Chapter 40
Mobile Learning:
A Bridging Technology of Learner Entry Behavior in a Flipped Classroom Model

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ABSTRACT

Today's learner is able to access information from mobile devices. Due to accessibility and affordability of mobile devices, more instructors continue to adopt instructional design models of mobile learning as more learners also bring their mobile devices to their classrooms. Instructors using flipped classroom model organize the learning activities both inside and outside classroom. Before the next class the instructor avails instruction and content in advance. The learner reviews class content materials and assigned research activities at home prior to class. In class, the instructor allows learners to peer review their work in groups while the instructor engages them to validate their work. The findings described in this chapter suggest that introducing mobile learning to learners in a flipped classroom model helps to bridge learner entry behavior as it improves learner performance.

INTRODUCTION

Ever since e-learning was introduced to classrooms and proven to be effective tool for learning, it has evolved with technology. It has been contextualized in many contexts especially Africa and developing world proving to resonate well like other developed world (Omwenga E.I. et. al, 2004). Technological changes that have occurred in the last decade has placed hand held electronic devices popular leaving educators with no choice but to adopt them for teaching and learning now referred as Mobile learning. Combining mobile learning with new pedagogical teaching models like flipped classroom model has also made teaching easy and has improved quality of teaching while achieving good learner performance.

Vygotsky's theory is one of the foundations of constructivism. It asserts three major themes that is social interaction, More Knowledgeable Other and Zone of Proximal Development. According to Vygotsky, social interaction plays a fundamental role in the process of cognitive development, however, it contrast Jean Piaget's understanding of child development where child development come first before learning, Vygotsky puts social learning before development. He states: "Every function in the child's cultural development appears twice: first, on the social level, and later, on the individual level; first, between people (inter-psychological) and then inside the child (intra-psychological)." The More Knowledgeable Other (MKO) refers to anyone who has a better understanding or a higher ability level than the learner, with respect to a particular task, process, or concept. The MKO is normally thought of as being a teacher, coach, or older adult, but the MKO could also be peers, a younger person, or even computers. The Zone of Proximal Development (ZPD) is the distance between a student's ability to perform a task under adult guidance and/or with peer collaboration and the student's ability of solving the problem independently. According to Vygotsky, learning occurs in this zone. This is congruent to Linda Neff, 2014, who states that social learning theories help learners to learn through social context which means learners learn from interactions and communications with each other. The interpretation of Vygotsky social learning theory by Linda supports the flipped learning methodology. She quotes Vygotsky work which examined how our social environments influence the learning process where he suggested that learning takes place through the interactions of peer to peers, learner to teachers, and other experts.

The word FLIP is an acronym, F stands for Flexible environment, L for Learning culture, I for Intentional content and P for Professional educator. Flipped Learning is a pedagogical approach in which direct instruction moves from the group learning space to individual learning space and the resulting learning group space is transformed into a dynamic, interactive learning environment where educator guides students as they apply concepts and engage creatively in the subject matter (Flipped Learning Network, 2014).

On the other hand, mobile learning is the kind of learning that take place anywhere, any time when the learner takes advantage of learning opportunities offered by mobile technologies (O'Malley et al.2003). Mobile technologies offer the learner space flexibility and any work given to the learner by the instructor, can be completed within the learner space anytime anywhere. Inside classroom, the learner shares their experiences within the group space. The learner can validate the truth of what they learnt with the peers and the instructor as they carry out learning activities in class. The effect of mobile learning expands the learner space to a point that it bridges the gap between learner's entry behaviors. This chapter will demonstrate how mobile learning bridges the gap between learner entry behaviors when applied in a flipped classroom model.

BACKGROUND

Flipped classroom model require student to be actively involved outside classroom by reading, doing quizzes and assignments while inside classroom they engage in discussions, peer evaluation and answering questions from the instructor. The work of the instructor is to facilitate learning by providing content, instructions and controlling learning activities. Mobile learning is a perfect delivery mode for a flipped classroom model implementation. With content all over, posting lecture note to learners in class is considered a waste of time by many undergraduate students especially those that are in third, fourth or fifth year. They can get notes and lectures over YouTube, social media and other sources authored

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