Predicting University Students' Intensions to use MOOCs in Informal Learning Environments

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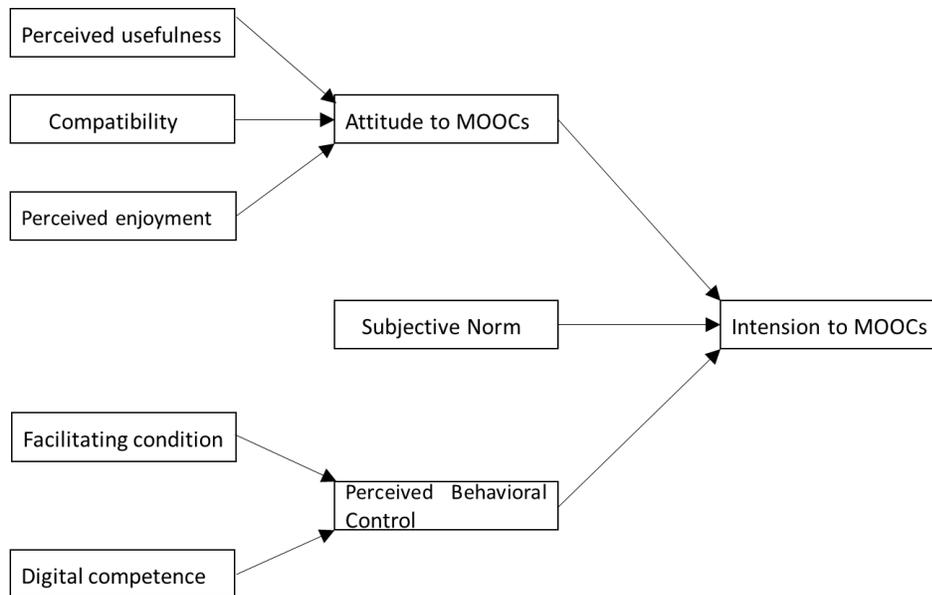
Proposal Information

Massive open online courses (MOOCs) have a great attention of from industry and academia, this trend leads a transforming way of learning and studying not only inside but also outside educational institutions(Yuan & Powell, 2013). Open learning with MOOCs is becoming a part of student's daily life as a form of informal learning (Selwyn, 2010). The informal learning process and structure is self-directed, intentional interest (rather than curriculum-based), non-assessment-driven and non-qualification-oriented. Current research suggests that students have a great diversity of technology use and types of technologies adopted into formal learning (Corrin, Bennett, & Lockyer, 2010), but the understanding of learning with MOOCs from informal learning is still limited. University students' lives nowadays are saturated with web 2.0 technologies, the way of their learning with MOOCs is clearly different from how they use traditional e-learning system based on curriculum. This study aims to determine factors influencing university students' learning with MOOCs in informal learning context. The results provide support for the importance of an intrinsic and extrinsic motivation construct to explain influence on students' use of MOOCs for informal learning.

The theoretical basis used in this study is based on the Decomposed Theory of Planned Behavior (Taylor & Todd, 1995). First , we replaced the self-efficacy latent variable as digital competence variable since digital competence is students' ability to achieve with digital technology (Hatlevik & Christophersen, 2013), which is more related to students perceived competence to use MOOCs. Secondly, informal learning for young people is key opportunity to interplay with digital media epscially the open learning platform such as MOOCs (Meyers, Erickson, & Small, 2013).Because the informal learning is a learner's control process, which including the control over the process and the goals(Naismith, Sharples, Vavoula, & Lonsdale, 2004), intrinsic motivation is often higher than in formal settings where goals are pre-set(A. C. Jones, Scanlon, & Clough, 2013), we replaced the perceived ease of use variable of use as perceived enjoyment which is more intrinsic related, which positively influence attitude to technologies in previous study. In addition, we remained other latent variables based on the theory background but develop new items to specific informal learning with MOOCs: 1, Attitude variable (Taylor & Todd, 1995), In this study, attitude refers to the students' feelings about using digital technologies for informal learning. 2, Compatibility, which describes the degree to which technology adoption fits the task, values, and needs of the user (Roger, 2003). 3, Perceived Usefulness, which defined as the subjective probability that using MOOCs will increase his or her job performance. 4, Subjective norms, which describes a person's perceptions of whether other people believe she/he should or should not perform a particular behavior (Ajzen, 1991). 5, Facilitating Conditions, which describes the necessary resources to engage in a behavior (Ajzen, 1991; Taylor & Todd, 1995). 6, Perceived Behavioral Control, which reflects the level of control individuals feel they have over their own behavior. 7, Behavior Intension, in this study, which is concerned with motivational factors related to students' intentions to use MOOCs in informal learning.

Research Model (Figure 1.)

Perceived usefulness

Compatibility → Attitude to MOOCs

Perceived enjoyment

Subjective Norm → Intension to MOOCs

Facilitating condition

Perceived Behavioral Control

Digital competence

Methodology

A study has been conducted where a well-structured online survey was designed and administered. The online survey was randomly sent to 500 students from two universities in Belgium. The Digital Competence Scale which has 13 items and was validated in this survey, Perceived enjoyment, perceived behavior control, subjective norm and behavior intension scale has 3 items respectively. Perceived usefulness and compatibility scale has 4 items respectively. Attitude and facilitating conditions scale has 5 items respectively. All items were scored on a 5-point Likert scale. A total of 179 responses was collected and included 68 incomplete responses. 111 valid cases had been analyzed.

The partial least square (PLS) modeling method was used for assessing scale validity and testing the hypotheses. This equation modeling technique is preferred over covariance-based analytical techniques such as LISREL in terms of sample size requirements and distribution restrictions (Chin, Marcolin, & Newsted, 2003). In this study we used SmartPLS 3.0 for model measurement and hypotheses testing.

Expected comes or Findings

The study confirmed that Attitude to digital technologies and perceived behavior control significantly predicted learner's intension to informal learning with MOOCs, resulting in an R^2 of 0.48. The subjective norm did not demonstrate significant influence on students' intenson to use MOOCs to informal learning (P>.05). Furthermore, Attitude variable decomposed by perceived usefulness, perceived enjoyment and compatibility has a good data fit, these three variable resulting in an R^2 of 0.66. Digital competence had significant influence on and explained 39% of the variance in perceived behavior control, whereas facilitating conditions did not show significant influence on perceived behavior control by the data (P>.05).

Behavior intension demonstrated a significant total direct effect on actual behavior of informal learning with MOOCs (β=.70, P<.001). The effects of perceived usefulness, perceived enjoyment and compatibility on behavior intension was mediated by Attitude, have significant direct effect on behavior intension (β=.57, P<.001) and indirect effect (β=.36, P<.001) for compatibility, (β=.08, P<.05) for both perceived enjoyment and perceive usefulness. Digital competence was mediated by perceived behavior control, which has a significant indirect effect on behavior intension (β=.13, P<.05) and significant direct effect on perceived behavior control (β=.62, P<.001). This study suggests that university students'

attitude to digital technologies is the most important factor that predict students' intension to use MOOCs in informal learning environments. Then the compatibility of MOOCs courses is also an important influencing factor for students' intension. Moreover, students with higher digital competence have a higher tendency to be involved in informal learning with MOOCs. Last, Students' perceive enjoyment and perceived usefulness cannot be ignored to predict students' intension to use MOOCs for informal learning.

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