Tablet Technology for Informal Collaboration in Higher Education

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Previously...

- Student Learning Organiser Project
  - Wireless pocket PC pilot
  - 17 MSc Students
  - Integrated suite of tools
    Communication, Time management, Course content, Note-taking
Findings of SLO Project

- Device usability issues
  - Battery life, backup, memory, screen size
- Usability and usefulness as a learning organiser
  - No best tool
  - Usability problems of SLO software
  - Communication tools and timetabling amongst the most useful and frequently used
  - Content browsing surprisingly popular
Tablet Computers for Informal Collaboration

• 3rd year of MEng course
  – Collaborative team projects
  – Formal joint assessment
  – Informal, intensive teamwork
  – Other ad-hoc collaboration on other modules
Method

- Members and supervisors of three teams plus two individual students (23 users)
- Provided with comprehensive package of productivity tools, plus project portal
- Freedom to customise and install
- Investigation by questionnaire, observation and focus group
Tablet Specification

- 1 team, clamshell tablet (with keyboard)
- 2 teams, slate-only tablet
- Integral WiFi (802.11b)
- Office 2003 + OneNote, Project, Visio, MindManager (all tablet-optimised)
- 1 team with headsets and webcams
Supporting Infrastructure

- WiFi (802.11b) complete coverage of department, partial coverage of campus
- SharePoint Portal server (integrates with Office 2003). 1 portal per team, plus overall project portal.
- Exchange server
Findings: Activities

• **Team meetings:**
  – Show and tell
  – Data sharing
  – Instant minute-taking/task assignment
  – Audio/video recording
  – Whiteboard

• **Distributed team work**
  – Internet messaging, with audio
  – Joint document writing, through team portal
  – Sharing of work-in-progress over email, messenger and portal.
  – Higher flow of communication

• **Personal**
  – Annotation of slides
  – Creation of media-rich notes (text, diagrams, photos, audio, video, web thumbs)
  – Internet research during lectures/tutorials
  – Increased email/messenger activity
  – Calendar/timetable management
  – Repurposing of notes for revision
Findings: issues

- A keyboard is essential
- Battery life is *almost* sufficient
- Pen input is useful but unreliable
- Speed/memory worse than expected
- Limitations of WiFi coverage
- Concept mapper would have been more useful if it were simpler to get started
Findings: patterns

- Most popular activities:
  1. Email
  2. Creating documents, browsing, listening to music
  3. Reading, taking notes

- Main benefits:
  1. Wireless communication (connectivity)
  2. Anytime/anywhere access (portability)
  3. Note-taking
Findings: patterns

- One student gave up after a few months
- Three gave up after lectures/projects ended
- All four had used the slate-only model
- Others used at least once per day to end
- Video and audio popular entertainment (including in lectures!)
Findings: requests

• Increase wireless access across campus
• Team portals more readily available
• Better access to campus networks (e.g. VPN) for backup/synchronisation, firewall, shared resources
• Better support for network roaming
• Docking/charging infrastructure
Conclusions

• Large changes to students’ patterns of work and learning with respect to place and time
• Tablet computer alone does not offer exclusive benefits to learning
• *But*, flexibility of tablet affords anytime anywhere access to productivity, communication and information tools
• Which means that learning activities become more productive
With thanks to:

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