

Chapter 13

A Text Mining Analysis of Faculty Reflective Narratives on Their Participation in the TeachTech Program at The University of Texas at El Paso: Implications for Integrating IT Technologies Into College Pedagogy

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ABSTRACT

The University of Texas at El Paso has launched the TeachTech Program to help its instructors to learn and implement the applications of new instructional technologies in the university classrooms. The objectives of this chapter are to examine what faculty members have experienced after taking part in the TeachTech Program. This study employed an online interview method to solicit past and present TeachTech Program participants (N=17) to share their experiences. Participants responded to a questionnaire hosted at QuestionPro. Faculty recurrent keywords and key phrases were collected from participants' experiential narratives. Using the key phrase extraction functions from QDA Miner and WordStat has found the following phrases related to their experiences: "incorporate technology," "collaborate sessions," "hybrid version," "desire to learn," and "solve problems." Implications and discussions were provided.

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INTRODUCTION

The Integration of Technology into College and University Classrooms

Technology has increasingly played an important role in today's pedagogy in college and university classrooms around the world (Davis, 2019). Three billion dollars have been spent on procuring digital contents (Herold, 2016). Over 8 billion dollars have also been invested in software and hardware to enhance the technology capability of classrooms (Herold, 2016). For example, renowned higher education institutes such as the Cronkite School of Journalism at Arizona State University, Harvard Business School, and Queensland University of Technology (in Australia) have all eagerly embraced these innovations into their teaching (Davis, 2019). The integration of new technologies into college and university classrooms is particularly essential to their core functions (McCallum, Schultz, Sellke, & Spartz, 2015) because, according to the National Center for Educational Statistics, there are around 19.9 million students in higher education institutes in the U.S. (Davis, 2019). Their academic success will have significant impacts on the nation's future.

The integration of new educational technologies into college and university classrooms has been identified as a vital part to improve students' learning and ultimate academic success (Zhang, Dang, Amer, 2016). According to the Department of Education report (2006, p. 25), colleges and universities are encouraged to "evaluate student learning through the development of 'pedagogies, curricula, and technologies to improve learning'" (cited in McCallum et al., 2015, p. 42). The Office of Educational Technology, under U.S. Department of Education, has developed its *2020 National Educational Technology Plan* (NETP) that will integrate new educational technologies into education to improve students' equity and opportunity across the nation (Office of Educational Technology, 2019). More specific, this new NETP initiative, aims to present "a vision of equity, active use, and collaborative leadership to make everywhere, all-the-time learning possible" (Office of Educational Technology, 2019, n.p.).

To respond to this call for action, many colleges and universities have been enthusiastically developing and launching initiatives to introduce educational technologies into their classrooms (Yang & Kang, 2020). For example, the Center for Teaching and Learning at University of Washington is set up to offer faculty members to integrate technologies into their pedagogy and instructional materials (Center for Teaching and Learning, n.d., <https://www.washington.edu/teaching/teaching-resources/engaging-students-in-learning/teaching-with-technology-2/>; Yang & Kang, 2020). Harvard Business School has also designed a state-of-art 1,000 seat stadium (lecture hall) with a 61.8-foot-wide curved LED display to allow students and the instructor to engage in meaningful dialogues (Davis, 2019). Similarly, the University of Texas at El Paso has launched its Blackboard Institute to help faculty members transform their courses to the platform (UTEP, n.d., <https://campusedge.utep.edu/browse-by-unit/technology-support-services>). Other initiatives include Teaching with Videos series to help instructors to tailor their teaching materials to integrate audio-visual technologies into their pedagogies (UTEP, n.d., <https://campusedge.utep.edu/browse-by-unit/technology-support-services>).

There are various types of educational technologies available for teachers interested in adopting a technologized classroom; they include *White Noise*, *Cold Turkey*, *Kahoot*, *Venngage*, *Trello*, *Plickers*, *Nearpod*, *Prezi*, and *Class Dojo* (McQuire, 2016; Yang & Kang, 2020). Other technologies include *Google Apps*, *PowerPoint*, *Canvas*, *Clickers*, *Smartphone*, *Panopto*, etc. (Center for Teaching and Learning, n.d., <https://www.washington.edu/teaching/teaching-resources/engaging-students-in-learning/teaching-with-technology-2/>; Yang & Kang, 2020). In a chart describing the component of the 21st century classroom

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