

**CONTEXT AWARE ADAPTIVE MOBILE
LEARNING FRAMEWORK FOR BOTTOM OF
PYRAMID (BOP) PEOPLE**

By

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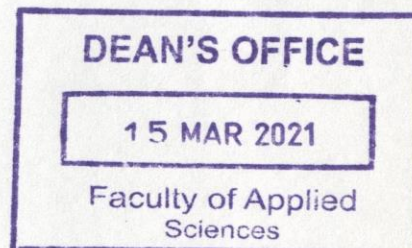
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ABSTRACT

When a learner is truly interested in learning, they learn faster, participate actively, and pull knowledge. Unlike school education, adult learning mostly occurs with the initiation of the adult learner, who then pulls the relevant knowledge. Vocational education is the master key that opens the door to the economic and social development of a country and it provides an opportunity for Bottom of Pyramid (BOP) people to acquire a sustainable livelihood. Due to the many difficulties and commitments in their lives, BOP people do not engage in continuous learning processes. Although there are many adaptive mobile learning systems available, there is no proper mechanism to achieve sustainable livelihood of BOP people through vocational education that is tightly coupled with their lifestyle and that can motivate them to participate in learning activities.

The context-aware adaptive mobile learning framework (CAMLf) is an attempt to push vocational knowledge for Bottom of Pyramid (BOP) people, who are not yet ready to pull knowledge. This research was carried out to deliver highly personalized content to BOP communities while motivating them towards the learning process. We tried to couple the learning process with their lifestyle factors. These lifestyle factors were given higher priority in the selection of personalization attributes.

In this thesis, we present a system that guides BOP people in their vocations through adaptive content delivery mechanisms using mobile technology, considering vocational and motivational factors to educate the user in a transparent and non-resistive manner. Social science based models are integrated into the system to carry out adaptive delivery of content based on the end user learning behavior, vocational, social and psychological factors. We further present: mobile learning content design, concept design, system architecture, adaptivity components, system implementation and evaluation of the system.

The proposed framework was implemented and tested for a farming community and overall, showed very promising results. The results reveal that the BOP community who participated in our study expressed a strong willingness to obtain more of the content which is offered through this framework, and have high demand for it. We could see a strong difference between the results of our preliminary study and post-test study. Through our system, we could make a positive change in the attitudes of the BOP community. At the preliminary study, forty two percent (42%) of the farmers preferred learning new things but at the post test study, eighty two percent (82%) of farmers understood that they have a knowledge requirement. The main and most positive result of our research was observed in the change of this particular attitude.

The BOP community believes that the content sent via this system was helpful for a better harvest. At the initial phase, we pushed the content and at the end it seemed that the learners tried to gradually pull the content. They posed queries, requested more content etc. This change leads to a better vocational education environment and opens the door for the economic and social development of a country.

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