

Preservice Teachers' Use of a Translation App With Dual Language Learners

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Abstract

Many practicing teachers face challenges with effective technology integration (Keengwe & Onchwari, 2009). Teachers who do integrate technology into their educational practices understand that it is not an end-all solution, but rather a support to their current pedagogical and content practices. However, a simple question remains among current early childhood educators, how can technology be effectively used and integrated into classroom environments in order to facilitate children's learning and development? Therefore, the purpose of this study was to explore how pre-service teachers (PSTs) integrated technology (a translation app) into their lessons and how students (dual language learners) responded to the use.

Background

- Despite the growing popularity and push for technology use in education, many practicing teachers face challenges with effective technology integration (Keengwe & Onchwari, 2009).
- Teacher preparation programs serve as a potential solution to increase the use of technology in elementary school settings (Kim, Hannafin, & Bryan, 2007).
- When technology is integrated in meaningful and purposeful ways, it can increase students' development of language, literacy, and math skills (Clements & Sarama, 2007).
- For dual language learners (DLLs), technology has been shown to have positive effects on their cognitive and social development and support their second language acquisition (Keengwe & Onchwari, 2009).

Conceptual Framework

- This study utilized Mishra and Koehler (2006) TPACK framework which identifies three types of knowledge teachers need to effectively integrate technology into their classrooms—technological, pedagogical, and content knowledge.

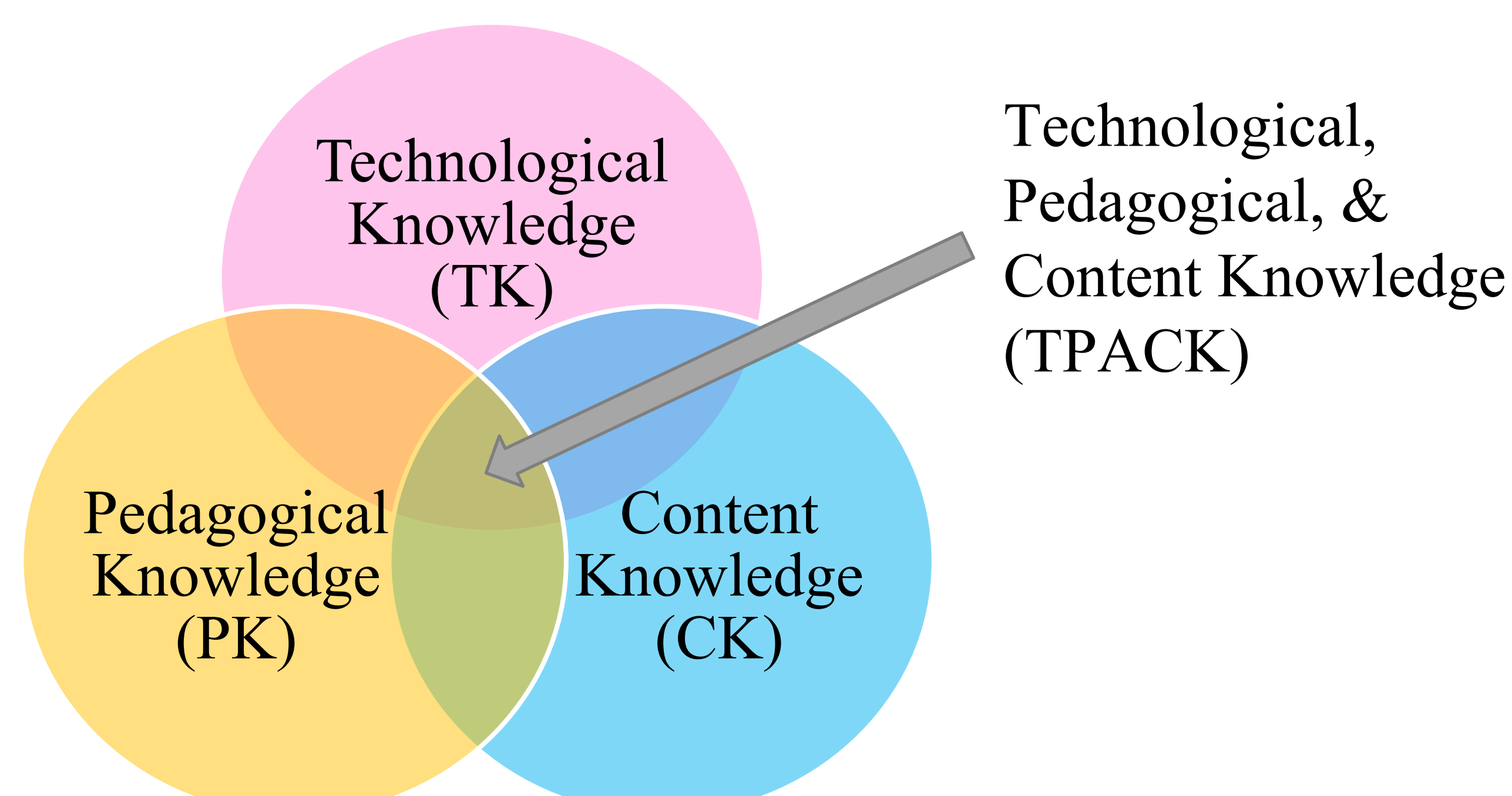


Figure 1. Mishra and Koehler (2006) TPACK Framework

Research Questions

- How do pre-service teachers integrate Speak & Translate with dual language learners?
- How do dual language learners respond to the use of Speak & Translate?

Methods

- This qualitative research study was conducted in a teacher preparation program in the Midwest.
- Thirty-one female PSTs participated in the study. Most of the participants spoke English as their first language (25), followed by Spanish (2), Punjabi (2), and Hindu (2).
- During their field placement experience, each PST taught 3 small group lessons with preschool children using the Speak & Translate (S&T) app.
 - S&T, the app at the center of the study, is a voice and text translator app that allows you to communicate with others in real-time through text and speech recognition technology
- After each lesson was taught, PSTs completed a lesson reflection. Questions included:
 - How did you incorporate the Speak and Translate App into your lessons?
 - What was the impact of your teaching on student learning for DLLs?
 - How did your group of children (DLLs) respond to the use of Speak and Translate?
- All reflections and lessons were uploaded into Dedoose for data analysis.

Analysis

- Level 1 and level 2 coding were used to explore PST's use of S&T with DLLs and how DLLs responded this experience (Bazeley, 2013).
- Mother (priori) codes were assigned during level 1 coding and were created based on the PST's reflections/lessons; child codes were developed under each mother code, respectively.
- Level 2 (thematic) coding was conducted to analyze patterns across reflection questions and lessons. Additionally, a co-occurrence matrix was developed to examine the relationship between codes.

Results

	Modeling Activity	Modeling Material Use	Instructions & Directions	Translate Vocabulary/Content	Total times S&T used
Lesson 1	2	0	1	5	8
Lesson 2	2	0	4	7	13
Lesson 3	3	4	7	11	25
Total	7	4	12	23	46

Table 1. How PSTs integrated Speak & Translate into their lessons (RQ1)

- PSTs used S&T during shared stories. They often read the page in English first, then used the app to translate the page to the child's native language (primarily Spanish).
- PSTs used S&T to model/explain what to do during an activity, how to use materials, and to translate instructions and directions for tasks.
- PST's noticed positive changes in DLL's body language, engagement, and motivation when they used the app in their lessons.
- PSTs described how DLLs "lit-up," "smiled," and "more easily participated" when they heard their native language.

Discussion

- Findings from the study encourage educators to support and allow student's first language use in the classroom environment.
- By incorporating translation apps with DLLs, teachers can begin to bridge the language gap by supporting their second language acquisition. This in turn increases their motivation and engagement in the classroom (Bebell & Kay, 2010).
- Findings from this study hold promising and important educational implications for pedagogical practices not only for PSTs, but also for current educators who work with DLLs.
- Future research needs to explore how teacher preparation programs support PST's journey to developing TPACK, and how mentor teachers support, or hinder, PSTs use of technology during their field experience.