Surveying the Relationships Between Students' Epistemic Curiosity and Their Online Academic Help Seeking Behaviors in Higher Education

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Abstract: This study initiated an attempt to explore the role of students' epistemic curiosity, the desire to obtain intellectual information to fill the gaps in one's knowledge, in their online academic help seeking behaviors in higher education. There were 113 undergraduate and graduate students surveyed in this study. The results showed that the students had more experiences of searching information online and strong epistemic beliefs about seeking help when encountering academic challenges. It was also found that while the beliefs about perceived benefits from online academic help seeking might foster the students' behaviors of information searching and formal query from teachers, their experiences of informal query from peers were significantly predicted by their perceptions of self-efficacy for seeking helps. There were strong significant relationships between the students' I-type epistemic curiosity (stimulating intellectual interest) and their experiences of information searching. On the other hand, the students' D-type epistemic curiosity (eliminating feelings of informational deprivation) was strongly related to their experiences of formal and informal query. Moreover, I-type epistemic curiosity may play a more important role in the students' beliefs about online academic help seeking than D-type epistemic curiosity does. This study is still ongoing with larger sample for verifying the academic evidences.

Keywords: Epistemic curiosity, online academic help seeking, self-efficacy, higher education

1. Introduction

Epistemic curiosity is an emotional-motivational state that individuals desire to acquire intellectual information (Berlyne, 1954); and it has been explored and discussed with other personality traits such as ambiguity tolerance and need for closure previously in the field of psychology (e.g., Litman, 2010). Epistemic curiosity aroused by being aware of gaps in one's knowledge was defined as two types including "interest" (I-type) and "deprivation" (D-type). While I-type epistemic curiosity involves intentions to discover something new for inherent enjoyment, D-type epistemic curiosity involves intentions to seek specific information for reducing undesirable states of uncertainty caused by informational deprivation (Litman, 2008).

Research has identified the significant association between learners' epistemic curiosity and their intellectual development and learning behaviors, particularly for information seeking (Litman et al., 2005). Students' experiences of seeking help online for academic problems has been proposed as the concept of online academic help seeking and explored through three aspects including information searching, formal query (asking question from teachers), and informal query (asking question from peers) (Cheng & Tsai, 2011). Recent studies (Liu, 2017) further probed adult students' beliefs about online help-seeking through three psychological factors including epistemological beliefs (considering help-seeking as knowledge source), perceived benefits (perceiving merits of help-seeking), self-efficacy (perceiving competency to seek help). Following the previous studies, this study attempted to re-examined adult students' experiences of and beliefs about online academic help seeking when facing abundant information from the Internet at the current stage. To obtain more understandings of online academic help seeking behaviors in higher education, what role of adult students' epistemic

curiosity plays in their experiences of and beliefs about seeking help online when encountering academic challenges was initially explored in this study.

2. Method

2.1 Respondents

The respondents of this study were 113 undergraduate and graduate students in Taiwan. All of them were recruited through the Internet. The mean age of the adults was 28.11 years old (SD=10.32). Some elder students enrolled in in-service master program (about 12%). Among these respondents, 49 were females (43.4%) and 64 were males (56.6%). While 57 learners' major was science (50.4%), 56 learners' major was social science (49.6%).

2.2 Instruments

To survey the adult students' epistemic curiosity and their experiences and beliefs of online academic help seeking, there were three instruments adopted in this study and presented as a 5-point Likert scale (from 1, "strongly disagree," to 5, "strongly agree"). The *Epistemic Curiosity Scale* developed by Litman (2008) was adopted for examining the students' traits of epistemic curiosity. The students' experiences of help seeking behaviors for academic information were surveyed by the *OAHS (online academic help seeking) questionnaire* (Cheng & Tsai, 2011). To investigate the students' beliefs about online academic help seeking, the *online help-seeking questionnaire (OHSQ)* developed by Liu (2017) was adopted and further adapted to fit the research context of this study. Notably, the Cronbach's alphas for all of the scales were higher than 0.7, indicating a satisfactory reliability of the instruments.

3. Results and discussion

3.1 Experiences and beliefs of online academic help seeking

Based on the collected data by the aforementioned instruments, this study explored the adult students' OAHS behaviors through the two main dimensions: experience and belief. Regarding the students' experiences of OAHS, compared with the experiences of querying formally or informally online, they tended to have more experiences in searching possible solutions via online channels such as search engines, instructional websites, or other databases when they encountered academic challenges (M=4.46, SD=0.63) (F=83.38, p<.001). Moreover, these students also showed more inclination to ask their peers or unknown experts for help (M=3.69, SD=0.91) rather than to seek help from their teachers (M=3.38, SD=1.06) through the Internet when having academic problems. The findings of this study were partially consistent with the previous studies (Cheng & Tsai, 2011). That is, when the students in higher education level encountered academic issues, searching information online may be their favorite approaches to resolving problems no matter at the previous or present stages. Interestingly, while the past students did not show strong different intention to seek help formally or informally (Cheng & Tsai, 2011), the current students in this study were inclined to ask for help informally via online channels and they might have fair experiences in querying formally.

With regard to the students' beliefs about OAHS, compared with the considerations of perceived benefits (M=4.15, SD=0.76) and self-efficacy (M=4.07, SD=0.82) for seeking help online, they possessed strong epistemic beliefs that OAHS behaviors could provide them with vital and useful information for academic problem-solving (M=4.25, SD=0.76) to a significant level (F=7.3, p<.01). This study further conducted a series of stepwise regression analysis to examine how the students' beliefs of OAHS predict their experiences of OAHS. The results showed that the students' perceived benefits regarding OAHS may significantly predict their experiences of information search (β=0.43, p<.001) and formal query (β=0.25, p<.01) behaviors. Notably, the students' experiences of informal query were significantly predicted by their perceptions of self-efficacy for OAHS (β=0.35, p<.001).

The findings highlight the role of self-efficacy of OAHS in the adult students' behaviors of informal query. The beliefs about perceived benefits from OAHS might foster the students' behaviors of information searching and formal query when encountering academic problems.

3.2 Relationships between epistemic curiosity and experiences and beliefs of OAHS

According to descriptive data of the adult students' scores on the *Epistemic Curiosity Scale,* their exhibition of I-type curiosity (M=4.05, SD=0.71) to explore something new and D-type curiosity (M=3.78, SD=0.77) to seek knowledge for reducing perceived information gaps were slightly above average. This study further examined how the students' epistemic curiosity were related to their experiences and beliefs of OAHS. As shown in Table 1, there were strong significant relationships between the students' I-type epistemic curiosity and their experiences of information searching (r=0.46, p<.001). On the other hand, the students' D-type epistemic curiosity was strongly related to their experiences of formal query (r=0.34, p<.001) and informal query (r=0.47, p<.001). Litman et al. (2005) have addressed that D-type curiosity is a stronger motive for seeking knowledge when comparing with I-type curiosity. Taking this a step further, this study identified that, when encountering academic challenges, adult students with stronger I-type curiosity may tend to search information online for help. Moreover, for students in higher education, stronger D-type curiosity may lead to help seeking formally or informally for academic problems.

It was also found that there were significant relationships between the students' epistemic curiosity and their beliefs of OAHS. Table 1 shows that the strength of the correlations between I-type curiosity and beliefs of OAHS was higher than that between D-type curiosity and beliefs of OAHS. Specifically, the students with stronger I-type curiosity may be likely to possess stronger epistemic beliefs (r=0.38, p<.001), perceive more benefits from OAHS (r=0.45, p<.001), and exhibit higher level of self-efficacy for OAHS (r=0.46, p<.001) as compared to D-type curiosity. Since Litman (2008) reported that learners with strong I-type curiosity may tend to hold mastery-oriented learning goals (e.g., considering that success is the results of efforts), this study considered that the students with strong I-type curiosity were inclined to possess positive beliefs about seeking help online for dealing with their academic issues.

Table 1

Relationships between epistemic curiosity and experiences and beliefs of OAHS

	Information searching	Formal query	Informal query	Epistemic beliefs	Perceived benefits	Self-efficacy
I-type EC	**0.46*****	0.28**	0.30**	**0.38*****	**0.45*****	**0.46*****
D-type EC	0.34***	**0.34*****	**0.47*****	0.27**	0.35***	0.44***

EC: epistemic curiosity, **p<.01, ***p<.001

References

Berlyne, D. E. (1954). A theory of human curiosity. *British Journal of Psychology, 45*, 180-191.

Cheng, K. H., & Tsai, C. C. (2011). An investigation of Taiwan university students' perceptions of online academic help seeking, and their web-based learning self-efficacy. *Internet and Higher Education, 14*(3), 150-157.

Litman, J. A., Hutchins, T. L., & Russon, R. K. (2005). Epistemic curiosity, feeling-of-knowing, and exploratory behaviour. *Cognition and Emotion, 19*, 559-582.

Litman, J. A. (2008). Interest and deprivation dimensions of epistemic curiosity. *Personality and Individual Differences, 44*, 1585-1595.

Litman, J. A. (2010). Relationships between measures of I- and D-type curiosity, ambiguity tolerance, and need for closure: An initial test of the wanting-liking model of information-seeking. *Personality and Individual Differences, 48*(4), 397-402.

Liu, S. H. (2017). Relationship between the factors influencing online help-seeking and self-regulated learning among Taiwanese preservice teachers. *Computers in Human Behavior, 72*, 38-45.