What Use Do Multi-Touch Mobile Devices Have In Workplace Learning?

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Agenda

- History of Multi-Touch
- Mobile Learning
- In the Workplace
- Theoretical Construct
- Opportunities
- Limitations
Defining Multi-Touch

“An interaction surface that has the ability to read and react to more than one finger or pointer at a time”

Brief History

- 1982 – First multi-touch system
- 1991 – Pinch and scaling motions
- 1992 – Wacom tablets
- 1997 – Haptic feedback
- 2007 – Apple iPhone multi-touch mobile phone
- 2007 – Microsoft Surface computing

Source: Buxton, Microsoft Research
Why Multi-Touch?

- One of the five senses
- Minimal learning curve
- Natural human interaction
Mobile Learning

“The point at which mobile computing and e-learning intersect to produce an anytime, anywhere learning experience.”

Source: Kambourakis, Kontoni, and Sapounas, 2004
Use in the Workplace

- Complements productivity
- Leverage visually-based activities
- Training and learning interventions
- Performance support
Growing Needs

- 72% of organizations have received iPhone support requests
  
Source: Osterman Research, 2007

- More than 25% of global workforce will have mobile devices by 2009

Source: IDC, 2006
Considerations

- Learning on mobile devices
- Best practices for multi-touch learning
- Design guidelines for multi-touch
- Social vs. Individual
Focus Areas

- Content
- User
- Task
- Context
Theoretical Construct

- Direct manipulation animation (DMA)
  - Interaction with functional relationships and causal interactions
- Embodied cognition
  - Sensorimotor capabilities interacting with environment
- Distributed cognition
  - Placing memories, facts, knowledge on objects in environment

Source: Chan & Black, 2006
Source: Clark, 1997
Source: Hutchins, 1995
Opportunities

- Medical
- Real Estate
Medical

- Learning
  - Functional relationships
- Best practice
  - Interactive anatomy model
- Design guidelines
  - Zoom in/out, rotate, DMA
- Individual
  - Anatomy review during downtime
Real Estate

- Learning
  - Spatial representation, real-time listings
- Best practice
  - Maps and floor plans
- Design guidelines
  - Zoom in/out, rotate, DMA
- Social
  - Geographic points of interest
Limitations

- Non-touch activities
- Minimal need for mobility
- Resistance to change
TOUCH-SCREEN NAVIGATION:
A GOOD IDEA?

YOU PUT YOUR FINGER ON MY SCREEN,
I KILL YOU!!!
Discussion

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