Chapter 12

Examining Bilingual Teacher Candidates’ Use of Digital Media

Iliana Alanís
The University of Texas at San Antonio, USA

Margarita Machado-Casas
The University of Texas at San Antonio, USA

ABSTRACT

Digital media has transformed how we interact with each other, how we stay connected, and how we learn about the world around us. Digital media has also changed the teacher’s role from knowledge provider to facilitator (Lee, 2006). Teachers however, continue to struggle with technology and curricula integration as a vehicle for engaging young learners with academics (Chen, 2010; Wachira & Keengwe, 2011). This chapter underscores the need to provide bilingual teacher candidates with specific instructional uses for digital media to increase their capacity with technology integration, pedagogy, and content knowledge (Mishra & Koehler, 2006). This chapter explores the use of digital media within an after-school technology project. This research lends additional support for teacher preparation programs to integrate the use of technology if they are to serve teachers who work with a growing culturally and linguistically diverse school-age population.

INTRODUCTION

Things are seeming to improve more and more each day and I can tell that Everardo is learning more about technology and at the same time integrating education curriculum. (Erika, La Clase Mágica participant, 2014)

When new teachers enter the classroom, they are expected to use research-based practices and technology integration while working with digital natives (Prensky, 2001)—students who have been using technology since they were old enough to hold a smart phone or tablet. However, many new teachers do

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not enter the profession with a strong understanding of pedagogical technology integration but instead use technology to present lessons, read emails, and search the internet (Chen, 2010; Smith, Rudd, & Coghlan, 2008; Henning, Robinson, Herring, & McDonald, 2006). Furthermore, teachers reported obstacles in the use of digital media in instruction such as, lack of time or preparedness, lack of access, and anxiety (Wachira, & Keengwe, 2011; Hutchison & Reinking, 2011). Yet, it is critical for teachers who will enter a workforce that assumes they already have strong technology skills to use digital media as pedagogy to augment students’ learning (Alanís, 2014). This incongruity has implications for children who have limited access to technology and challenges for teachers who lack the knowledge required to teach within digital spaces.

This chapter draws from the larger corpus of data related to the impact of La Clase Mágica at The University of Texas at San Antonio (LCM@UTSA) (Machado-Casas & Alanís, 2017). La Clase Mágica is an after school technology-based project designed to promote the academic achievement of bilingual Latino/a elementary-aged students, particularly in the areas of bilingualism, biliteracy, and technology (see Vásquez, 2003 for a detailed description of La Clase Mágica). Within this project, undergraduate teacher candidates develop children’s bilingual and biliterate skills through technology with meaningful learning activities (Ek, Garcia, & Garza 2014).

The current study explores how using digital media within a teacher preparation program helps new teachers view technology integration as pedagogy for digital, bilingual, and bicultural literacies. Our research focused on two questions, (1) How does integrating technology into a teacher preparation program help bilingual teacher candidates utilize technological pedagogy when developing language and literacy? and (2) How will bilingual teacher candidates use this knowledge to engage with culturally and linguistically diverse learners? In this way, novice bilingual teachers become better prepared to compete in an increasingly global society.

THEORETICAL FRAMEWORK

There has been extensive research about how digital media changes the way students learn. As well as, an effort to help teachers adapt to new technologies (Koehler, Mishra, Kereluik, Shin, & Graham, 2014; Harris & Hofer, 2011; Mishra & Koehler, 2006; Niess, 2005). This research illuminates the need for teachers to have a basic technological understanding as well as knowledge of how to use technology as pedagogical practice that can strengthen students’ academic success.

For this qualitative study, we used two frameworks to guide our understanding of how teachers can use technological pedagogy to develop language and literacy skills. First, we used a sociocultural framework that considers the social nature of learning. Derived from Vygotsky’s view of learning, sociocultural theory views meaning making as a social and cultural phenomenon (1978). In Vygotsky’s theory of learning (1978), children’s mental, linguistic, and social development is supported by more competent others within a social context known as the Zone of Proximal Development (ZPD). When children engage with others, whether it is with their families, teachers, or their peers, they are using language as a tool to make meaning (Rowe, 2010; Vygotsky, 1978). It is within these interactions that children construct knowledge.

The TPaCK (Technology, Pedagogy, and Content Knowledge) framework was the second lens we used and is based on the work of Mishra & Koehler, (2006, 2009). The TPaCK describes the goals for technology use as a model of interrelationships among Shulman’s (1986) basic components of pedagogi-