owners are currently being socially excluded from technological style of learning through lack of personalized training styles support in work – based training practice.

Micro Businesses need a platform that offer training basing on their education level, practical oriented (coaching), simplified and understandable structure. Furthermore, mobile training to MBs has to be designed with consideration of mobile devices size and characteristics of both MBs and MFIs and their specific needs.

However to the best of our knowledge there are limited studies in Tanzania that specifying specific requirements of MBs in connection with mobile technology. Therefore, this study focuses on determine users requirements and architectural design of the mobile training application to MBs. The users’ requirements and architectural design considered relevant characteristics and working environment/experience of MFIs and MBs.

A. Mobile Technology in Training

Due to the increase of mobile technology the multimedia can be delivered through mobile devices and hence giving chance learning process to reach anywhere, anytime to any age (Karlene & Daniel, 2015; Yang, 2007), however the study design a tailor-made to fit a specific requirement of MFIs and MBs.

Informal training strategies are rather casual and incidental and naturally from experience, also MBs have difficulties to find full range of the trainings available (Maule, 1998; Birdthistle, 2006; Oyibo & Hemada, 2013). Moreover, mobile training to MBs needs an appropriate framework because of the distinguishing characteristics of MBs. Therefore this study, as one of the steps in Design Science Research (DSR) aim to solve current challenges facing training process to MBs, establish users requirements and an architectural design that fits MFIs requirements and MBs needs, characteristics, and size of device to be used.

B. Characteristics of Micro Business

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<th>S/No.</th>
<th>Characteristics of MB</th>
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<tr>
<td>1.</td>
<td>Owners have weak business management Skills (Ferrer, Hodges, &amp; Bonnardel, 2013).</td>
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<td>2</td>
<td>Lack of time and time management capabilities to balance between business and training (Gomera &amp; Mikko, 2015; Zbick, Nake, Jansen, &amp; Milrad, 2015).</td>
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<td>3</td>
<td>Businesses development depends much on knowledge, skills and attributes of owners (Zbick et al., 2015).</td>
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<td>4.</td>
<td>They are not able to conduct research and development activities to exploit available technological opportunities (Ferrer et al., 2013).</td>
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<td>5</td>
<td>Most of them have low Education level (Yusri, Goodwin &amp; Mooney, 2015).</td>
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