Chapter 7
Choosing and Adapting a Mobile Learning Model for Teacher Education

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ABSTRACT

Teachers and instructors end up choosing any instructional design and tools for luck of guiding frameworks especially when integrating teaching and learning with mobile technology. The decision by the instructor becomes even more complex when presented with multiple traditional frameworks to choose from. The Technological Pedagogical Content Knowledge (TPACK) model has lately become popular in teacher training, however, research continues to explore on its effectiveness especially in a fast growing technological environment. New models are being created and this chapter has attempted to present such model that can aid teachers and instructors in making a good choice. Content Relevance and Serving, Content Format and Packaging, Learner Attention, Learner Feedback and Context Awareness where factors identified as critical in making a choice for an instructional design model to adopt.

INTRODUCTION

When preparing to teach, teachers must prepare a lesson in reference to the syllabus. The aims and objectives must reflect those that are designed in the curriculum, but to be effective in class, i.e. ensure learning takes place, one must understand their learners. Being an effective teacher is being able to achieve the learning objectives. The learner should be able to do all things as set out in the objectives. In order to design a good lesson plan, a teacher should be able to understand and adopt an instructional

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design model so that the instructions can be well structured. An electronic tool can be useful in order to reduce laborious paper work. The tool selected should be designed in a way the instructional design details are structured.

As Fincher, Cairns and Blackwell (2012) states, many of teachers tend to create, recreate lessons and course materials relying on what they were taught or how the subjects around them are taught. Many take little time to reflect on the effectiveness of their lesson. They care less about their learners' understanding of content and later cannot explain the massive failure of their subjects. They think that learners cannot grasp the content due to their cognitive ability. Some have even condemned the learners, questioning their entry level to the course, a question that should be asked before engaging the learners in the first place. A teacher should never blame entry behavior as a course to failure of learner's test. Moreover, as indicated by Ireri and Omwenga (2014), if a teacher is using mobile learning technology, the entry behavior is bridged and contributes insignificantly to learner performance.

Knowing the learner and the entry behavior helps in planning the lesson. From computer science perspective, user behavior is tested in real world scenarios with actual users. It is not enough for the teacher to peruse the entry marks of a prerequisites course unit and conclude one knows the learners. Teachers that have taught a class before know the learners through association, they have an advantage, this means that a teacher who has not met learners before must meet them first and do a mini action research to find out the cognitive, associative and psychomotor skill levels of the learners before designing their first lesson. Especially for computer science, user centric design approach for human computer interaction can be applied by the lecturer. User-centered design approach is a process in which the needs, characteristics and limitations of end users are the main focus during each stage of the design process. For the teachers, the users of the lesson plan are students. They must be involved while designing a lesson, they are consumers of the lesson. Some researchers call this constructive method derived from constructivism theory of learning. In this approach, the lesson optimizes learning by exploiting the learners' behavior and not the other way where learners are expected to change their behavior to accommodate the design (lesson). In this respect, learners need to participate in what they ought to learn, they need to be part of the design process of the lesson. There are reasons given to explain this by Gregory (2003). He explains the reasons for involving users in the design process of a system as:

1. The users of the system help in providing more knowledge that is required to create the system;
2. Helps in reducing the resistance to use the system therefore improving acceptance of the system.

Involving the users in the design, it assists the designers to be familiar with users' world and how it operates. In addition to all that, teaching with mobile technology require the lecturer to also understand the learner in terms mobile device they have. The kind of operating systems that are running the devices and the supported applications that can be exploited by the lecturer in delivering instructions or learning content.