

# Chapter 1

## Cyborgs and Cyberpunks: Implications of Digital Literacies in Schooling

Douglas J. Loveless  
James Madison University, USA

### ABSTRACT

*This conceptual chapter introduces theoretical issues to consider when reflecting on digital technologies in educational processes. Rather than beginning this book with a practical discussion of how to employ digital technologies as teaching or learning tools, the ideas presented here, and in this section of the book, provide a beginning to philosophically probing the implications of integrating such technologies into schooling. This type of reflection, initiated in this chapter and developed further in others, should continue throughout the book to inform perspectives shaped when reading about more practical matters. Ideally, theory and practice concerning digital technologies form a cyclical relationship. The dialogue presented here on empowerment, identity, and social/corporate globalization will hopefully lead to a Freirian notion of praxis involving reflection and action that transforms the world.*

### INTRODUCTION

The stories we tell, particularly in works of science fiction dating back to Mary Shelley's (1823) *Frankenstein*, illustrate a deeply embedded mistrust of and complex relationship with technology. The artificial intelligence Skynet in the Terminator movies (Hurd, 1984; Cameron, 1991; Kassir, Lieberman, Michaels, et al, 2003; Anderson,

Borman, Kubicek, & Silver, 2009) oppresses humankind nearly to the point of extinction shortly after becoming self-aware. Rather than attempting to exterminate the human population, the sentient machines from *The Matrix* (Silver, 1999) use a simulated reality to subdue people and harness their energy. In the novel *Dune* (Herbert, 1965), humans have overthrown the reign of thinking machines after thousands of years of subjugation.

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Of course there are also utopian stories of technology, but we always seem to be more riveted by the dystopian tales in which technology rebels against its creator. Still, technology experts (e.g. Brooks, 2013; Ghose, 2013) eagerly anticipate the theoretical moment of singularity (see Vinge, 1983; Kurzweil, 2005) when computer intelligence will surpass human intelligence.

Cautionary tales, written from another perspective, like *Brave New World* (Huxley, 1932), *Nineteen Eighty-Four* (Orwell, 1949), and *Enemy of the State* (Bruckheimer, 1998) express perhaps a more currently relevant fear reflected in the writings of McLuhan (1964). These stories suggest it is not the machines that we should fear, but the hidden humans controlling technology to reinforce the status quo. In these scenarios, as McLuhan contends, the elite use technology to suppress the subaltern (see Aronowitz, 1992), affecting the ideologies, identities, and actions of all users. This is reminiscent of the controlling visibility described by Foucault (1977) and the ramifications of the digital generation discussed by Palfrey and Gasser (2008).

As digital technologies become increasingly integrated into our social institutions, including schooling, we must continue to question what happens to those individuals who participate in the institutions and use the technologies. This book focuses on schooling since digital technologies have become an integral part of the public education system leading to terms like *digital literacy* and Prensky's (2001) problematic *digital natives/digital immigrant* dichotomy among others. In 1999, there was one school computer for every five students in school, and 99 percent of teachers had access to computers (Smerdon & Cronen, 2000). By 2005, the average public school contained 154 computers and 94 percent of all classrooms had Internet access (Snyder, Dillow, & Hoffman, 2008). These computers impact both academic and social interactions that take place in schools. This ever-increasing integration of digital technologies and teaching practices adds another thread to consider in discussions of education.

In this book, *Academic Knowledge and Multimodal Curriculum Development*, we have gathered a number of scholars who theoretically, historically, and practically examine the complexities and challenges of teaching and learning in the digital/information age. To capture the complexities of the student/teacher relationships with digital technologies, with one another through technology, and with the concepts being learned in a technologized environment; this chapter begins the discussion by introducing theoretical and epistemological implications of using digital technologies in schooling. Before we examine the practical question of how to use technology later in this book, we must first consider the question: What is the relationship between digital technologies, the learning environment, and the individuals inhabiting that environment? Like all relationships (see Bloom, 2013), the relationships formed through digital technologies are complex, as ideas and people interact in iterative educational processes.

Some scholars effectively argue that the use of technology is inevitable and "here to stay" (O'Brien & Scharber, 2008, p. 68). Nonetheless, as reflective educators, we have the responsibility of informing our practice with thoughtful considerations that delve deeper than the *how to* question. This chapter aims to initiate these sorts of reflections on digital technologies' place in education. The first section of this chapter provides background information, linking digital technologies with discussions of empowerment. The second section explores issues of identity, globalization, and the corporatization of schooling through the lens of digital technologies. The final section presents possible directions for future research.

## BACKGROUND

With the advent of the computer and its steady induction into the classroom along with increasing Internet capabilities, empowerment in education came to involve digital technological factors. Of course, the dialogue has moved beyond computers

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