# Adult Learners' Perception of Mobile Learning Image Analysis

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## 1. Introduction

The development of handheld devices and mobile networks impact on mobile learning and learning effects with smart phones and applications in education at the national and international institutions is interested rapidly. However, there is lack of information of images and acceptance of mobile learning by adult learners for conducting the mobile learning program.

Therefore, in the study, the image of the mobile learning was analyzed based on the ability and age of adult learner with the semantic differential method of Osgood

## 2. Literature Review

### 2.1. Mobile learning

Mobile learning is started from the concept of attempting to take advantage of the emergence of mobile technology. Mobile learning environment is gotten attentions as being able to change the type of education such as individual learning styles, collaborative learning or general learning environment[1].

Mobile learning should be understood as a learning process through the collaborative conversation with a variety of personalization interactive technologies in social and cultural context rather than its mobility[2].

### 2.2. The Semantic Differential method of Osgood

Osgood proposed the semantic differential method which is a type of a rating scale designed to measure the connotative meaning of objects, events, and concepts. The connotations are used to derive the attitude towards the given object, event or concept Osgood[3].

## 3. Research Method

### 3.1. Participants

This study was conducted from July 1st to 20th, 2013 by online survey. Participants were 100 people who are working at Human Resources Development Center. Male and female ratio were 35% and 65% of participants. The age structure was 54% of under 30 years and 46% of more than 40 years old.

### 3.2. Instruments

Research survey was composed 30 questions of action images on mobile learning(evaluation factor, potency factor and activity factor), 8 questions of personal information and using smart phones, 8 questions of the perception of the learning usefulness and 4 questions of mobile learning participation intentions. The factor analysis of principle component analysis for the validity of factorial validity was conducted with a varimax rotation method. 2 sub-factors have 26 items (16 evaluations, 10 capacities) and the overall explanatory power was 74.38%. Cronbach's alpha was .975.

## 4. Results

The results of evaluation of the image was positive respectively (evaluation image of mobile learning: M = 1.73, SD = .763; and capacity image of mobile learning: M = 2.03, SD = .79). A convenient, necessary, valuable, interest and useful were answered by participants as items of the most positive images of evaluation images.
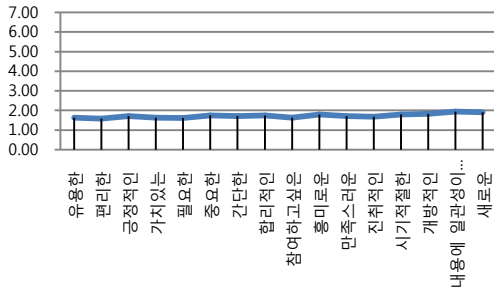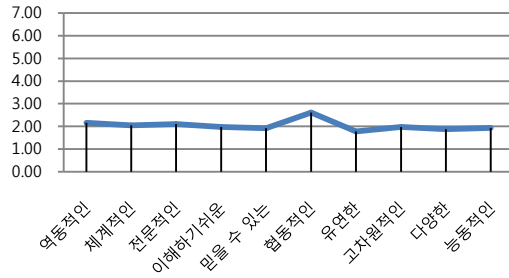
Fig 1. Evaluation image of mobile learning



Fig 2. Capacity image of mobile learning

The image of mobile learning showed statistically significant correlation between the attitudes and participation of mobile learning (evaluation image: R= -.64, P<.01, ability image: R= -.58, P<.01).

[Tabel 1] A correlation coefficient table between attitudes and mobile learning evaluation image

|  | usability | usefulness | evaluation image | competency image |
|---|---|---|---|---|
| usability | 1 | .82** (.00) | 0.04 (.71) | 0.01 (.90) |
| usefulness |  | 1 | 0.04 (.68) | 0.02 (.85) |
| participant intentions |  |  | -.644** (.00) | -.575** (.00) |
| evaluation image |  |  | 1 | .827** |
| competency image |  |  |  | 1 |

Images of Mobile learning and Depending on the nature of individual learner – such as the subject's age, experience of mobile learning, experience of using mobile devices were not different. However, differences of learning image depending on learners' ability of Smartphone. There was statistically significant correlation between ability of Smartphone and evaluation image of mobile learning (R = - .229, P <0.05). Also, there was statistically significant correlation between ability of Smartphone and capacity image of mobile learning (R = - .229, P <0.05).

## 5. Conclusion

Images of Mobile learning and the subject's age, experience of mobile learning, experience of using mobile devices were expected to have significant differences. However, there were not differences between each age groups and also experience of mobile learning and experience of using mobile devices. Therefore, each age does not affect mobile learning image.

Finally, positive image of Mobile learning showed highly correlated to the ease, usefulness and participation of mobile learning. Therefore, various ways of enhancing the promotion and guidance are required before providing mobile learning.

## 6. References

[1] Alley, M.(2009). Mobile learning: Transforming the delivery of education and training. Canada, Athabasca University Press.
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[3] Osgood, C. E. (1957). The measurement of meaning (No. 47). University of Illinois press. 9th edition.