



Moving Out of the Classroom:

Using PDAs and
Tablet PCs in
Teaching and
Learning

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Mobile Learning

- Next step in long tradition of technology-mediated learning
 - New strategies, practices, tools, applications, and resources
 - Promises ubiquitous, pervasive, personal, and connected learning
 - The learning question is now...
 - What is just the right **CONTENT** on just the right **DEVICE** for just the right **PERSON** at just the right **TIME**?
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Today's Student at Work Picture This

- Today's student is doing homework
- Listening to music, instant messaging, and chatting on the phone at the same time
- Not distractions, but new forms of collaboration
- Collaboration is the next frontier
- Enabled by different concepts and different devices
- It's about the power of the human network



Got Wireless?

- Wireless networks in schools
 - 2001: 10%
 - 2005: 45%
 - Wireless schools look different
 - Students are NOT in rows, facing the front of the classroom
 - Students ARE in small groups, scattered around the classroom and in the hallways
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PDA: The Technology

- Terms
 - PDA: Personal digital assistant
 - Handheld
 - Models/companies
 - Palm
 - HP iPAQ
 - Dell Axim
 - Connectivity
 - WiFi
 - Bluetooth—create personal area networks (PANs)
 - Accessories
 - Foldable keyboards
 - iGo Pitch Duo—present from your PDA
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Tablet PCs: The Technology

- Pure tablet (slate only): Motion LE1600
 - Convertible tablet/laptop: Gateway M280E
 - Hybrid (keyboard removable): HP Compaq Presario TC 1100
 - Rugged (enhanced viewability in all lighting conditions): Xplore iX104C3DV
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Mobile Technologies Project University of South Carolina

- Thirteen teams with 1 faculty member and 4 students evaluated the following mobile technologies:
 - PDAs
 - Treo 650
 - Samsung i730
 - Audiovox vx6600
 - Dell Axim
 - Tablet PCs
 - IBM x41 Tablet PC
 - Gateway M280 Tablet PC
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Mobile Technologies Project-- USC

- Overall positive responses
 - Managing personal life
 - Academic classroom usage
 - Ease of use
 - 65% said the devices were Blackboard-friendly
 - Only half surveyed said that the technology was easily supported by campus IT services
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Teaching and Learning with PDAs (K-12)

- Hand e-Learning: UK
 - Enabled 24/7 access
 - Handheld devices used as a tool to support personalized learning across the curriculum, at home, school, and for fieldwork
 - Student Centered Learning Project: US
 - Listened to their own reading
 - Created drafts of their work
 - Used concept mapping tools
 - Used camera to make nature notebooks
 - Paperless Classroom for Biotech Course: Canada
 - Submit assignments
 - Gather data using probes
 - Note-taking
 - Access the Internet for documents, class information, and conferences
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Teaching and Learning with PDAs (Higher Education)

- Virginia Commonwealth University
 - Medical students used PDAs loaded with medical reference software in the field
 - Nursing students used PDAs with video clips of procedures in the field
 - Used infrared kiosks around campus so mobile PDA users could hotsync to the network to use email and download web clipping content
 - Wake Forest University
 - Software engineers developed a software app, ClassInHand, that turned a Pocket PC into a web server
 - Then faculty and students used their PDAs for
 - Real-time quizzes
 - Presentation controllers
 - Classroom communication devices
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Teaching and Learning with PDAs (K-12)

The Power of Handheld Computers in the Classroom
(follow link to video clip)

<http://goknow.com/Video/LearningWithHandhelds/>



Teaching and Learning with Tablet PCs

- Possibilities
 - Ink annotations for written feedback on electronic documents
 - Ability to try multiple problem solving approaches and make intermediate notes and calculations
 - Simplifies the note-taking process and combines typewritten notes, graphic images, web pages, and multimedia
 - All information is searchable
 - An example: UW (Classroom Presenter)
 - Increase student engagement
 - Provide real-time feedback to the instructor on student understanding
 - Integrate student materials into classroom discussions
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Teaching and Learning with Tablet PCs

University of Washington
Classroom Presenter
(follow link to play video)

http://www.cs.washington.edu/homes/anderson/Presenter_1M.wmv



Future Possibilities

- How do we integrate mobile technologies into the classroom?
- What are some of the challenges ahead?

1. Annotate papers

2.

3.

4.



Resources

- [Handheld, Pen, and Tablet Technology](#)
 - Wiki project by USC students in TSTM 443-in progress
 - Software resources
 - [Microsoft OneNote](#)
 - [Agilix GoBinder](#)
 - [Tegrity Campus or Tegrity WebLearner](#)
 - [Workshop on the Impact of Pen-based Technology on Education \(WIPTTE\)](#)
 - [UW Classroom Presenter](#)
 - [PDA Medicine: Virginia Commonwealth University School of Medicine](#)
 - [Clarinet Systems](#)
 - [Virginia Commonwealth University Libraries PDA Resource Guide](#)
 - Wake Forest University
 - [ClassInHand](#)
 - [DataInHand](#)
 - [pdaEd.com](#)
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Resources

- GoKnow Learning
 - <http://goknow.com/>
 - <http://www.learningathand.com/>
 - [K12 Handhelds](#)
 - [Tony Vincent's learninginhand.com](#)
 - [Teaching with Handhelds: Project Ideas to Enhance Learning \(Intel\)—K-12](#)
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