Chapter 9
Pedagogical Cases in Integrating Technology Into Instruction:
What Can We Do to Celebrate Failure?

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ABSTRACT

This chapter will showcase two practitioners' experiences in using technology tools to promote student engagement in learning in high school and college classroom contexts. A review of the characteristics of technology tools used and the suitable theoretical background of the use of their chosen technology tools will be presented respectively. This is followed by an overview of two failed instructional experimentations to integrate technology tools into existing teaching formats. The chapter will present a series of reflections on the suitability of educational incentives that technology can offer and provide some pedagogical insight for teachers who are thinking of using technology tools as a means to support student learning. This chapter will contribute to conducting successful research and development that can advance the effective use of technology to support teaching and learning.

INTRODUCTION

Researchers have asserted that problems associated with technology integration may have much less to do with access and technical mastery of technology and much more to do with effective use in practice (Al-Awidi & Alghazo, 2012; Jenkins et al., 2006). Understanding appropriate pedagogical practices for using technology can be more important to effective instruction than technical mastery of technology, although both elements are essential. As instructors and educators, we often encounter emerging innova-

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tions, but we have little evidence that integrating innovative technology tools in learning is more effective than not employing technology tools. Often, a positive vision and promising technology features–without careful consideration of course design and student learning–have led to failed pedagogical experiments, which, in turn, discourage educators from adopting new technology tools in their classroom instruction. Although much research seeks to promote the positive elements of technology adoption in educational contexts, educators should be wary of possible negative consequences when the integration of technology into an existing teaching context is poorly designed and supported. Failed integration experiences can, however, provide invaluable lessons that might lead to a better understanding of innovative technology ideas and impact factors that will hopefully prevent future failed technology integration in the classroom.

This paper will showcase two practitioners' failed experiences in using innovative technology tools to promote student engagement, in both the high school and college classroom contexts. A review of the characteristics of technology tools used and the suitable theoretical background of the use of their chosen technology tools will be presented. This will be followed by an overview of two failed instructional experiments to integrate technology tools into existing teaching contexts. The paper will present reflections on the suitability of educational incentives that technology can offer and will provide some pedagogical insight for teachers who are thinking of using technology tools as a mean0s to support student learning and engagement.

BACKGROUND

Pedagogical Challenges to Integrating Technology Into Instruction

This section will discuss empirical, emerging pedagogical challenges associated with integrating technology into education. Because of ineffective ways of adopting technology tools, this can inhibit the transformation of teaching without careful research and a needs assessment of learners. Researchers assert that teachers often concentrate on making the best use of the newest digital technologies, ignoring the effect of their use on student learning and their own teaching approaches (Adams, 2012; Judson, 2006). This section will further highlight a series of unexpected issues in teaching with social media, including deficiencies with and a lack of the following: careful analysis of goals and audience; guidance on which tools are appropriate for different settings; rigorous participations; intentional effort to read the posts made by others a while ago; and visually salient formatting of online discussions, such as a linear text-based format.

This chapter also explores a relatively new term in education: gamification. Since millennial and Generation Z students live and grew up in the world of video and digital games, it is critical to research how gamification might affect their teaching and learning. The research literature connected to gamification is limited, and there is a need to explore the effect of gamification on promoting and sustaining learners' motivation and engagement. This literature review will include studies done on the effect of gamification on learners' engagement and motivation.

A significant problem that many schools and educators are facing today, as posited by Zichermann and Cunningham (2011), is that many students lack the motivation and interest to learn. One of the proposed solutions to this problem in schools has been to adopt gamification strategies in the classroom to mitigate disengagement through the marriage of education and entertainment. *Gamification* has been