Title of Project:
An Exploration of English Language Teacher Educators’
Cognitions and Practices in Relation to the Pedagogical
Purposes and Efficacies of 21st Century Digital Technologies

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Project Summary

Why This Study?
Twenty-first century technologies have emerged as powerful tools in the training of pre-service
teachers of English to speakers of other languages (TESOL) teacher trainees (Al-Mahrooqi & Troudi,
2014; Dudeney & Hockly, 2012; Heim & Ritter, 2013; Kukulska-Hulme, Norris, & Donohue, 2015; Stanley,
2013). While much research has focused on ascertaining the technology-related beliefs of teacher
trainees (D. Kim, 2011; Jang, 2008; Loughran, 2007; Wright, 2010), teachers, (Baek, Jung, & Kim, 2008;
Chai, Chin, Koh, & Tan, 2013; Hu & McGrath, 2011; Kim, 2006; Lee, Yoon, & Lee, 2009; Mellati, Fatemi, &
Motallebzadeh, 2013; Park & Son, 2009; Rahimi & Yadollahi, 2011), and education administrators (for reviews
see Ertmer & Ottenbreit-Leftwich, 2010 and Liu, 2013 and for an overview of the findings see
Mumtaz, 2000), one key group of ELT stakeholders has gone largely understudied: English language
teacher educators (Hwang, 2014; Prestridge, 2012).

The Focus of the Research
My doctoral dissertation, which is conceptualized as a multiple case study, investigated English
language (EL) teacher educators’ cognitions (Borg, 2013) and practices related to the pedagogical
purposes and efficacies of 21st-century digital technologies. The focus of the research concerns five
native-English speaking teacher educators (TEs) within a TESOL program at a South Korean university.
The goals of the research were to determine the following: (1) TESOL-TEs’ cognitions regarding the
pedagogical purposes and efficacies of 21st-century digital technologies, (2) TESOL-TEs’ uses of such
technologies in their practice, and (3) factors related to TESOL-TEs’ decisions about whether and how to
integrate technologies into their teaching practice.

Three strands of research provided the theoretical underpinnings for this study: (1) theories about
educators’ cognitions and beliefs, especially within the areas of TESOL and teacher education (Borg,
2013), (2) concepts about perceptions toward the integration of technologies into teaching (Mishra &
Koehler, 2006; Venkatesh, Morris, Davis, & Davis, 2003; Venkatesh, Thong, & Xu, 2012), and (3) theories

Data Collection
Data were collected over 20 weeks during one fall semester and included the following: (1) four rounds of semi-structured interviews and two sets of classroom observations for each of the five focal participants, (2) interviews with program administrators, (3) written reflections and field notes, and (4) photographs and documents for review. I coded data using King’s (2004) template analysis method. Categories were based on constructs from the technological, pedagogical, and content knowledge (TPACK) framework (Mishra & Koehler, 2006) and the Unified Theory of Acceptance and Use of Technology (UTAUT, Venkatesh et al., 2003) and UTAUT 2 (Venkatesh et al., 2012).

The Findings: Six Key Understandings
The focal participants displayed high levels of TPACK and used Web 2.0 applications extensively to facilitate interactions in their roles as teacher educators. It was found that UTAUT factors guided TEs’ technology-related decisions and behaviors to varying degrees, but that the mediating factor of age did not relate to TEs’ decisions in the manner predicted by the UTAUT. In other words, there was no pattern of younger TEs being more accepting of technologies and older TEs being less accepting. Moreover, TEs’ cognitions both coincided with and diverged from their practices. The findings from the research led to the formulation of six key understandings.

Understanding 1. There are five forces that act against and create tensions with voluntariness. I observed numerous instances of types of forces that created tensions with voluntariness and found that both of these elements at varying times added to and detracted from the pedagogical integration of 21st-century digital technologies. These five forces were: (1) perceived market pressure; (2) downward force from an accredited program; (3) a hierarchy of program directors, coordinators, and instructors; (4) teacher educators forcing trainees to use technologies; and (5) teacher educators forcing themselves to adopt technology-related behaviors.

Understanding 2. TESOL-TEs may demonstrate high levels of TPACK for L2 fluency enhancement but not for accuracy development. I found that teacher educators used technologies to help trainees’ language development through content and language integrated learning (CLIL) approach, with a greater emphasis on fluency practice.

Understanding 3. TEs may not be explicitly modeling instructional technology uses. I observed that while teacher educators implicitly modeled instructional technology uses (e.g., the creation and running of a learning management system), they tended not to explain their choices to trainees.

Understanding 4. TEs may use technologies differently for young learner and general TESOL courses. Teacher educators displayed different beliefs and practices when it came to how technologies could be used with teachers of young learners and teachers of general content classes. The use of 21st-century digital technology was somewhat discouraged for young learner TESOL projects.

Understanding 5. Cognitions and practices can simultaneously align and misalign due to effort expectancy. There were both congruencies and incongruencies among TEs’ cognitions and practices. For example, the TEs all said that they thought that technologies had powerful collaborative and reflective uses, and they used the technologies to this effect in their classes. However, while participants generally thought trainees needed to know about technology in the classroom, they did little to push the trainees to incorporate technologies innovatively into their own work.

Understanding 6. ‘Digital nativism’ (Prensky, 2001, 2010) and age are in the eyes of the beholder. I observed mixed perspectives among the participants on the very controversial term ‘digital native’ and
incongruence even among teacher educators of the same age as to how they described themselves and their trainees.

**The Policy and Pedagogical Implications of This Study**

This research offers several possible implications for TESOL policy makers and practitioners. First, the six key understandings revealed in this study raise important questions for practitioners.

- How can technology integration occur?
- Why might a teacher educator model implicitly and not explicitly?
- Why might a teacher educator come to believe that 21st-century technologies are appropriate for teachers of different age groups but not of young learners?
- How are trainees’ needs being interpreted—do teacher educators view and use the term ‘digital native’?
- Do TEs consider themselves and their trainees ‘digital natives,’ and if so, does that change the way they deal with 21st-century technologies in their practice?
- What forces are acting upon teacher educators in their decision-making related to 21st-century technologies?

As this study showed, a teacher educator who was quietly using and advocating for a new learning management system did not have the same power in bringing about change as an early adopter who was a louder advocate of a switch to a single system and who was in a position to implement such a system program-wide.

For policy makers in teacher education this research also highlights need to consider the particular population of TESOL-TEs and, in particular, those in South Korea (Hwang, 2014). TEs cannot help but act as models for teachers (Lunenberg, Korthagen, & Swennen, 2007) through their behavior and decision-making. Although the last decade has seen an increase in research on TEs, as of yet, the area is still lacking, and most information on TE cognition and practice must be gleaned from studies on the programs in which TEs work or the perceptions of their trainees. To gain a fuller picture of the people training the next generation of teachers, more direct empirical research is still needed on these crucial members of EL education systems.

My research aimed to provide a mirror by which teacher educators and administrators around the globe may garner reflective insights into their own practices. It is hoped that by reading the richly detailed cases of the five focal participants, teacher educators in other contexts will consider their relationship with 21st-century technologies and their intentions to integrate new technologies in their work.
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