



# Reflections on mLearning in Creating Awareness in the Study of Local Culture in the Malaysian Context

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## **ABSTRACT**

This paper presents the researcher's reflections on the study of local culture and makes recommendations for creating awareness in the light of qualitative research conducted in Malaysia. The recommendations address student-generated local content in mLearning using mobile phones; culturally appropriate design guidelines for mobile applications; and managing privacy, personal security, and data management by educational organisations. In addition, connections with learning theory are made which apply to the study of local culture in the Malaysian context at institutions of higher learning.

## **Keywords**

Study of local culture, student-generated content for mLearning, culturally appropriate design guidelines for mobile applications, data privacy and security management

## **INTRODUCTION AND BACKGROUND**

Mobile learning, or mLearning, is about using handheld devices both inside and outside the classroom, and even for learning in remote locations. The affordances and convergence of multiple functions in handheld devices can support a dynamic learning process.

In managing the advent of new technological mobility and this new approach to learning which constitutes mLearning, connectivism (Siemens, 2005) is more pragmatic in that it connects humans and technology and supports decisions about what is appropriate in the dynamics of learning. In connectivism, the knowledge can be outside the learners: they do not necessarily know everything about the subject, but essentially know how and where to access the information online on their own.

This research focuses on the study of local culture, in the form of humanities-related subjects, such as History, Cultural Heritage, Cooking, Wood Craft, etc., that focus specifically on Malay culture, highlighted in the National Cultural Policy as Malaysia's indigenous culture (JKKN, 2010). This research focuses on local Malay culture, as it is the dominant culture of practice and communication, including within the Malaysian public university system.

The researcher's interest is in exploring mLearning, particularly the study of local (Malay) culture (Ariffin & Dyson, 2011) in the Malaysian university context. However, the current study suggests a lack of awareness in Malaysia from students and academics about what mLearning can contribute to the study of local culture (Ariffin & Dyson, 2012). The researcher found that there is a lack of mobile applications having to do with cultural content (Ariffin, Dyson, & Hoskins-McKenzie, 2012).

Second, mobile phones are underused in mLearning in general (Kukulska-Hulme, 2010), and specifically in the study of local culture. Moreover, there is a lack of culturally appropriate design guidelines for local information and communication technology design that can inform the use of technology in education. This lack is evident particularly in the absence of a bridge between human-computer interaction and specific local requirements (Young, 2008), and in the absence of user interface design guidelines (Nielsen, 1990) for mobile applications (Nielsen, 2012). Lastly, one of the challenges in encouraging student-generated content for mLearning is in managing data and information. Privacy, personal security, and data management can play a huge role in connectivism in order to protect data in the mLearning environment. However, there are limited published guidelines for best practice in mLearning, which can include privacy, personal security, and data management (Al-Shehri, 2011).

The issues and challenges of mLearning awareness are exacerbated by the fact that mobile phones are banned in primary and secondary schools in Malaysia, although they were permitted in universities at the time this paper was written. This paper reflects the researcher's perspectives on creating awareness of ways to use mobile phones (Dykes & Knight, 2012) in the study of local culture.

### **CONNECTIVISM THEORY**

Connectivism is a practical approach and a catalyst for managing this new modality of learning (Siemens, 2005). Kim, Caytiles, and Kim (2012) demonstrate the benefits for students of wireless technology in ubiquitous learning encapsulated with connectivism learning theory: in a distributive learning environment, students can gain experiences and interactions in their own learning communities.

### **CREATING AWARENESS FOR LOCAL CONTENT DEVELOPMENT**

This researcher has observed no connection at all between content development and student-generated activities in mLearning within the Malaysian context. However, many researchers contend that local-content development can be aligned with student-generated activities (Kukulska-Hulme, Traxler, & Pettit, 2007) to mLearning content (Dyson & Litchfield, 2011; Litchfield, Dyson, Wright, Pradhan, & Courtille, 2010; Dyson, Lawrence, Litchfield, & Zmijewska, 2008).

Classroom teachers must take responsibility for promoting the use of mobile phones in creating mLearning content. Depending on students' background and level of software literacy, teachers can recommend that their students use their own mobile phones to create local content.

#### **Students with Basic ICT Knowledge**

Students may develop local content, for example, to aid their mastery in the study of local culture using software provided with their mobile phones, such as taking photos, recording video and audio. At the most basic level, the students could take photos to integrate into their assignments. Peer learning could be incorporated by having students with better ICT skills help those who lack the skills to carry out more demanding tasks.

#### **Students with Advanced ICT Knowledge**

Students may develop local content along the lines of the students who have a basic knowledge of ICT using software provided with their mobile phones along with other, more advanced software. The students in a recent "Technopreneur" class had a multimedia background and used their expertise to collaboratively create local content, for example, about local museums, local histories, tourism sites and the environment (Ariffin, 2009).

### **CREATING AWARENESS FOR USING MOBILE PHONES**

To create awareness of the potential for using mobile phones in learning, lesson-plan objectives must be modified to incorporate the use of this technology. Mobile phones are, ideally, tools for the enhancement of learning, not replacements for instructors. To successfully integrate mobile phones

into learning activities, instructors must assess students' readiness, including how many own mobile phones and how many can use the relevant phone functions and software. Although training must be provided, learning from peers is also possible and desirable.

### **Technology and Infrastructure Readiness**

Both students and instructors must be encouraged to use mobile phones in the study of local culture, such as being told to "Bring Your Own Device" (Puente, 2012). Incentives could be given to teachers and students to have appropriate mobile phones for learning. Having a mobile phone must be aligned with hardware and software capabilities; wider screen size; touch screens; wireless hot spots; coverage in rural areas; low-cost or free data packages, smart phones and services; and simple, brief and informative mobile applications for the study of local culture.

### **Activities Using Video**

Video recordings using mobile phones are important, not only to produce files that can be viewed later but also to develop material for assignments. Teachers should be aware of assignments for which mobile phone video recordings might be appropriate, for example, real-life situations, people interacting, interviews, experts doing cultural demonstrations, etc. Other capabilities of mobile phone applications are video streaming and video calling, which could be useful in improving the study of local culture. Students might later edit the videos, for example to create vodcasts (Litchfield et al., 2010) or screencasts for publishing on the Internet. .

### **Activities Using Audio**

Students can use mobile phones to record people telling their stories, interviews, or speeches. Instructors need to keep in mind the capabilities of mobile phones, such as audio streaming and audio calling. Similarly to video, audio content can be used to generate podcasts for publishing on the Internet (Nataatmadja & Dyson, 2008).

### **Activities Using Photos**

Taking photos is one of the most common activities by students using mobile phones. Students already use photos widely as evidenced in their studies of local culture in Malaysia, and this could also include the editing of photos and making them available for sharing, particularly as photos have the advantage over either video or audio content of smaller file sizes. A series of photos can present chronologies or stories for later use either in assignments or in final reports.

### **Activities Using Portal**

Mobile phones can be used for both searching and sharing information such as audio, video and photos on mobile portals (for example, a blog or other social media). Students may interact with their friends and instructors via a mobile portal. Teachers may benefit from using a mobile portal by sharing learning content with their students, making announcements, and generally interacting with students. For example, in this study students and academics used both Facebook and blogs in these ways.

### **Training to Use Mobile Phones**

Teachers need to be trained before they can demonstrate to their students how to use mobile phones for learning activities. Once trained, the teachers should use scaffolding to demonstrate techniques for using mobile phones effectively for recording video, audio, and photos. Brighter students will then be expected to train those of their peers who find the technology difficult.

## **CREATING AWARENESS FOR CULTURALLY APPROPRIATE DESIGN**

Kukulska-Hulme (2007) stressed that usability aspects are ignored in mobile-technology research: specifically, there is no connection between mobile applications and the users evaluating the application.

Consequently, the needs of both students and teachers must be considered when designing culturally appropriate mobile applications, particularly user-interface design principles (Nielsen & Mack, 1994) for mobile applications (Nielsen, 2012) that focus on local culture (Reinecke & Bernstein, 2011).

Because the subject is related to the local culture, the design principles must emphasise local aesthetic values (Hussin, 2010; Jamal, 1992). The mobile application – including its content and its philosophical and intellectual basis – must accord with Malay culture in a design that is appropriate to the subject.

### **Local Aesthetic Values**

One of the aesthetic values is the application of motifs (Hussin, 2010; Jamal, 1992) that portray local cultural elements. Motifs such as local flora to represent traditional Malay philosophical values can be incorporated into the mobile application's user interface (Ariffin & Dyson, 2011) in either contemporary or traditional ways without losing their philosophical value.

### **Local Language**

Since local language is important (Mastor, Jin, & Copper, 2000) in mobile applications employed in the study of local culture, it is advisable to use either bilingual text (English and Malay) or solely Bahasa Malaysia (known as Bahasa Melayu). The words used must be subtle, respecting the values taught in the study of local culture.

### **Local Context Sensitivity (Moral Value in Malay Culture)**

When designing mobile applications for different subjects in the study of local culture, it is necessary to incorporate local context sensitivity. This includes the moral values of the Malay culture, what is right and what is wrong (Mastor et al., 2000; SKMM Guidelines, 2012).

## **PRIVACY, PERSONAL SECURITY, AND DATA MANAGEMENT BY THE EDUCATION ORGANISATION**

It is crucial that administrators identify which groups are involved in issues of privacy, personal security and data management, so that safety measures can protect the privacy of, and reduce the risks to, the relevant groups (Ugray, 2012). Training is required to provide awareness in protecting data privacy and security for student-generated mLearning content.

## **CONCLUSION**

The paper concludes that mLearning can contribute significantly to the study of local culture, as long as education organisations and instructors are aware of its potential. Since managing new technology and the use of handheld devices such as mobile phones require the development of new pedagogies, it is recommended that the concept of connectivism in mLearning management is applied, including the introduction of student-generated mLearning content. Students can collaboratively develop local content and disseminate it on mobile portals to improve learning access and maintain learning-content equity. However, it is crucial to answer privacy, personal security, and data-management concerns, including the need to manage data created by students using mLearning for the study of local culture. The instructor's role as facilitator to embed mLearning activities in the lesson plan is vital. This awareness must be based on sound learning theory including the idea of connectivism, the primacy of student-generated content, embedding cultural appropriate design and consideration of issues of privacy, personal security, and data management.

The contribution of this paper is to make recommendations for creating awareness of mLearning in the Malaysian context from a holistic perspective, with the aim of making a significant learning intervention in improving the study of local culture.

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