

WCES 2012

Meaning of epistemological belief through online communication: exploratory study

Young Park* , HyunJin Lim

Ewha Womans University, Seoul, South Korea

Abstract

Learners' perceptions of instructional practice may vary depending on their own different epistemological perspectives (Hofer, 2004). In other words, learners' beliefs about knowing may influence their attitude towards learning-related activities. Based on this assumption, the study focuses on how a learner's epistemological beliefs shape their experiences in relation to learning. The hypothesis is applied for online communication platforms like a Social Networking Service (SNS) which is a non-traditional learning environment where learners do not seek any explicit goals related to learning. To investigate this hypothesis, the study analyzed the survey results from 169 Korean adult bloggers and SNS users. The initial results show that the participants' epistemological beliefs affect their definition of learning and their perception of a particular experience as meaningful or learning-related. Moreover, those who hold a broader epistemological belief tend to have a more comprehensive definition of learning and use online communication tools in a more meaningful way. Moreover such platforms for social communication tend to support learners to change their view of learning. In conclusion, this study may advance our understanding of epistemological belief, its role in learning, and the mediating role of social communication.

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Keywords: Epistemological Belief, Online Communications, Social Media, Learning Process

1. Introduction

Learning may be most effective when learners filter their perceptions of instructional practice through their own epistemological perspectives (Hofer, 2004). In other words, learners' beliefs about knowing may influence learners' attitude to learning-related activities. While this supposition may require further research on how epistemological beliefs shape learners' experiences (Hofer & Pintrich, 1997), it may be considered applicable beyond formal learning contexts such as an informal learning surrounding or a non-learning set where learners do not seek any explicit goals related to learning. The case can be examined where online communication takes place. The roles and potentials of Information and Communication Technology (ICT) for learning seem to be endless. While ICT ensures that learning occurs "anytime anywhere," this study examines that the vital capability of ICT may be linked at least, partially to the learners' development of epistemological beliefs and learning.

Corresponding Author: Young Park. Tel.: +1-617-852-7740
E-mail address: yp85@ewha.ac.kr, yp85@columbia.edu

2. Literature Review

Those who study personal epistemology have examined how educational experiences enhance the progression toward advanced epistemological outcomes. Thus, from this paradigm, personal epistemology is a developmental construct, and education influences this development (Hofer, 2004). In contrast, most educational psychologists who have pursued research using the framework of epistemological beliefs view such beliefs as a feature of the individual—a trait-like aspect of individual differences. Accordingly, such researchers have been interested in how beliefs influence learning. From this paradigmatic approach, beliefs are viewed as predictors of outcome variables such as achievement, comprehension, and conceptual change.

According to Schommer (1994), when first-year college students encounter different viewpoints in their classes, they tend to see uncertainty as temporary until authority determines the right answer. As students advance in their epistemological views, they come to embrace knowledge as complex and tentative. They start to realize that the source of knowledge begins to shift from the simple transfer of knowledge from authority to process of rational thinking. Perry's work (1970) suggests that many college students undergo epistemic changes. The literature reveals that sophistication of epistemological belief increases with age and education (Schommer, 1994). It also implies that adults' beliefs may encompass more comprehensive views and become more subjective, intuitive, and reflective.

In the meantime, the literature indicates that epistemological beliefs are related to students' active inquiry, persistence, integration of information and ability to cope with complex and ill-structured domains (Hofer, 2004). In other words, students with more enhanced beliefs will be more likely to keep active inquiry and persist in looking for right information and knowledge, to integrate information, and to handle ill-structured domains and problems. These constructs are valuable features not only in formal learning but also in informal or non-formal learning settings.

Ill-structured problems, for example, relate to epistemological beliefs. Ill-structured problems may have more than one answer, no answer at all, or more than one route to solving those problems. Online communication sites such as blogs or Social Networking Service (SNS) are ill-structured in terms of learning structure. They are neither designed nor used for educational purposes but for entertainment. The authors viewed them as a typical non-formal learning site where the participants would not have any learning-related expectation. The authors, however, hypothesized that these places could yield interesting insights into participants' view of epistemological belief, its impact on learning, and their attitudes to their activities.

3. Methodology

To investigate this hypothesis, the study recruited 169 Korean adult bloggers and SNS users. Data were obtained through an online survey questionnaire consisting of open-ended questions, which elicited participants' understanding of (a) blogging and SNS activities related to their everyday life, (b) the relationship between blogging/SNS activities and learning, and (c) learning in general. One of the most popular SNS sites in Korea, Cyworld and one of the most popular blogging sites, Naver, were selected to explore this hypothesis. A snowball technique was used to recruit participants. Any adult bloggers or SNS users except for those in formal educational systems were invited to join a survey. The data were analyzed using both quantitative and qualitative methods. For the quantitative approach, any feasible correlation was measured. In addition to the statistical analytical approaches among the variables, the data obtained from the open-ended survey questions were qualitatively analyzed, using an open coding method like microanalysis (Strauss & Corbin, 1990) to explore the relationships laid out in the broad

research questions and obtain a fruitful description and interpretation of the complex phenomena within Cyworld and Naver.

4. Results and Discussion

Of the 169 participants, 118 (69.6 %) indicated that there had been changes in their life and way of thinking after they began keeping blogs. Their descriptions of these changes were identified largely in terms of (a) information and knowledge management, (b) personal ways of thinking, (c) self-development, and (d) social relationships. Interestingly, even if information and knowledge management was one perspective to have their life changed, none of the participants thought that it was a direct factor affecting their lives or was a main force for engaging in Cyworld activities. One of participants stated, “Using such a place for writing is good for us to share our lives in a way that we hardly could do before. I think that these indirect experiences, understanding, and interaction are ways of learning.”

Regardless of whether the participants defined learning as simple acquisition or as rather subjective reflection (Park, Heo, & Lee, 2008), the majority of participants (82%) agreed that they had experienced learning either through blogging or SNS activities. Defining learning as acquisition can imply that the participants’ epistemological belief is closely related to the simple transfer of knowledge from authority. The participants who define learning as acquisition are more likely to perceive SNS activities as non-meaningful or not-learning experiences than are members of the group who define learning as reflection. Meanwhile, defining learning as subjective reflection may mean the participants’ personal epistemology involves comprehensive views and is more subjective, intuitive, and reflective. They therefore tend to perceive SNS and blogging activities as meaningful and/or learning experiences.

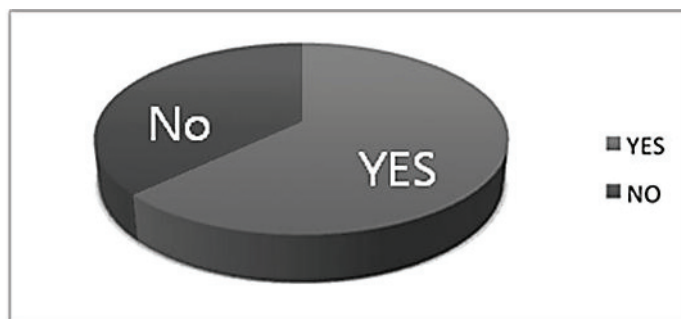


Figure 1. Number of responses to a question, if they define SNS/Blogging as learning

Among 97 SNS participants, 61 people (63%) perceive SNS activities as learning; only 36 (37%) did not perceive SNS activities as learning. Those perceiving learning as acquisition (59%) were not much different from those perceiving learning as reflection (41%). However, among 36 people who did not perceive SNS activities as learning, only seven (19%) defined learning as reflection; 29 participants (81%) defined learning as acquisition.

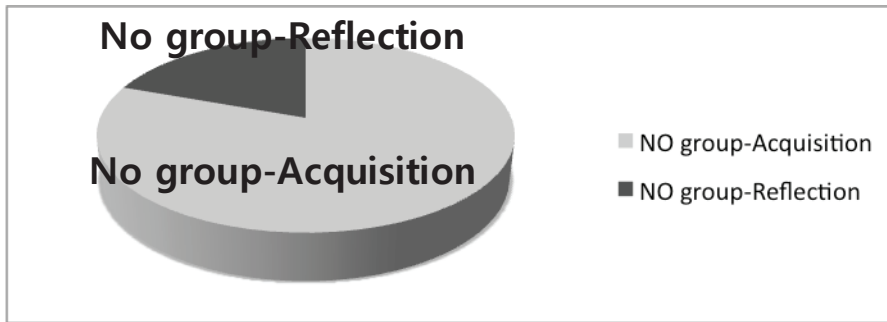


Figure 2. Comparison between learning as acquisition vs. learning as reflection in a group who do not define SNS/Blogging as learning

Most bloggers (95%) agreed strongly that blogging was most useful in knowledge acquisition. At the same time, they tend to consider that blogging would be useful in reflective learning that leads to the transformation of old perspectives or even the generation of new ones. The responses to a survey asking the relationship between blogging and learning, revealed three aspects of blogging:

- (1) Blogging can be useful in acquiring various kinds of knowledge and information. (4.15 out of 5 points)
- (2) Blogging can be useful to describe and/or express my thoughts and views. (4.13 out of 5 points)
- (3) Blogging can help me engage more actively in my fields of interest. (4.00 out of 5 points)

Here, “engage more actively,” “expressing my own thoughts,” and “acquiring various contents (from various resources)” were the most common responses. The result implies that only respondents having enhanced epistemological belief would be able to form such a definition of learning by generating such responses. Such an assumption is rooted in the theory that these enhanced epistemological beliefs are closely connected to active inquiry persistence, integration of information and coping with complex and ill-structured domains. This argument indicates that whoever is active in blogging and finds its activities meaningful and learning-related, tends to have more enhanced epistemological beliefs.

5. Discussion and Conclusion

This study advances our understanding of epistemological belief and its role in learning. It is important to comprehend individual learners’ ways of thinking and belief about knowledge. The study results show that the participants’ epistemological beliefs affect their defining of learning and perceiving whether a particular experience can be meaningful or learning-related. For instance, SNS users who define learning as a reflective process tend to use SNS in more constructively than those who define learning simply as the acquisition of specific knowledge. The preliminary results also entail that frequent adult online communicators demonstrate a broader definition of learning and that any reflection and reasoning can be a crucial part of learning process. Moreover, the epistemological beliefs of participants who hardly open themselves up to online communication still seem to indicate that a particular knowledge should be given or transferred by authority.

Specifically, the themes of adult informal learning seem to match the characteristics of online communication tools such as a blog and SNS. Online communication tools are recent and accessible instruments that can be most appreciated in self-directed learning practice. The full analysis of data will reveal the comprehensive relationship between an individual’s epistemological belief and his or her definition of learning. The participants’ personal judgment of whether or not an activity (occurring through online communication tools) is learning-related will be explained in greater detail later. The full results will be substantial in helping to answer a profound question: “How does believing about knowing influence learning?”

Acknowledgements

I acknowledge this paper is based on the contribution of GyungMi Heo and Romee Lee.

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