A Study of Factors Affecting the Intention of Usage in MOOC

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Abstract. Massive Open Online Course(MOOC) is recently being spread worldwide around the U.S.A, and contrary to existing online lectures, it is a type of lecture allowing the communication between the instructor and each student. With the expansion of MOOC system use, this study aimed to investigate what factors make the people needing to be educated use a MOOC. For this aim, this study set a research model which on the basis of TAM(Technology Acceptance Mechanism) and empirically analyzed the model and identified the relationships among influential factors.

Keywords: MOOC, TAM, Empirical Analysis, Factor Analysis

1 Introduction

MOOC(Massive Open Online Course) means the evolved system of existing online course in enabling for student to form study groups, make discussions, ask questions and answers, take a quiz, and submit tasks while taking an online course. This study intended to empirically analyze the factors affecting consumer’s intention to use domestic MOOC services. It is expected that the results of this study will provide some useful information to MOOC service providers.

2 Theoretical Background and Previous Studies

The number of provided MOOC lectures is currently the most in the U.S.A, and as representative online sites, there are the edX, the Coursera, and the Udacity. If an
innovation is already being used on the basis of Roger’s Innovation Diffusion Theory (2003), it will be appeared a tendency that individuals can easily accept the innovation. It is the Popularity, a relevant factor of MOOC [1].

The Ubiquity as a relevant factor of MOOC means the ability of MOOC enabling learners to take an online lecture anywhere, anytime. The Pervasive Connectivity means the ability of MOOC to provide wanting contents and information to its users anywhere and anytime through the users’ mobile devices [2].

The Interactivity is defined as the perception degree about bilateral communication, control level, user’s activity, sense of presence and time sensitivity [3].

The Reputation, a factor of MOOC, means the perception degree in relation to the service provider’s service provision to users and the user’s evaluation on the provision [4].

3 Research Model and Hypotheses Setting

![Research Model](image)

Fig. 1. Research Model

H1: The Popularity will affect the Perceived Ease of Use.
H2: The Popularity will affect the Perceived Usefulness.
H3: The Openness will affect the Perceived Ease of Use.
H4: The Openness will affect the Perceived Usefulness.
H5: The Ubiquity will affect the Perceived Ease of Use.
H6: The Ubiquity will affect the Perceived Usefulness.
H7: The Interactivity will affect the Perceived Ease of Use.
H8: The Interactivity will affect the Perceived Usefulness.
H9: The Reputation will affect the Perceived Ease of Use.
H10: The Reputation will affect the Perceived Usefulness.
H11: The Information Richness will affect the Perceived Ease of Use.
H12: The Information Richness will affect the Perceived Usefulness.
H13: The Perceived Ease of Use will affect the Perceived Use Intention.
H14: The Perceived Use of Use will affect the Perceived Use Intention.
H15: The Perceived Usefulness will affect the Perceived Use Intention.
4 Empirical Analysis

As the sample for this study, 309 copies of survey were used and the survey contents. $\chi^2$ value was output as 1.911, and the Comparison Fit Index (CFI) and Goodness of Fit Index (GFI) were output to 0.945 and over 0.870, respectively. And the other values in goodness of fit index were generally output to satisfactory ones like the Adjusted Goodness of Fit Index (AGFI) of 0.834, the RMSEA of 0.073, and the TLI of 0.934.

The largest value in the correlation coefficients among potential variables was found in the correlation coefficient between the INT and the INFO as 0.738, and the determination coefficient was 0.545 ($0.738^2$). Therefore, it could say that the results got some partial discriminant validity.

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<th>Table 1. Evaluation on Validation by Template</th>
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<td>0.551</td>
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As the results of this study got satisfactory values of over 0.7 and 0.5 in the Concept Reliability (CR) and the Average Variance Extracted (AVE), so it could say that the research model of this study secured the concept reliability.

<table>
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<th>Table 2. Hypotheses Test Results</th>
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<tr>
<td>Research Hypothesis</td>
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The Table 2 listed the results verifying the above hypotheses. From the Table 2, it came to know that hypotheses of H3, H4, H6 and H7 were refused and the other hypotheses were accepted.

5 Conclusion and Implications

The analyzed results of this study are as follows. First, it is expected that uses being familiar with the Internet use and online class will contribute in expanding the popularity of MOOC in future. Second, it was found that the Openness of MOOC did not affect the Perceived Usefulness and the Perceived Ease of Use. Third, with its use convenience, the MOOC affects some positive influence on the Ease of Use, but does not affect the Ease of Usefulness. Therefore, domestic MOOC programs are judged to be familiar with existing online learning programs. Fourth, the Interactivity affected the Perceived Usefulness, but did not affect the Perceived Ease of Use. Fifth, a MOOC’s reputation at home affects its perceived usefulness and perceived ease of use. Sixth, the information richness affects positive influence on the perceived ease of use and the perceived usefulness in Korea. Seventh, the both factors of Perceived Ease of Use and Perceived Usefulness affect positive influence on the MOOC’s use intention. Therefore, in establishing and providing a MOOC site, it is recognized that the factors of ease of use and usefulness are needed.

References