

Chapter 16

Taking Making Into the Schools: An Immersive Professional Development Approach

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ABSTRACT

This chapter introduces professional learning (PL) challenges in a Digital Age and makes a case for an immersive, sustained, experiential approach including diverse groups of professionals. It explores how this approach informed novice and experienced educators to incorporate design thinking and making into their current practice. After providing background on the Maker Movement, an immersive PL model is explored. This model comprises an integrated series of PL experiences designed to encourage participants to actively engage in four distinct yet related elements. Drawing on a qualitative, iterative process, initial research findings and experiences suggest that such a model may support good PL and professional development for educators designing and developing 21st century learning environments. These findings suggest this model may allow for collaborative re-thinking of established course and curricular designs, while addressing significant social issues, encouraging participants to become thoughtful contributors in an increasingly complex, globalized economy.

INTRODUCTION

In this chapter, we introduce professional learning (PL) challenges in a Digital Age and make a case for an immersive, sustained, experiential approach including diverse groups of professionals. The current Digital Age is in an interesting place in terms of socio-economic change, opportunity, and

technological affordances. Currently, members from three generational cohorts are identified in our work force. In North America, 50% of the content users' access is cloud based. Approximately 95% of 12 – 17 year olds are regularly online, 76% of them use social networks, and 77% have cell phones (Barker, n.d.). Predicting digital life in 2025, experts imagine “people will tap into

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[the Internet] so easily it will flow through their life ‘like electricity’ ... [with] the most useful impact [being] the ability to connect people ...” (Anderson & Rainie, 2014, p. 5). For educators and learners in global north (Mimiko, 2012), formal or informal learning opportunities have probably never been more ubiquitous and flexible (Pink, 2005). Yet, when considering these educators’ workflows coupled with learners’ learning flows, digital literacy may require the same fluency and fluidity as the Internet or electricity. Basically, we are in a time where digital fluency is an essential skill locally, nationally and internationally as,

social, and technological transformations are linking us in unprecedented ways. Today’s students will need extensive knowledge of the world and the skills and dispositions to engage with people from many cultures and countries. They will need these to be responsible citizens and effective participants in the global marketplace of the 21st century. Few teachers today are well prepared to educate students for this new global context. (Longview Foundation, 2008, p. 3)

Therefore, with educators and learners having the potential to connect, formally and informally, at any time, space, place or format, learning environments are being redefined (Thomas & Seely Brown, 2011). In the Digital Age, access to information is not the challenge. When designing professional learning environments for pre-teachers and practicing teachers, a challenge rests in considering ways to invite novice and expert educators into new practices and workflows rather than reducing the goodness of the new thing into just another something to add to the existing, over-crowded curriculum (Macintyre Latta & Crichton, 2015). Unlike liberal education, students in teacher education learn in order to engage in practice (Shulman, 2005). Signature pedagogies, as coined by Shulman (2005), are “the types of teaching that organize the fundamental ways in which future [teachers] are educated for their

new professions” (p. 52). As students progress from classrooms into professional systems like education, they may experience uncertain localized contexts requiring the judgment to act and the cognizance to recognize the consequences of such an action. Shulman (2005) suggests that “in the presence of uncertainty, one is obligated to learn from experience” (p. 19).

Increasingly the Digital Age is being characterized by constant flux and uncertainty. Consequently, all levels of education (K - 20) are calling for personalized knowledge building and skills situated in authentic learning environments (Trilling & Fadel, 2004). A recent EdSurge document states “students learn best in environments where teachers themselves are model learners” (2014, p. 4). General characteristics of such learning environments include:

- **Learner-centered:** highly focused on learning but not as an alternative to the key role for teachers
- **Structured and well-designed:** needs careful design and high professionalism alongside inquiry & autonomous learning
- **Profoundly personalized:** acutely sensitive to individual and group differences and offering tailored feedback
- **Inclusive:** such sensitivity to individual and group differences means they are fundamentally inclusive
- **Social:** learning is effective in group settings, when learners collaborate, and when there is a connection to community. (Organization for Economic Co-operation and Development [OECD], 2011)

These learning environments are consistent with what Pink (2005) calls the Conceptual Age – a time where logical and linear thinking is valued, especially when it is coupled with creativity and innovation. Essential skills identified include exploration, visual aesthetics, and problem finding with problem solving. Hatch (2014), suggests

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