Mobile content: traits and characteristics

According to Wikipedia, mobile content "is any type of electronic media which is viewed or used on mobile phones, like ringtones, graphics, discount offers, games, movies, and GPS navigation. As mobile phone use has grown since the mid-1990s, the significance of the devices in everyday life has grown accordingly" (Wikipedia, 2013).

Mobile content varies in range from basic text messages to applications to even videos and podcasts. To truly understand mobile content, one must first assess the term "content." According to *Exploring a Heterogeneous and Fragmented Digital Ecosystem: Mobile Content*, "content has 2 possible origins: creative content and processed information" (Feijoo, Maghiros, Abadie& Gomez-Barroso, 2009, p. 283). Creative content focuses more on "the creation of goods with an intrinsic cultural, aesthetic, or entertainment value" whereas "processed information refers to the identification of information and its timely adaptation to user preferences" (Ibid.). Mobile content can be defined as a combination of both creative content and processed information used in a mobile setting. (Ibid.)

When determining mobile content, teachers must ask themselves what the objective is regarding the topic of the course. Just like typical classroom learning content, it is important to understand the pedagogical implications of the content and coinciding activities in order to best facilitate learning. However, in addition to typical classroom concerns, teachers must assess the technological limitations of their learning space. If the classroom is BYOD, then it is imperative that the content be designed for various platforms. The content should have the capabilities to be sent to both smartphones and basic mobile phones. Additionally, teachers must take into consideration whether students' phones have internet capabilities or whether students can afford the internet on their phones. Although this seems to be a more technical aspect of mobile content, it is important in determining the length of the mobile content. If students need to use their data to complete the activity, it is important for it to be as short and concise as possible.

Mobile content is similar to and different from e-content. Often, mobile content, like e-content, is designed to be used outside of the classroom (Feser, 2010). The main difference between mobile content and e-content is the length of the content (Ibid.) . Because mobile phones are used continuously throughout the day, but only for a brief period each time, it is essential for mobile content to require around five minutes of time (Training Partners, n.d.). Therefore, it is important for mobile content to be both straightforward and concise in comparison to e-content. Teachers must be aware, when designing mobile content, of the differing capacities of mobile devices (Ibid.) In BYOD scenarios, smartphones will have greater capacity for learning content than basic mobile phones. However, with both smartphones and basic mobile phones, the learning content must be short in order to not exceed students' mobile learning attention span. While e-content is designed for students who have a significant amount of time set-aside to complete the tasks at hand, mobile content is designed for students on-the-go (Feser, 2010). They can do their homework, read, or study, while on a bus, doing household chores, or waiting in line at the market. Essentially, mobile content is designed to to be used during periods of downtime students already have throughout their day. Additionally, e-content is typically designed to be learned at a later time, whereas mobile content is designed to be learned on the spot. Students typically access their mobile devices in areas where distractions are easy (Training Partners). Because of students' propensity to be distracted while using their mobile device, it is necessary that the content be both informative and engaging. Students should feel like they are having fun while learning on their mobile device, thereby both promoting and encouraging their own individiual scholarship. As mentioned here and in the paragraph above, mobile content needs to be short and concise in nature, due to both the limits of students' attention spans as well as their internet data. However, in addition to the needs of the student, it is also important for mobile content to be limited in nature according to the needs of the device. One does not want to render mobile learning ineffective simply by creating a file size too large for the mobile phone, leading to technical problems with the device.

Another important factor to take into consideration is that mobile content is often more collaborative than e-content (Feser, 2010). Since mobile devices are primarily used for communication purposes, it is natural that this social element is incorporated into mobile learning content.

Mobile content should encourage student to student communication as well as student to teacher

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communication. Often, depending on the technical capabilities of the mobile devices used, students may have an ongoing story amongst each other, written solely from their mobile devices. Additionally, students are able to provide various insights regarding the topics being learned through discussions with one another or discussions with the teacher, allowing for a more personalized and student-centered learning environment. Mobile content should be designed to allow teachers to adequately and accurately assess the students' knowledge of the topics being learned, allowing for a more flexible learning environment dependent on that knowledge.

As stated previously, it is important for mobile content to be short in length. Furthermore, it should have limited features. Typically, people use their mobile devices with just two fingers, and users do not want to spend too much time scrolling (Training Partners, 2010, p. 4). If the mobile content has too many features, it will be complicated and confuse the users (Ibid.). Indeed, mobile content should be as simple as possible. Frequently, mobile content includes the most basic html, audio, and video capabilities. However, not every mobile phone has these capabilities. For example, most mobile phones cannot have adobe flash player, a software for viewing animations and movies.

Not only is it essential that mobile content be compatible with various operating systems in BYOD scenarios as already mentioned, but it is also necessary for the purpose of creating a sustainable mobile learning program. In order to promote continuity with future mobile learning programs and future technologies, the content needs to be designed for various platforms (or at least easily transferrable to a different platform.) If one designs an audio component to his or her mobile learning curriculum, this component must be adaptable to smartphones, basic mobile phones, and future mobile phones that have yet to be designed. For example, although basic mobile phones simply have voice call and sms capabilities, users could receive computerized phone calls that provide learning instruction. Smartphone users with internet capabilities could have audio files sent to their devices through SMS and by email. Indeed, through the use of mobile phones, there are various learning spaces and many ways in which students can acquire knowledge as well as exercise their knowledge.

Another factor to take into consideration when designing mobile content is the organization of the actual in-person learning space. Many teachers now have a "flipped" classroom where students watch instructional video recordings on their mobile devices and then practice this acquired knowledge in the classroom. This way, students have the opportunity to reinforce their knowledge with the assistance of a professional. Teachers can then have a greater idea of the students' general understanding of the topic and base the remaining curriculum on that determination. However, it can also be argued that the "mobile" aspect of the program should be the reinforcement portion of the class. Teachers may have a host device that easily and accurately grades and sums up each individual student's knowledge of a topic simply by determining the number of questions students answered correctly in response to subject-knowledge questions sent by SMS. Although these debates simply reflect personal teacher preferences, teachers must decide which path they wish to follow in order to best determine the mobile content suited for that particular path.

Content is an important aspect of any learning curriculum, but it is particularly important regarding mobile learning. In summary, mobile content must be short in length, small in file size, as simple and straightforward as possible, and adaptable to various mobile phone technologies. Students should be able to easily access learning information while on-the-go during their completion of other daily tasks. It needs to be designed in a way that encourages and promotes its sustainability within various learning environments. In this section, the toolkit will teach you how to design mobile content for each teacher's classroom. It will provide teachers with a checklist for assessing your mobile content as well as the taxonomy of mobile learning activities. Additionally, it will assist teachers in creating mobile activities for their classrooms.

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