

The Effects of Facilitating Condition and Metacognitive Awareness on Continuance

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Abstract: The purpose of this study is to explore the influencing factors of continuance and its influence mechanism. This study investigated students from grade one to grade three in three middle schools in Binzhou City, Shandong Province. The results show that facilitating condition and metacognitive awareness have different effects on continuance.

1. Introduction

With the development of technology, more technical help and resource support were required to back online learning [1]. Teachers need to confirm whether students can take the online curriculum and judge students' adaptability sharply, so as to formulate more appropriate teaching methods for students [2]. Therefore, this research explores the effect of facilitating condition and metacognitive awareness on continuance and its mechanism.

2. Literature review

2.1 Theoretical framework

2.1.1 Continuance

Some studies have shown clearly that when teachers interact with students online, the perception of their online learning will increase significantly [3]. Students' perception of the learning process and curriculum design will largely affect their continuance.

2.1.2 Community of Inquiry

Community of Inquiry (CoI), is a collaborative constructivist framework [4]. Community of Inquiry includes three elements, namely teaching presence (TP), cognitive presence (CP), and social presence (SP). Cognitive presence refers to the degree to which students conduct knowledge building on the basis of cognition and reflection [5]. Social presence refers to the ability of students to make knowledge and emotional connections with others through media [6]. Teaching presence is defined as "the design, promotion, and guidance of social processes and cognition" [7].

2.1.3 The effects of Facilitating Condition and Metacognitive Awareness on Continuance

Facilitating condition (FC) refers to resources that can assist students to learn even better [8]. Facilitating conditions may affect students' perception of teaching [9]. Studies have shown that facilitating condition has a significant positive effect on the continuance of online learning [10]. In addition, although Some scholars have previously emphasized the importance of teachers' metacognitive support for students, there is little empirical research on Teachers' support for students' metacognition [11].

2.2 Research questions and hypotheses

Based on the above discussion, this study will mainly answer the following questions:

(1) In an online learning context, how do students' perceptions degree of facilitating condition, metacognitive awareness, community of inquiry, and continuance?

(2) In an online learning context, what are the effects of facilitating condition and metacognitive awareness on continuance, and how do they affect continuance?

In order to solve the above research problems, based on the online learning context, we now propose a hypothetical model of factors affecting continuance. The assumptions of this study are as shown in Figure 1.

3. Research methods

1056 questionnaires were collected in this study, of which 998 were valid (the validity rate was 94.51%). Participants came from three junior middle schools in Binzhou City, Shandong Province, including 27 classes from grade one, grade two, and grade three.

Four scales were used to investigate students' perception of degree. The community of inquiry stems from Stenbom (2018). Facilitating conditions developed by Venkatesh et al. (2003). The metacognitive awareness inventory, adapted by Schraw and Dennison (1994). Continuance, developed by Bhattacharjee (2001). The Cronbach's alpha of these scales is respectively 0.915, 0.956, 0.984, 0.935, 0.975, 0.952.

4. Results

4.1 Students' perception of continuance and the factors influencing it

The descriptive statistics results are shown in Table 1. It can be seen that students have a high perception degree of continuance and the factors influencing it.

4.2 Correlation analysis and path analysis

We use Pearson correlation analysis to explore the potential relationship of variables. As is shown in Table 1. Among them, cognitive presence is most significantly related to continuance ($r = 0.59$), followed by social presence ($r = 0.56$) and facilitating conditions ($r = 0.52$).

We analyzed the path hypothesis model and the results have shown in Figure 1. The data in this study are Chi-square=18.274, $df=2$, Chi-square/ $df=9.138$, RMSEA=0.090, CFI=0.996, TLI=0.973, SRMR=0.009. According to Hu and Bentler (1999), the model has an excellent fit. It can be seen from Figure 2 that the facilitating conditions ($\gamma= 0.241$, $P < 0.01$) had a direct positive impact on continuance. Metacognitive awareness indirectly affects continuance, through the mediating effect of the community of inquiry.

5. Discussion and Conclusions

We can confirm from these results that facilitating condition plays an important role in students' online learning context, especially in the pandemic environment. Meanwhile, metacognitive awareness matters too, as it exists at the teachers' level, which may not directly influence the continuance of students, but could be experienced through languages and behaviors of teachers in daily interactions. Some scholars have previously indicated that the facilitating condition is positively related to the continuous learning intention of online learning [11], and the results of this study conform to the statement.

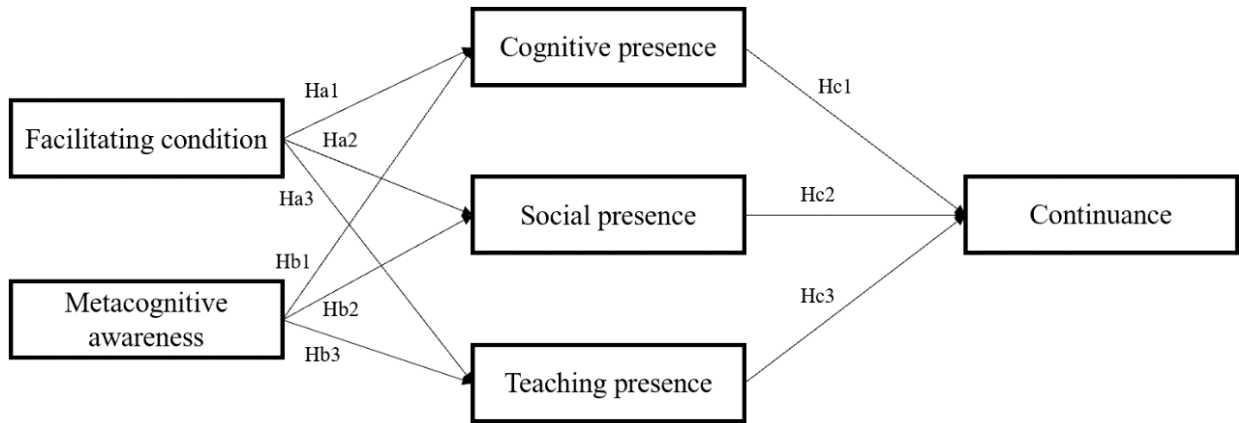


Figure 1. hypothetical model

Table 1. Descriptive statistics of variables and correlation analysis results

	Mean	SD	FC	MA	TP	SP	CP	CON
FC	3.84	.88	1					
MA	4.06	.79	.57**	1				
TP	4.14	.84	.53**	.83**	1			
SP	3.87	.77	.61**	.74**	.77**	1		
CP	3.78	.82	.60**	.72**	.68**	.85**	1	
CON	3.63	.98	.52**	.42**	.41**	.56**	.59**	1

FC: Facilitating Condition; MA: Metacognitive Awareness; TP: Teaching Presence; SP: Social Presence; CP: Cognitive Presence; CON: Continuance;

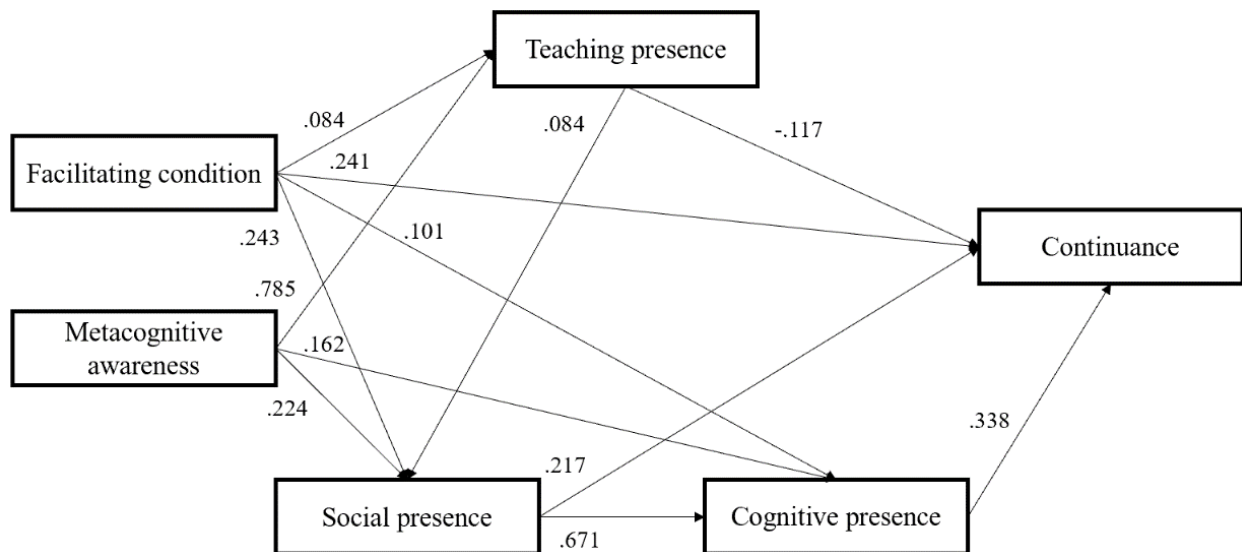


Figure 2. Final model

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