The Relationship among Self-determined Motivation, Cognitive Presence, Teaching Presence and Achievement in Flipped Learning Environment

Myunghwa Jin (Ewha Womans University)
Siwon Kim (Ewha Womans University)
Hae June Kim (Ewha Womans University)
Kyu Yon Lim (Ewha Womans University)

ABSTRACT

This study analyzed the mediating effects of cognitive presence and teaching presence on the relationship between self-determined motivation and achievement in flipped learning environment. Flipped learning is a new way of teaching and learning which can facilitate learners’ active participation and collaborative meaning construction. In flipped learning environment, it is critical for learners to play an active role for their own learning process; to be specific, learners are required to watch a video lecture autonomously before class and actively participate in collaborative activities such as experiment, discussion, and problem solving in class. Therefore, learners’ motivational aspect is a key factor for the success of learning in flipped learning context. According to self-determination theory, self-determined motivation is a key factor to facilitate intrinsic motivation and promote self-determination in extrinsic motivation. Moreover, high level of self-determined motivation leads to successful learning.

According to the aim of this study, research questions are as follows.

1. Does cognitive presence mediate between self-determined motivation (autonomy, competence, relatedness) and achievement in flipped learning?
2. Does teaching presence mediate between self-determined motivation (autonomy, competence, relatedness) and achievement, in flipped learning?

Subjects of this study were eighty-five middle school students who took social studies flipped class in Gyeongbuk province. The instructor of this flipped classroom produced 10-minutes videos about basic concepts of social studies and uploaded at Naver café. Learners autonomously watched the videos and organized their own notes before participating the class. In the classroom, learners formed small groups and solved activity worksheets in a collaborative way. To organize and summarize what they learned, the instructor utilized various forms of activities and games such as golden bell quiz, a flipped marble game, and knowledge market.

Hierarchical regression analysis was employed to examine the mediating effects of cognitive and teaching presence. The results revealed that cognitive presence partially mediated the relationship between competence and achievement. Moreover, teaching presence had a complete mediating effect on the relationship between competence and achievement.

The results of this study suggested implications for instructional design and strategies considering cognitive and teaching presence in flipped learning environment.

Key words: flipped learning; self-determined motivation; teaching presence; cognitive presence