Chapter 6
Teacher Trainee Development and ICT Training:
Impact of the Training From the Teacher Trainee Perspective

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ABSTRACT

This study focuses on how training for e-book creation has helped teacher trainees upskill their instructional technology skills. The study assessed the effect of technology training on the teacher trainees' self-efficacy beliefs and perceived use in creating e-books for teaching. The study adopted one group pretest-posttest experimental research design . The study used a quantitative method to collect data from 60 teacher trainees. An adequately structured questionnaire, on perception of the need for technology training before the training and perceived self-efficacy beliefs and usage of e-books, was administered before and after the training programme. Training sessions spread over two months on e-book creation was provided. Descriptive analysis and paired t-tests were used for data analysis. The paired t-test result revealed significant differences between pre-and post-test scores in self-efficacy and perceived use of e-books. The study strengthens the importance of training for student teachers in instructional technology and e-book creation.

INTRODUCTION

In this 21st century, "technology" has impacted every aspect of our lives, including education. This is because technology has become the knowledge transfer highway in most countries. As part of this, schools and other educational institutions that prepare students to live in "a knowledge society" need to consider ICT integration in their curriculum (Ghavifekr, Afshari & Amla Salleh, 2012).

Integration of Information, Communication, and Technology (ICT) in education refers to the use of computer-based communication that incorporates into the daily classroom instructional process. ICT integration in education generally means technology-based teaching and learning processes closely related to learning technologies in educational institutions. ICT is considered an interactive media for engaging students in problem-solving activities and decision-making to improve their thinking skills. It also provides better access to resource materials. Since ICT adds much value to key learning areas, it should be involved in the process of teaching in every subject and every classroom. Moreover, effective use of ICT can facilitate student-centered active learning (Ellis et al., 2008), engage students in collaborative learning as well as enhance their social interaction (Dodge, Colker & Heroman 2003), improve their cognitive development, increase creativity, and improve their problem-solving skills (Khan, Hasan & Clement 2010).

ICT can be used in various ways where it helps both teachers and students to learn about their respective subject areas. Technology-based teaching and learning offer various exciting ways, including infographics, e-books, gamification, educational videos, simulation, data storage, database usage, mind-mapping, guided discovery, brainstorming, music, and the World Wide Web making the learning process more fulfilling and meaningful. Students will benefit from ICT integration, where they are not bound to the limited curriculum and resources. Instead, hands-on activities in a technology-based course are designed to help them to stimulate their understanding of the subject. It helps teachers to design their lesson plans in a practical, creative and exciting approach that would result in students' active learning. Previous research proved that using ICT in teaching would enhance the learning process and maximize the students' abilities in active learning (Finger & Trinidad, 2002; Jorge et al., 2003; Young, 2003; Jamieson-Procter et al., 2013). Teachers are the key players in using ICT in their daily classrooms to prepare students for the current digital era. This is due to the capability of ICT to provide a dynamic and proactive teaching-learning environment (Arnseth & Hatlevik, 2012). (Year Mismatching)

Teachers constitute the core of the process of imparting knowledge in the classroom. The new technologies and their effective integration with curriculum and classroom processes are impacted by the teachers' motivation, personal knowledge and experience, confidence levels, access to ICT resources and training, and technical

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