Chapter 9

Development and Transfer of TPACK From Pre–Service to In–Service Experience for a Special Education Elementary School Teacher: Case Study

Aleksandra A. Kaplon-Schilis
The Graduate Center (CUNY), USA

Irina Lyublinskaya
College of Staten Island (CUNY), USA

ABSTRACT

This case study analyzed the TPACK development and a learning trajectory of a single pre-service special education elementary school teacher during TPACK-based graduate pedagogy course and TPACK transfer from this course to the teaching during induction year. The case study was guided by the following research questions: 1) What instructional strategies and experiences in the graduate pedagogy course supported TPACK development of this pre-service teacher? and 2) What are the internal and external factors affecting TPACK transfer for this teacher? The study showed that TPACK level of the participant increased to exploring level of TPACK throughout the graduate course, but regressed to Adapting level during first year of teaching showing partial transfer of TPACK. The study described course experiences and instructional strategies that supported preservice teacher’s TPACK development in the graduate course and identified some external and internal factors that could have affect the transfer of TPACK from college classroom to teaching.

DOI: 10.4018/978-1-5225-7001-1.ch009
INTRODUCTION

The rapid transition to digital learning in America’s schools has made it challenging for teacher preparation programs to stay in the forefront of this change. According to Ottenbreit-Leftwich et al. (2012) many pre-service graduates feel unprepared to use technology effectively in their classroom practice on their first day of in-service teaching. Many in-service teachers do not find specific technology skills they have learned in pre-service programs meaningful or relevant to their teaching practices. The Technological Pedagogical Content Knowledge (TPACK) framework, which is used to describe what teachers need to know to effectively integrate technology into their teaching practice (Mishra & Koehler, 2006), has been developed in response to these challenges. In the last decade, the TPACK framework has quickly become a widely referenced conceptual framework within teacher education, particularly as teacher education programs are redesigning their curriculum to provide a systematic and meaningful way of preparing teachers for technology integration to address the needs of all students (Chai, Koh & Tsai, 2010; Lyublinskaya, 2015).

The purpose of this case study was to analyze the TPACK development and a learning trajectory of a single pre-service special education elementary school teacher during a TPACK-based graduate pedagogy course and the TPACK transfer from this course to the teaching during the induction year. The case study was guided by the following research questions: 1) What instructional strategies and experiences in the graduate pedagogy course supported TPACK development of this pre-service teacher? And; 2) What are the internal and external factors affecting TPACK transfer for this teacher?

BACKGROUND

This section presents a literature review that introduces the TPACK framework, provides an overview of current research on TPACK with the focus on pre-service and in-service special education, and describes current studies on the teacher development, the transfer of knowledge from pre-service to in-service experience, as well as learning trajectories for teachers.

TPACK Framework

The TPACK framework as described by Mishra and Koehler (2006) was built upon Shulman’s (1986) idea of PCK (Pedagogical Content Knowledge) framework by adding the knowledge of technology as a separate domain, since technology, especially digital technology, have changed (or can change) the nature of the classroom. The TPACK framework describes the knowledge that teachers need for effective integration of technology in their specific content areas and grade levels (Niess, 2008). Seven knowledge domains described by the TPACK framework include: Technological Knowledge (TK) as knowledge and proficiency with technology tools (Shinas, Yilmaz-Ozden, Mouza, Karchmer-Klein, & Glutting, 2013), Content Knowledge (CK) as knowledge of the subject matter, Pedagogical Knowledge (PK) as knowledge of educational theories and instructional methodologies needed to develop appropriate instructions, Technological Content Knowledge (TCK) as knowledge of using technology tools to support specific content matter, Pedagogical Content Knowledge (PCK) as knowledge needed to develop and deliver effective content-specific instruction, Technological Pedagogical Knowledge (TPK) as knowledge of
Related Content

The Impact of Language Use and Academic Integration for International Students: A Comparative Exploration Among Three Universities in the United States and Western Switzerland
[www.igi-global.com/article/the-impact-of-language-use-and-academic-integration-for-international-students/244207?camid=4v1a](www.igi-global.com/article/the-impact-of-language-use-and-academic-integration-for-international-students/244207?camid=4v1a)

Ideas and Issues Concerning the Learning Environment
[www.igi-global.com/chapter/ideas-and-issues-concerning-the-learning-environment/195067?camid=4v1a](www.igi-global.com/chapter/ideas-and-issues-concerning-the-learning-environment/195067?camid=4v1a)

A Systematic Exploration of Language Learning Technologies: Insights for Developers and Educators
[www.igi-global.com/chapter/a-systematic-exploration-of-language-learning-technologies/224154?camid=4v1a](www.igi-global.com/chapter/a-systematic-exploration-of-language-learning-technologies/224154?camid=4v1a)

Educational Innovations in Nigeria: Planning, Reasons for Failure, and Prospects
[www.igi-global.com/chapter/educational-innovations-in-nigeria/111907?camid=4v1a](www.igi-global.com/chapter/educational-innovations-in-nigeria/111907?camid=4v1a)