

Chapter 18

High Possibility Classrooms: A New Model for Technology Integration

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ABSTRACT

This chapter reports on a case study of a high school teacher from a larger study of ‘exemplary’ teachers and how they conceptualized their knowledge of technology integration in education contexts (Hunter, 2013). The research was a series of purposeful case studies of teachers in classrooms in Australia. The study found that theory, creativity, public learning, life preparation and contextual accommodations are crucial. Each conception of the teachers’ knowledge is underpinned by particular pedagogical themes that together form a fresh vision for technology integration known as High Possibility Classrooms or HPC. Kitty, the teacher featured in this chapter, conceptualized her knowledge of technology integration based on flexibility, experiential learning and creativity, preparation of learning, and whole school culture. This case study builds on the TPACK framework (Mishra & Koehler, 2006) and provides an important theoretical and practical exemplar of technology integration in practice for teacher education in a digital age.

INTRODUCTION

In a recent TED talk *How to escape education’s Death Valley*, Sir Ken Robinson (2013) invited us to think about the ‘seeds of possibility’ for better education in schools. He emphasized that we are now ‘just waiting for the optimal conditions to come about.’ Drawing on the Robinson metaphor, this chapter argues that ready to support teachers to flourish in such environments is a new model of technology integration known as *High Possibility Classrooms* or HPC. The model emerged from

research on particular teachers’ knowledge of technology integration in schools (Hunter, 2013). It revealed that ‘exemplary’ teachers conceptualized their knowledge of technology integration based on theory, creativity, public learning, life preparation and contextual accommodations. The chapter features conceptions and themes of the HPC model in the classroom/s of Kitty, one teacher from the collection of four cases study in the research (Hunter, 2013), who taught middle years and high school students ranging in ages from 12-16 years in an Australian school in a major metropolitan city.

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Highly relevant for teacher education, the rich case study of Kitty offers a new model for technology integration to support pre-service and in-service teachers to create the kind of learning spaces that all students in schools need to inhabit in the future. A visual arts teacher, Kitty, works in a diverse and challenging context, often teaching students who no one else in the school wants to teach. The ambitious digital media projects she conducts require an expression of interest (EOI) from students before they can participate. Such projects give highly disengaged students the desire to stay on at school and learn. It is clear a 'sense of aesthetic' in the creation of products to express learning is important in technology integration. Kitty instills the same values into her students and this 'belief of beauty' is reflected in the quality of the work they produce. Her students use bonsai and other visual forms with various technology tools, and this facilitates experimentation and imagination, that in turn breeds success in learning subject matter.

Prior to examination of the case study in full, brief background to the study including details of the conceptions and themes of the HPC model are given, followed by a snapshot of the approach used in the research (Hunter, 2013). This snapshot sets out the research questions the study answered, and the methods of data collection and analysis including a glimpse of why case study methodology provided a particular opportunity to explicitly understand practice from the teacher's point of view. Also noted are limitations of the approach. Technology integration from the perspective of the TPACK framework (Mishra & Koehler, 2006) is outlined, and following the case study, solutions and recommendations for technology integration practices in teacher education are made. To conclude, future research directions are suggested. It is important to situate the study in some of the literature; the next section begins that process.

BACKGROUND

The study (Hunter, 2013) used the Technological Pedagogical Content Knowledge (TPACK) framework as its theoretical starting point and built on it to form the HPC model. TPACK articulates the relationship between content, pedagogy and technology both in isolation, and in pairs of content knowledge (CK), pedagogical knowledge (PK) and technology knowledge (TK). This connection evolved into pedagogical content knowledge (PCK), technological content knowledge (TCK) and technological pedagogical knowledge (TPK) and all three came together as technological pedagogical content knowledge (TPCK): "This was similar to the move made by Shulman in which he considered the relationship between content and pedagogy and labelled it pedagogical content knowledge ... we introduce two new pairs and one new triad" (Mishra & Koehler, 2006 p.1026). In all, seven TPACK components; the four teachers in the study (Hunter, 2013) demonstrated all of them in their daily classroom practices.

The development of TPACK features movements and more minor interpretations that began with Pierson (2001) and Shulman's (1986, 1987) original ideas around Pedagogical Content Knowledge (PCK), to the change of name, to research using TPACK in online contexts and moving to explanations involving play and TPACK (Koehler 2011). Related developments in self-efficacy and self-directed learning have also been found to be important in how TPACK is constructed (Mishra et al., 2013).

Figure 1 below displays the TPACK framework.

On close examination of the four teachers' practices in the study (Hunter, 2013) there were other aspects of their knowledge of technology integration at play in the classroom. These are conceptions of theory, creativity, public learning, life preparation and contextual accommodations. New understandings of technology integration based on this research from teachers' perspectives

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