Chapter 4
A Pedagogical Approach Towards Curating Mobile Apps in an Educational Context

Helga B Hambrock
Concordia University - Chicago, USA

Richard G Richter
Concordia University - Chicago, USA

ABSTRACT

Mobile apps vary in functionalities. The more apps are developed, the process of determining whether an app is effective in an educational environment can become next to impossible. The purpose of this chapter is to propose a curation rubric with a specific focus on evaluating mobile apps by utilizing three pedagogical frameworks as guidelines. Existing pedagogical frameworks for categorizing apps have been proposed by Allan Carrington based on Bloom's taxonomy for learning and the SAMR model by Puentedura. In this study the researchers are widening the lens by proposing the inclusion of the levels of instruction by Gagne as a third pedagogical framework as part of a curation rubric for mobile apps. The rational for adding the third framework is supported by the notion that technology should be regarded as "mindtools" which do not only focus on learning with technology, but also rely on effective facilitation and implementation thereof in an educational context.

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INTRODUCTION

A vast number of mobile apps are flooding the market every day (Levenson, 2018). For a facilitator, the choice of which mobile apps to use for learning with mobile devices is becoming extremely complicated and the challenge to make an informed decision to choose the most appropriate apps for an education context needs attention (Baran, 2014; Du, 2015). To address this enormous task this study presents a short review of existing curation criteria for mobile apps and proposes a curation rubric based on three pedagogical frameworks including a cognitive, a technological-pedagogical, and an instructional approach. By utilizing the proposed curation rubric mobile apps are critiqued with the objective to improve educational achievements of learners driven by theories related to pedagogy. The rationale for using these three pedagogical frameworks is based on the notion that technology (in this case mobile apps) needs to be considered as "mindtools" to enhance critical thinking and problem solving (Jonassen, Carr, & Yueh, 1998) which are essential skills for "twenty-first century life, work, and citizenship" (Scott, 2015, p. 1).

In addition to using apps to support learning, they can also afford the possibility for inclusion and ubiquitous learning (Maich, 2016). But the question remains, which of the available apps are of educational value in terms of their contribution to achieve different levels of learning and to answer the question a curation rubric for mobile apps was identified.

Before the curation rubric is compiled and applied, a historic walk-through of the development of mobile apps is presented in the first section of the chapter. In the second section, three proposed pedagogical frameworks are discussed as possible criteria to assess whether an app is, or is not useful for the educational context. Only then a combined curation rubric is proposed and applied with examples by curating 6 identified apps. The chapter ends with a conclusion consisting of a summary and recommendations for future studies in this field.

BACKGROUND: A HISTORIC WALK-THROUGH

Mobile applications or mobile apps, are software programs which were initially developed by mobile device handset manufacturers for their internal company use. After smartphones emerged, the market for mobile apps grew due to the increasing power and capabilities of the smartphones and the increase of demand. Improvements of the global positioning system, battery life, camera, displays and processor have pathed the way to the development of feature rich applications. In 2008, Apple offered a third-party application distribution system known as App Store that was followed by Google in the Android market, known as Google Play. More distribution markets