Chapter 7

Developing Pedagogical Skills for Teachers:
A Learner–Centered Approach for Technology Supported Instructions

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ABSTRACT

Since technology alone without the instructor or teacher cannot deliver learning to learners, the presence
of the teacher or instructor is very important. For any meaningful teaching and learning to take place in
a class, the teacher must gain learner’s attention. Teachers who use learner centered approaches have
a strong trust in students, they believe that students want to learn, have great faith in student ability
and offer students ownership of class activities. They are able to manage their classroom. This chapter
looks at the way attention can be measured and used as a tool to inform teachers in order to enable
them manage the classroom and learning activities. There is a significant relationship between rate of
response as a measure of attention and use of technology meant for teaching and learning. Teaching
and learning technologies draw learners’ attention, motivating them and arousing their curiosity to be
engaged in learning.

INTRODUCTION

This book chapter aims to explain the need for teachers to use learner centered styles of teaching using
technology. The technology used in the experiment discussed in this chapter is mobile learning. It is
used to measure learner’s attention. Learner’s attention plays a significant role in achieving intended
learning outcome, a focus that teacher development and training should observe. A critic of empirical
studies conducted to support learner centered pedagogy is also reviewed and discussed. Pedagogy is
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the science of delivering learning content to the learners and the term, learner-centered refers to the concept and practice where learners and teachers learn from one another through active participation in class. It calls for a shift from instructions that are teacher-centered, at times referred as teacher on the stage, to learner centered (Barr & Tagg, 1997).

Learner-centered teachers or instructors are focused on what the learners need to learn, design educational experiences to advance their learning, and provide opportunities for them to demonstrate their success in achieving those expectations (Weimer, 2015).

A learner-centered teaching is developed from curricular decisions and strategies that encourage learners’ interaction with the content, with one another and the teacher.

It gives the learner the opportunity to interact and make decisions on assessments (Ahmed, 2013).

Learner-centered pedagogy questions this assumption, given differences in how students learn. The emergence of learner-centered instruction arises from the quest to have all learners perform well in their educational goals.

Research has attempted to explain how people learn, however the exact science of learning continues to raise many questions on learning. For example, how do we optimize learning in a learner centered approach supported by technology? Technology has been used to support learning especially where e-learning, mobile learning and flipping classwork are used to bridge learning gaps and to improve learner performance (Ireri & Omwenga, 2015). The choice of technology to aid teaching-learning process has remained a challenging task for an instructor. Some find technology obstructive in their traditional methods while others are comfortable using it. E-learning and mobile learning tools are examples of technologies that are used to support teaching and learning. While e-learning is gaining momentum faster in educational institutions (Omwenga et. al., 2004; UNESCO, 2012), instructional support is necessary in all learning activities for example in modeling, coaching and scaffolding. Modeling is a demonstration to the learner; the way and the reason why they should perform the learning activities to completion while coaching is the intervention by teacher at critical points in the instruction in order to provide the learner with encouragement, diagnosis, directions and feedback. Scaffolding is adjusting the task for the learner to match his/her level of performance (Omwenga, 2004), therefore the teacher remains irreplaceable in the learning environment even in the midst of emerging technologies.

Research has proven that the contributions of ICT to the quality of education are vital ingredients due to its potential to innovate, accelerate, enrich, and deepen skills, motivate and engage students, strengthen teaching and learning in schools (Al-Ansari, 2006). According to Reeves & Jonassen (1999) students using ICTs for learning purposes become actively involved in the process of learning as they use ICT as information sources and cognitive tools. ICT can also provide speedy dissemination of education to target disadvantaged groups (UNESCO, 2002). In addition, ICT can increase flexibility so that learners can access education regardless of time and geographical barriers thus providing greater decentralization in the delivery of education services. It is not in doubt, therefore, that ICT has the potential to play a more powerful role in increasing resources and improving the environment for learning.

Teachers who care about their students and are willing to go an extra mile to help them usually do a good job. They provide students with activities that meet their learning capabilities (Weimer, 2015). Many studies carried out about student learning reveals that learning occurs at the intersection between interactions of teachers, students and content. The kind of relationships that teachers create with students determines the levels of interactions students have with their teachers while the level