Chapter 20

An Agile K-12 Approach:  
Teacher PD for New Learning Ecosystems

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**ABSTRACT**

Several schools in the United States are adapting to incorporate 21st century skills, active learning pedagogical approaches, and new technological innovation to advance student learning. Creating physical and virtual spaces and support for creativity, collaboration, critical thinking, and innovation is vital. Yet, designing and offering meaningful professional development to teachers in these new learning ecosystems is a challenge. This chapter explores the application of Agile methodologies to professional development planning, design, and facilitation in a school district that implemented a new learning ecosystem. The Agile approach resulted in customized professional development opportunities that were rigorous, relevant, iterative, and flexible enough to meet district needs. Data were collected on teacher technology efficacy, and initial results indicated success. This has generated an agenda for further research.

**THE NEED FOR MEANINGFUL PROFESSIONAL DEVELOPMENT**

What is effective professional development for teachers? It has traditionally consisted of an administration-planned in-service on one topic that will meet the needs of all teachers. Guskey (2014) states that these training sessions are often planned without knowing what teachers need to accomplish with the training. Christesen and Turner (2014) report that to gain teacher commitment to professional development, the teacher’s desire to be involved in the process is essential. Teachers weigh the cost-factors of professional development to the benefit of a new practice and the relevance to the teacher’s classroom practice (Christesen & Turner, 2014, p. 233). Many professional development opportunities planned for teachers may not meet the needs of all the teachers, their school, or the district (Roseler & Dentzau,
In 2012, Valeria shared that the biggest problem with professional development for teachers was that it was usually an isolated event with little or no teacher input or connection to daily teaching. Valeria (2012) suggested that teacher professional development should be an ongoing process, embedded in daily classroom practices with clear knowledge of expectations in their classrooms. Soine and Lumpe (2014) recommended that teachers should have professional development designed in a way they can take control of their own learning (p. 303). DuFour (2014) states five factors important to the best environment for professional development which builds staff capacity to function as high-performing: sustained and ongoing; collective; job-embedded; results-oriented; and functions as a professional learning community (Agile Innovation, 2015). Professional development for teachers to include teacher input, be an organizational change process, and a mechanism for continuous school improvement must also embrace the mastery of innovation.

Innovation, collaboration, and improvisations have become the essential forces shaping modern life and have become important for all of society (Morris, Ma, & Wu, 2014). Schools are not exempt from this rapid change. Morris, Ma, and Wu describe as enormous and accelerating challenges that every organization faces today. The questions they ask of business organization can be applied specifically to educational organizations:

- How well can your faculty and school prevail in the current environment of accelerating change?
- Is your faculty/school positioned to benefit from the countless new opportunities that change is bringing?
- Can your school become agile to succeed?

21st Century Professional Development

Professional development focusing on innovative technology integration for teachers is a complicated landscape. Sykes describes professional development activities for K-12 teachers as “The most serious unsolved problem for policy and practice in American education today.” (1996, p. 465). The literature indicates that as the numbers of computers and technology capacity exponentially increase, so does the need for in-service teacher technology integration activities (Jenson, Lewis, & Smith, 2002). Thus, this grant project integrated teacher professional development as a key focus, with a goal of reaching the entire P-12 faculty. “High-quality professional development is central to any education improvement effort, particularly those that seek to integrate technology in support of classroom instruction.” (Martin, et al, 2010, p. 53). Nationally, teacher professional development opportunities range from traditional “canned” approaches on how to use a tool to rich professional learning group models. The professional learning community model encourages sustainability and accountability across the curriculum. (Jenson, Lewis, & Smith, 2002). The central professional development team goal was to offer professional development sessions to the entire district, while forming an online community of practice to address more individualized needs. The research team for this study therefore investigated various topics, themes, and activities central to teaching in a new learning ecosystem.

There is a distinct need for meaningful professional development and training of in-service teachers regarding innovative technologies. Innovative technology for the purpose of this paper focuses on new instructional media (educational computing, multimedia, furnishings, and technological teaching tools) serving to advance the education of today’s students (Istance & Kools, 2013). This challenge is even