Chapter 14
Integrating Mobile Technologies in Multicultural Multilingual Multimedia Projects

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ABSTRACT
This chapter explores the role of mobile technologies, such as Global Positioning System (GPS) and cell phones and tablet PC technologies, in higher education and professional development; offers creative strategies and possibilities for integrating GPS and mobile technologies into the curriculum with limited resources; outlines participants’ projects and digital stories; and demonstrates examples that integrates Maps, Mathematics, and Media Education using cell phones, tablet PCs, and GPS devices in a gallery walk. The study explores a wide range of meanings participants associated with experiential project-based learning activities; the impact of mobile technologies in developing multicultural and multilingual curriculum that promotes inclusive and differentiated instruction; the ways in which participants integrated math, maps, and media into their learning; and how they gained alternative points of view on global education and renewed interest and commitment to community service and socially responsible teaching. This chapter will benefit teacher candidates and teacher educators who seek innovative and cost-effective strategies and tools in higher education.

INTRODUCTION
“Only when you say it in Russian I will do it,” my kindergarten child said when we were living in Turkmenistan. My children attended an international school where they studied all subjects in English but also learned Turkmen, the official language of Turkmenistan, as well as an elective language, Russian. Our friends and neighbors spoke different languages and came from different countries- French, South Korea, China, Britain. Turkmenistan was truly a multilingual and multicultural experience for my family as well as for my scholarship. I ended up working

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with faculty who were seeking innovative ways to integrate new technologies into their curriculum. I had the privilege working closely with over 20 higher education faculty as well as countless number of university and high school students who took courses, workshops or participated in my research projects.

Every day, my Turkmen language skills grew and knowing a few words in Turkmen opened so many doors. I was invited to speak at various occasions (e.g. seismology institute, women groups) and interviewed by Turkmen Television, Radio and Newspapers. For the first time, I prepared and presented all my talks in a multilingual format. For instance, if my slides are in English, I had a couple translators who translated my presentations to Turkmen and Russian. Sometimes, I had a chance to work with the translators ahead of time and prepared some of my slides in Russian or Turkmen to supplement my talks. Knowing Turkish was a big plus, because most of the Turkmen students I worked with went to Turkmen Turkish bilingual education schools. In short, my children and I had a true immersion into Turkmen culture and language throughout our stay. I was challenged to develop workshops, presentations, lessons and projects in a multilingual format as well as to integrate The Universal Design for Learning – UDL model in order to be more inclusive, innovative, multilingual and transdisciplinary for my Turkmen students.

Our experiences teaching new media and technologies (e.g. mobile phones, GPS) to K-16 students and providing professional development workshops to in-service teachers in multicultural and multilingual settings provided us ample examples to highlight in this paper.

The “m” in mLearning generally refers to mobile, in this chapter we will share our experiences with in-service and pre-service teachers and their experiences with mlearning in context of multicultural and multilingual education while creating their innovative transdisciplinary lesson plans and interactive multimedia projects. We integrated 7 state core curriculum and 2 common core standards in designing our K12 curriculum projects. We call our curriculum design 9M model. (e.g. Multilingualism is for World Languages standard.)

We used various mobile devices such as laptops, cell phones, GPS devices in our teacher education classes and professional development workshops. Each participant developed their mlearning model for developing their lesson plans and projects using mobile technologies. In-service and pre-service teachers are encouraged to work toward the development of an eclectic model using current educational research and frameworks. This chapter outlines some of the best practices, assessment tools, and curriculum models that promote transdisciplinary teaching models for P16 curriculum; argues the challenges and advantages of mobile learning technologies in teacher education and professional development; introduces the innovative use of mobile technologies (e.g. GPS, cell phones and apps) in developing multilingual and multicultural multimedia projects; demonstrates creative strategies and possibilities for engaging teacher candidates (undergraduates) and in-service teachers (professional development) in project-based globally connected activities integrating mobile technologies; and investigates the role of mobile technologies as a means to promote problem-based, project-based and inquiry-based curricula among in-service and pre-service teachers.

Mobile devices and technologies have been bringing new opportunities and challenges for teaching and learning and expanding the walls of our classrooms by promoting education in a formal or informal context anytime anywhere for anybody. From pre-school to graduate school, from English language learners to special education students, the use of mobile technologies are evident. With the advent of handheld devices such as GPS devices in our mobile phones, there will be an expanded access to alternative resources and global connections. Teaching and learning have potential to be a continuous life-long process; it