

Chapter 1

From App Attack to Goal-Oriented Tablet Use

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ABSTRACT

There is a need to move from the hype of tablets and apps to the usefulness and functionality of tablets' hypermedia capabilities to engage K – 12 students and teachers. Tablets are dynamic devices allowing students and teachers to construct knowledge multimodally, individually, and collaboratively. With so many different types of tablet devices, it is important to make well-informed decisions around goals and educational objectives. A hybrid theoretical approach is offered in this chapter that offers guiding markers. Considering the “four Cs” of context, curriculum, content, and collaboration as foundational guidance, this chapter offers insights and support when integrating educational technology. Considering these elements offers clarity for which theories and practical pedagogy would be applicable and how they should be applied for successful tablet educational engagement. The need exists to theoretically and practically plot and plan how to use tablets and apps, making the educational teaching and learning practice a rich interactive experience.

INTRODUCTION

As the rise of ‘the’ apps continue to march strong, there is a need to utilize educational theories to inform tablet and application integration into educational contexts. The purpose of this chapter is to offer universal and well established educational theories that can aid planning, interaction and delivery with tablets around educational goals and objectives. Without educational theories supporting practical pedagogy, tablet use in educational settings can be fraught with issues amidst the

simple and multitude of apps and uses available. With these interactive tablet tools readily available and at the mercy of a swipe or a tap of our fingertips, tablet devices, like the iPad, Kindle and many Android tablet options, are rapidly becoming devices of choice for consuming content. Partly because of the simple and easy interface, quick start up times as well as the availability of a plethora of applications (apps). The multitude of apps alone can be overwhelming, and without a theoretical understanding, selecting an app to aid the pursuit of educational outcomes can complicate matters.

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Thus, this chapter offers the theories that converse the pedagogical underpinnings supporting the use of tablets in and outside of the classroom.

BACKGROUND

From designing and teaching a mobile learning graduate course for more than six years and being in the educational technology space for more than fourteen years, to working on various projects with K- 12 schools, after school and non-profit organizations, the experience has been of administrators and non/trained teachers to jump on the technology bandwagon, add a shiny new toy to the educational experience to look technological savvy and impress stakeholders superficially. Very little theoretical guidance for practical pedagogical use or professional development offerings is available for K – 12 teachers who are already suffering from time poverty (Provincial Government of Alberta, 2012; Greenly, 2013). Teachers often have to respond to the frequent demands of policy changes for technological purposes, but are provided little professional development, time and strategies to prepare themselves to satisfy those demands and to strengthen their competencies (Greenly, 2013; Mills, 2013). Furthermore, there is value in adopting tablet technology as recent short term studies (Molina, et al., 2013; Simpson, et al., 2013; Stewart, et al., 2013) conducted in K-12 educational settings have shown success and improvements in assessment scores (Dalyrimple 2012), possibly from better information retention because of multimodal interactive capabilities of the tablet (Boyle, 1997; Moreno & Mayer, 2000) and in turn, higher levels of student engagement (Baca, 2012; Bonnington, 2012; Whittingham, 2013) if supported by foundational educational theories and practices (Wiske, 2001; Harmon, 2011; Hughes, 2004; Sandvik, Smørðal, & Østerud, 2012). Consequently, when theoretically advised pedagogical practices, with objectives and goals, are driven by educational technology

integrations, tablets add value to the educational experience and become powerful educational tools in the hands of educators and students.

The chapter will identify some of the major challenges of supplying teachers with tablets or apps, and expecting them to use either without offering guidance or professional development resources. In parallel, this chapter will describe, list and provide the reader with offerings of theoretically-informed practical pedagogical options applicable no matter the device or app. Specific apps are provided as examples that will highlight some constructivism and behaviorism, as well as situated cognition as examples to show the relevance of those theories and how to leverage collaboration amongst students, when appropriate, to encourage iterative learning, critical thinking through the promotion of hosting multiple perspectives through real time and offline tablet engagement with their peers and teachers. Within the chapter there will be suggestions and simple ideas, as well as handy solutions for educators to use or share with students. In short, using a variety of theories and practical applications, this chapter will demonstrate that a hybrid approach of face-to-face and online engagement for teaching and learning with tablets is necessary for the development of successful and dynamic educational activities.

FROM HYPE TO HYPERMEDIA

Issues, Controversies, and Challenges

Tablets are far more interactive than a paper textbook. Therein lies the advantages and the challenges of their use in the education field. Consequently, teachers, curriculum designers, educational leaders and school administrators need robust theories to think, to evaluate, and to define their teaching rationales and, ultimately to rethink their teaching philosophies. Because

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