

Mobile Phone Learning - An Introduction

Nabeel Ahmad & Dominic Mentor

CRN 51932 - MSTU5510 - 3 Credits - Dates: Jan 20 - May 11 (Spring 2010) - Thu 510p-650p

Course Description

This course explores how one can utilize the mobile phone for learning and the factors to consider to maximize mobile learning. Roughly half of the world's population already has some type of mobile phone, making it the most wide spread technology and most common electronic device in the world (Reuters 2007). Un-tapping this ubiquitous technology creates a wide array of educational possibilities. In this course, you will learn: (1) about the different mobile phone technologies; (2) how to design learning activities for mobile phones; (3) pedagogical and theoretical frameworks for mobile learning. The course will provide you with a better understanding of learning strategies that can be used on and via mobile phones.

The course consists of five units: (1) learning foundation – examining the connection to learning and the theoretical foundation of mobile learning; (2) technology – exploring the various mobile phones, their interfaces and capabilities; (3) uses – practical uses of mobile phones for learning and functionalities; (4) design considerations – what to consider when designing learning activities for mobile phones; (5) conceptual design – design an application for your mobile phone.

You will be given weekly reading assignments that will be summarized at the beginning of each class session. You will lead a brief discussion on one of these topics. Applying the theoretical and pedagogical frameworks for mobile learning, you will conceptually design a learning application of your choice for a mobile phone. You will have two presentations during the course. The assignments will be discussed in greater detail during the first two weeks of class. The course is designed to give you a broad overview of learning on mobile phones and allow you to connect your subject area of interest and pursue mobile learning delivery.

Prerequisites

There is no prerequisite for this course. Regardless of your mobile learning or mobile phone experience, you will gain an understanding of the learning foundation, technology and theoretical considerations surrounding mobile learning.

Course Objectives

After completing this course, students will be able to:

- Differentiate and learn about mobile phone technologies
- Determine and utilize appropriate mobile phone learning activities
- Understand pedagogical opportunities for mobile phones
- Design learning activities for mobile phones

The objectives will be met through:

1. Individual assignments (including assigned readings);
2. Lectures, student participation, discussion, and presentations;
3. Demonstrations, use, and analysis of Mobile Learning.

Method of Instruction

The course periods are divided between reading discussions, mobile learning examples, hands-on work and lectures.

Students will do individual work. They will use theoretical foundations relevant to mobile learning and present the results of their work.

ClassWeb is an integral part of the class. Students must develop proficiency with using the various aspects of ClassWeb.

Reading Requirements

There is no textbook for this class. Required readings and their references are listed on ClassWeb.

It is your responsibility to check ClassWeb for readings and make personal copies, if needed. Each reading assignment should be completed before the class in which it will be discussed.

NOTE: Check ClassWeb often with regard to readings and other information. Class readings will be posted as "PDF" files on ClassWeb.

Method of Evaluation

Assignments:

- All assignments are due as indicated on the syllabus.
- Assessment rubrics are provided for the assignments.
- A final project will be required.
- Students will submit the assignments as indicated in the ClassWeb Outline.
- Students will present to the class the results of their work.
- Attendance is mandatory for presentations.
- Your assessment will be based upon the assignments, group work, attendance and final project.

Rubrics are available upon registration and request.

Course Instructors

Nabeel Ahmad (na2189@columbia.edu) holds a doctorate in Instructional Technology and Media from Teachers College, Columbia University. His research focus is on how mobile devices can be used in the workplace for learning. Nabeel holds degrees in business, technology and education and has worked in the financial and technology sectors developing learning solutions.

Dominic Mentor (djm2123@columbia.edu) is a Fulbright doctoral student at Columbia University Teachers College, pursuing an EdD in Communication, Computing, and Technology in Education program within the department of Mathematics, Science & Technology. His research interests include issues in mobile communication and social connectedness, mobile portable communities, mLearning, computer assisted language learning, teacher technology training, hypermedia design, including online formative and summative assessment practices. After completing a Bachelors and Honours Degree in English at the University of the Western Cape, he served as teacher and contributor to learning materials for ESL publications as well as a series of modular textbooks. While completing his Masters at Stellenbosch University, he designed and launched an online computer assisted language learning program for ESL students in the Western Cape province of South Africa. While teaching in the Higher Education environment, he also serves as presenter in various teacher and research conferences as well as coordinating professional development computer technology workshops.

Grading Policies

- Final grade is calculated from the grades on each assignment
- Assessment rubrics provide the details of the minimum requirements for each assignment and how the assignment will be graded
- We give out grades of "Incomplete" very rarely. Not having the final project/paper done by the end of class is not sufficient reason for an incomplete grade unless there are truly extenuating circumstances, usually supported by a physician's documentation.

The grade of Incomplete will be assigned only when the course attendance requirement has been met but, for reasons satisfactory to the instructor, the granting of a final grade has been postponed because certain course assignments are outstanding. If the outstanding assignments are completed within one calendar year from the date of the close of term in which the grade of Incomplete was received and a final grade submitted, the final grade will be recorded on the permanent transcript, replacing the grade of Incomplete, with a transcript notation indicating the date that the grade of Incomplete was replaced by a final grade. If the outstanding work is not completed within one calendar year from the date of the close of term in which the grade of Incomplete was received, the grade will remain as a permanent Incomplete on the transcript. In such instances, if the course is a required course or part of an approved program of study, students will be required to re-enroll in the course including repayment of all tuition and fee charges for the new registration and satisfactorily complete all course requirements. If the required course is not offered in subsequent terms, the student should speak with the faculty advisor or Program Coordinator about their options for fulfilling the degree requirement. Doctoral students with six or more credits with grades of Incomplete included on their program of study will not be allowed to sit for the certification exam.

Expectations

Students will focus on the learning foundations of examining the theoretical foundation

connection to learning and mobile learning. They will also explore the various mobile phones, their interfaces and capabilities. In addition, they will look at the practical uses of mobile phones for learning and functionalities. They will also pay close attention to design considerations while not losing sight of theoretical considerations. Students will also be looking at what to consider theoretically and pedagogically when designing learning activities for mobile phones. They will apply that knowledge to the conceptual design of a learning application or activity for their mobile phone. Students will thus be required to show the following proficiencies:

- Demonstrate knowledge and ability to differentiate between different mobile phone technologies
- Be able to determine and utilize appropriate mobile phone learning activities
- Demonstrate an understanding of pedagogical opportunities for mobile phones
- Design learning activities for mobile phones

Responsibilities and Expectations

- Students are responsible for their own learning
- Students may monitor their progress by reviewing the grade book
- Students are expected to be respectful of their class mates
- Students are expected to request help or clarification when they feel it is need

Information for Students with Disabilities

The College will make reasonable accommodations for persons with documented disabilities. Students are encouraged to contact the Office of Access and Services for Individuals with Disabilities for information about registration (166 Thorndike Hall). Services are available only to students who are registered and submit appropriate documentation. As your instructor, I am happy to discuss specific needs with you as well.

What do we want to teach and/or achieve through this course?

The course aims to provide students with a better understanding of learning strategies that can be used on and for mobile phones. The course will teach students about the variety of mobile technologies available and the strengths and weaknesses among them. The course will provide students the ability to create mobile learning activities for mobile phones. After completing this course, students will be equipped with the necessary skills to engage in mobile learning projects.

Why offer a course on Mobile Technology at Teachers College?

With the exponential use of mobile phones, it is imperative to understand how mobile technology can be used for learning. Currently, a dedicated course does not exist for exploring the relation between mobile technologies and learning. By offering a course on mobile learning technologies, students will have the opportunity to keep abreast of current mobile technology phenomena and its potential for learning.

Who can benefit from a course like this at Teachers College?

- Arts & Humanities: Visualizations, museum phone tours, interactive art
- Biobehavioral Sciences: Physical interaction, strains, stresses when using mobile phones
- Counseling & Clinical Psychology: Record frequencies of a target behavior to change (smoking, nail biting)
- Curriculum & Teaching: Design curriculum using mobile phone technology
- Health & Behavior Studies: Medication alerts, nutrition tracking and wellness mapping
- Human Development: Cognitive processing and load using mobile devices
- International & Transcultural Studies: Ubiquity and cheap mobile phones, increased access in developing countries
- English Education: Photo and video narratives
- Program for Higher Education: Testing, emergency text alerts
- Linguistics: Using mobile phones to learn languages (text/instant messaging)
- Mathematics, Science & Technology: Converging current technologies, teaching and learning opportunities
- Organization & Leadership: Mobile phones in the workplace, electronic performance support systems (EPSS)

What is covered in this course (a brief overview)?

1. Mobile Technology and mLearning History
 - A. One to Many (One computer to many people - mainframe)
 - B. One to One (One computer to one person - PC)
 - C. Many to One (Many computers to one person - PC, laptop, mobile phone)
2. mLearning Pros and Cons
3. Mobile Technology for Communicative, Entertainment and Educational uses
4. Mobile Telephony Global and Local examples
 - A. SMS - Language Learning via Mobile device, Sex texting (public health)
 - B. Games - Multiplayer, Social, Educational
 - C. Mobile Devices for Location based Use - GPS, looking for books, museums audio tours
 - D. Mobile Touch screen - tactile feedback, motion detecting
 - E. Mobile Voting: Polling, and survey
 - F. Corporate, Instant Messaging (IM'ing)
 - G. Medical Examples – X-rays, medical records
5. Terminology & Glossary
6. Theory

Course Outline

Sessions	Date	Components
Pre-reading (optional)		<p>Ling, R. (2004). <i>The Mobile Connection: The Cell Phone's Impact on Society</i>. San Mateo, CA: Morgan Kaufman. Chapter 1 - Introduction</p> <p>Rice, R. and Katz, J. (2003). Comparing Internet and Mobile Phone Usage: Digital Divides of Usage, Adoption, and Dropouts. <i>Telecommunications Policy</i>, (27)8-9, pp. 597-623.</p>
Session 1	Jan 21	<p>Topic: Introduction and Course Objectives</p> <ul style="list-style-type: none"> • Why is this course important • What is mobile computing • What is mobile learning • Differences between mLearning and eLearning <p>Who is this class designed for?</p> <p>Historical development</p> <p>Types of mobile learning</p> <ul style="list-style-type: none"> • Training • Learning • Performance support • Just in time <p>Proliferation of the mobile phone in society</p> <p>Assignment: Field observation of specific mobile phone use (voice call, texting, gaming)</p> <p><u>Readings for Session 2:</u></p> <p>Naismith, L. et al., <i>Literature Review in Mobile Technologies and Learning</i>, NESTA Futurelab Series, Report 11, 2004, United Kingdom.</p> <p>Sharples, M., Taylor, J. and Vavoula, G. (2005) <i>Towards a Theory of Mobile Learning</i>. Proceedings of mLearn 2005 Conference, Cape Town.</p>
Session 2	Jan 28	<p>Topic: Learning Foundation</p> <p>Connection to learning</p>

		<p>Theoretical foundation</p> <ul style="list-style-type: none"> • Mobile communication • Cognition • Social affordances <p>Assignment: Create a historical timeline of a technical aspect of mobile phones (size, screen, keyboard).</p> <p><u>Readings for Session 3:</u></p> <p>Shuler, C. (2009) <i>Pockets of Potential: Using Mobile Technologies to Promote Children's Learning</i>. Report for The Joan Ganz Cooney Center at Sesame Workshop.</p>
Session 3	Feb 4	<p>Topic: Mobile Phones in K-12 Education</p> <p>Guest speaker – Carly Shuler (Sesame Workshop)</p> <p>Assignment: Policy stance on various mobile phone-related topics</p> <p><u>Readings for Session 4:</u></p> <p>LaMontagne, J. (2009). <i>Please Turn On Your Cell Phone</i>. The Change Observer.</p> <p>Nielsen, L. (2009). <i>Five Ways Innovative Educators Can Use Texting As a Professional Tool</i>. The Innovative Educator.</p> <p>Nielsen, L. (2010). <i>Don't be illTwitterate or aTextual</i>. The Innovative Educator.</p> <p>Green, E. (2008). <i>Despite School Cell Phone Ban, Course Sees Them as Aid</i>. The New York Sun.</p>
Session 4	Feb 11	<p>Topic: Educational Policy on Mobile Phones</p> <p>Guest speaker – Lisa Nielsen (DOE)</p> <p>Assignment: Conceive and evaluate a higher education mobile solution</p> <p><u>Readings for Session 5:</u></p> <p>ACU (2009). <i>ACU Mobile Learning Report</i></p>

Session 5	Feb 18	<p>Topic: Mobile Phones in Higher Education</p> <p>Guest speaker – Marty Christofferson (Tompkins Community College)</p> <p>Assignment: User interface exploration for design and usability</p> <p>Mid-term Assignment Guidelines</p> <ul style="list-style-type: none"> • Conceptual design • Design a learning activity for a mobile phone <p>Theoretical/learning basis</p> <p><u>Readings for Session 6:</u></p> <p>Morgan Stanley (2009). <i>Mobile Internet Report Summary</i>.</p> <p>Ahmad, N. (2010). <i>Design tips for creating effective mobile learning</i>. T+D 64(1), 46-50.</p> <p>Lee, Y. E., & Benbasat, I. (2003). <i>Interface design for mobile commerce</i>. <i>Commun. ACM</i>, 46(12), 48-52.</p>
Session 6	Feb 25	<p>Topic: User Interface Design for Mobile Phones</p> <p>Guest Speaker – David del Ser (FrogTek)</p> <p>Devices and Applications</p> <p>Design considerations for mobile learning</p> <p>Theoretical base</p> <ul style="list-style-type: none"> * Cognitive load * Attention split <p>Customization capabilities</p> <p><u>Readings for Session 7:</u></p> <p>UNICEF (2009). <i>Using Mobile Phones to Improve Child Nutrition Surveillance in Malawi</i>.</p> <p>Mace, M (2006). <i>European vs. American mobile phone use</i>. Mobile</p>

		<p>Opportunity.</p> <p>The Economist (2009). <i>Mobile-phone culture: The Apparatchik calls.</i></p>
Session 7	Mar 4	<p>Topic: International Projects Using the Mobile Phone</p> <p>Guest speaker – Meredith Chang / Sean Blasche (UNICEF / RapidSMS)</p>
Session 8	Mar 11	<p>Mid-term Presentations</p> <p><u>Readings for Session 9:</u></p> <p>Mentor, D. (2008) The Cognitive Load Down on Texting: Mobile Communication and Social Connections.</p>
	Mar 18	Spring Break – No class
Session 9	Mar 25	<p>Topic: Text Messaging and the Mobile Phone</p> <ul style="list-style-type: none"> • Higher Education • K -12 <p><u>Readings for Session 10:</u></p> <p>Ahmad, N. (2009). IBM Mobile BluePages study.</p>
Session 10	Apr 1	<p>Topic: Mobile Electronic Performance Support Systems in the Workplace</p> <p><u>Readings for Session 11:</u></p> <p>Cameron, D. (2008). <i>Mobile journalism: A snapshot of current research and practice.</i></p>
Session 11	Apr 8	<p>Topic: Mobile Phones as a Change Agent in Journalism</p> <p>Guest speaker – Mo Krochmal (Hofstra)</p> <p>Assignment: List and evaluate mobile phone games.</p> <p><u>Readings for Session 12:</u></p>

		Schwabe, G. & Göth, C. (2005). Mobile learning with a mobile game: design and motivational effects. <i>Journal of Computer Assisted Learning</i> , 21(3), 204–16.
Session 12	Apr 15	<p>Topic: Designing Educational Games for Mobile Phones</p> <p>Guest speaker – Karen Schrier (Columbia / Teachers College)</p> <p><u>Readings for Session 13:</u></p> <p>Hupert et al. (2007). <i>An Analysis of Technology-Assisted Progress Monitoring to Drive Improved Student Outcomes</i>. Wireless Generation</p>
Session 13	Apr 22	<p>Topic: Educational Assessment and Monitoring Using Mobile Phones</p> <p>Guest speaker – Greg Gunn (Wireless Generation)</p>
Session 14	Apr 29	<p>Final Presentations</p> <p><u>Readings for Session 15:</u></p> <p>Review conferences and journals for mobile learning for areas of interest</p>
Session 15	May 6	<p>Topic: Furthering Your Knowledge of Mobile Learning</p> <p>Final presentation feedback</p> <p>Applicability across subject areas</p> <p>Conferences and journals for mobile learning</p>

References

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