Chapter 7
Teacher Education and Teacher Professional Development: Current Issues and Approaches

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ABSTRACT
This chapter reveals the prospect of teacher education; teacher education and technology utilization; the issues with professional development (PD); and the perspectives on teacher professional development (TPD) in the digital age. Teacher education offers teachers ways to keep their classrooms and curriculum highly educational. By providing teachers with teacher education programs, they are able to continue their own education, gain vital skills that they may not have been able to learn while taking college courses, and stay current with new technologies. TPD is an essential method of improving teaching and learning for teachers. TPD provides time, resources, and educational personnel to support teachers to improve their skills about teaching and learning. The effective teacher education and TPD programs should include technology pedagogy, the 21st century skills, and ethical perspectives toward improving preservice teacher’s technological skills and enhancing both learner’s educational opportunities and learning outcomes.

INTRODUCTION
The field of teacher education has been evolving for several decades, and current approaches to teacher education aim to help preservice teachers teach diverse populations and develop a wide range of skills, dispositions, and attributes in the modern learning environments (McLoughlin & Nagabhushan, 2016). The most critical factor within the school in facilitating student learning is the teacher and the ability of those in leadership positions to shape a collaborative, motivated, and effective teaching community (Momanyi, 2016). Teacher education programs worldwide are engaging in a digital conversation around best practices for teaching teacher candidates in the creation of digital content for the 21st century blended classroom (Dickenson & Sistek-Chandler, 2016). Teacher education programs should consider how they

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support preservice teachers to become the self-reflective consumers of technology (Amador, Kimmons, Miller, Desjardins, & Hall, 2015).

The quality of educational services in universities is mainly influenced by the quality of teachers (Ionescu, 2013). Educational technologies can provide a continuous source for professional growth and community-building in teacher education programs (Brown, 2014). The need to train untrained teachers and to offer professional development (PD) significantly dominates the teacher education perspectives (Moon, 2012). In teacher education, field experiences in clinical settings considered as the essential licensure requirements for preparing preservice and lateral entry teachers (Heafner & Plaisance, 2013). The more transformational leadership characteristics teacher educators possess, the more multicultural education practices are executed by them toward producing and transforming teachers to arrange the same practices in their classroom (Greene-Clemons, 2016).

In order to thrive in the increasingly demanding school contexts, teachers must adapt to the diverse students’ needs through educational adjustment to new pedagogical approaches, education policies, and educational reform efforts (Jimoyiannis, Gravani, & Karagiorgi, 2014). In this regard, teachers need continuous support through multiple PD opportunities to deepen content and pedagogical knowledge and to improve teaching skills (Jimoyiannis et al., 2014). The increased impact of information and communication technology (ICT) in the society has lead teachers to engage in teacher professional development (TPD) activities related to the use of ICT (Lindberg & Sahlin, 2012).

TPD comprises a major challenge in many countries (Klieger & Bar-Yossef, 2011). In TPD, the component of collaborative participation among teachers is emphasized (Gröschner, Seidel, Pehmer, & Kiemer, 2014). Teachers are a significant factor related to student achievement (Heafner, 2016) and play a vital role in addressing TPD programs (Zehetmeier & Krainer, 2011). TPD helps teachers develop the appropriate knowledge to accomplish the educational goals is necessary (Harlow, 2014). Sztajn et al. (2014) stated that TPD has been recognized as a knowledge delivery mechanism. The utilization of TPD programs for teachers is the important strategy for facilitating the educational changes in classroom practices (Singer, Lotter, Feller, & Gates, 2011).

This chapter aims to bridge the gap in the literature on the thorough literature consolidation of teacher education and TPD. The extensive literature of teacher education and TPD provides a contribution to teachers by describing the issues and approaches of teacher education and TPD in order to maximize the educational impact of teacher education and TPD in the digital age.

BACKGROUND

Traditional teacher education has been under attack from those who believe it is not worth the investment (DeMink-Carthew, Hyler, & Valli, 2016). Many standards from professional organizations (e.g., INTASC, NCATE, NCTAF, and NCLB) point to the importance of the university faculty and quality teacher education programs to support the needs of preservice teachers and to prepare the teacher education programs (Koch & Kush, 2015). Teacher preparation programs historically have been contained on campus using face-to-face instruction (Lemoine, Yates, & Richardson, 2015). Teacher preparation programs need the reliable performance assessments to provide actionable data upon which programs can direct the meaningful change (Lys, L’Esperance, Bullock, Dobson, & Patriarca, 2016).

Increasing external demands on student time, calls for more cost-effective programs, and a growing demand for course offerings are the important factors that have prompted colleges of education to expand
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