Facilitating change – Tablet PC trials across two distance education focused universities

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How this paper was conceived

• Tablet PC trial at the Open University (OU). Focus on marking. Publications.
• Tablet PC trial at the University of Southern Queensland (USQ). Focus on improving service to students.
• How can we benefit from each other’s experiences?
The two universities

• Distance vs face-to-face

• Who is the instructor?

Background to the trials

OU
• 2005: COLMST Centre (CETL) Teaching Fellowship – 6 tablet PCs
• Workload allocation: 0.5 from 2005-2008

USQ
• 2005: 1 tablet PC, used to demonstrate potential
• 2006: USQ L&T Grant (plus additional funds) – 6 tablet PCs
• No workload allocation
Methodological frameworks

- Both trials used an Action Research Approach, with a participatory angle
- The researcher:

**OU**
- Guide for participants to develop their own practice

**USQ**
- Interaction with participants, training, support, new ideas
- Also teaching with the tablet

Methodological frameworks

- The research questions:

**OU**
- Can tablet technology facilitate a near pen-and-paper experience for markers?
- What are the markers’ and students’ perceptions when feedback is provided with electronic handwriting?
- Is the quality of feedback higher when assignments are marked via electronic handwriting, compared to other electronic means?

**USQ**
- Can tablet technology facilitate improved communication and through this improve the learning experiences of students (especially remote or isolated students)?
Methodological frameworks

• The participants
  OU
  • Associate Lecturers
  USQ
  • Academic staff involved in all components of teaching

• Support
  Both: Exchange of ideas and collaboration, community of practice

• Three Phases

The three phases

Start & Scope
  Fund
  Research Questions

One cycle

Pre-Trial
  Preparation
  Students
  Selection
  New participants

Trial
  Knowledge sharing
  Evaluation
  Cost & Reflections

Post-Trial
  Evaluation
  Consideration
  Approaches
  Adoption

Planning for next cycle, drawing on experience

End of Project
  Recommendations
  Adoption

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Pre-Trial

• Workload and resource allocation
  > Investment of similar magnitude (hardware)
  > But at the OU:
    – Teaching relief for fellow
    – Access to educational researchers for support and advice
    – Encouragement to publish outcomes, attend conferences
  > And at USQ:
    – Difficulty to find time to analyse results and report on them
    – Driven by enthusiasm of all participants

Pre-Trial

• Scope of the trial and participant selection
  > Participants: Self-selected or nominated by others

OU
  • Associate Lecturers teaching ICT module
  • Tablets sent to markers via post
  • Geographically dispersed

USQ
  • Four team members in L&T Grant bid
    > Mathematics
    > Statistics
    > The Learning Centre
  • One tablet PC for short term loan
  • Two tablet PCs loaned on semester-long basis
    > Biology, Chemistry, Physics
    > Mechanical Engineering
    > German language, Statistics
Pre-Trial

- Hardware selection, ITS Support and technical issues

**OU**
- Hardware: Comparison of existing tablet PCs. Rotating screen as keyboard required
- HP
- Full ITS support through CETL

**USQ**
- Hardware: A device that everyone is familiar with, rotating screen = laptop
- Toshiba
- ITS Support: “best effort”

“trial technology”

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Trial

- Technical and pedagogical training

**OU**
- Online training manual provided
- Online forum moderated by fellow
- Staff development at distance via electronic communication

**USQ**
- Face to face, often one-to-one basis
- Project team in a group
- Discussions on how to integrate technology in participant’s context
- Encouragement of innovation, not replication
Trial

• Technical and pedagogical support
  > Collegial approach, sharing good practice

OU
• Sharing between participants
• Made available openly to academic community (Wiki)
• Forum
• Technical issues solved by participants, for participants

USQ
• Face-to-face support by researcher
• Frequent meetings of project team

Post-Trial

• Continuation

OU
• Researcher kept tablet PC
• All other tablet PCs returned
• Additional 4 tablet PCs for next cycle

USQ
• Project team members kept tablet PCs
• Others returned at end of semester
  > To encourage requests for additional tablet purchases
  > To involve more lecturers
Comparison of outcomes

• Number of participants and post-trial use

OU
• 5 tablets loaned to 10 participants
• 1 tablet for the researcher
• 2 cycles (9 month duration)
• None of the 10 participants is using a university-funded tablet PC at present
• New cycle to commence

USQ
• 6+1 tablets, used by 9+1 participants
• 4 cycles (1 semester duration)
• 8 enthusiastic tablet PC users, all with access to their own or a shared tablet PC
• 2 left teaching towards management or left university sector altogether
• Tablets still in use in follow-on project (start 2009)

Comparison of outcomes

• Dissemination

OU
• Wiki with good practice, public access
• Extensive dissemination of outcomes
  > National and international conferences, local groups
  > Central academic staff, Associate Lecturers across faculties, hands-on interactive show-and-tell workshops
• Publications

USQ
• Wide range of good practice examples collected, disseminated at
  > University L&T events
  > Seminars
  > Conferences (to limited extent)
• Limited publications
### Comparison of outcomes

**Pedagogical change**

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<tr>
<th>OU</th>
<th>USQ</th>
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<tr>
<td>Innovation expected within marking of online assignments</td>
<td>Emphasis on changing current methods of teaching and supporting students</td>
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<tr>
<td>Innovations shared online in second cycle</td>
<td>Enabled educators to effectively and efficiently communicate with students for the first time</td>
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<tr>
<td>Deep reflection on the task of providing marks and feedback</td>
<td>Range of pedagogical innovations</td>
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**Attitude of university management**

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<tr>
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<th>USQ</th>
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<tr>
<td>Extensive dissemination, but management has not taken proactive lead in supporting tablet technology</td>
<td>Dissemination of pioneering work lead to extension of trial through university L&amp;T Fellowship in 2009</td>
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<td>Reasons: scale, cost of hardware, ICT support infrastructure required</td>
<td>Support from all Deans, CTO, VC</td>
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<td>Narrow focus of trial limited perceived use of tablets to marking</td>
<td>Addition of student tablet PC trial</td>
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<td>All dissemination through fellow, no sharing of the load</td>
<td>40+ new tablet purchases till April 2010 following fellowship</td>
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Tablet technology has not moved beyond trial status

Tablets are supported hardware
Recommendations on how to run a successful technology trial in HE

“Bottom up, champion driven approach”

- **Choose the participants carefully**
  > It is not the number but the type of participants selected that will make a difference. Choose those who have the ability and drive to take a trial further, e.g. enthusiastic lecturers and those who are regarded highly for their teaching excellence.

- **Ensure at least “best effort” ITS support**
  > This is vital for a successful trial and needs to be established before commencement. The technology needs to be approved by ITS before widespread adoption can occur.

• **Train the participants**
  > It is crucial to provide both technological and pedagogical training, with a focus on the needs of an instructor. This includes the provision of a pedagogical guide and examples. In the ideal case, the champion will be a participant or at least directly involved in the use of the technology, which will give them credibility as they are talking from experience. Training can be done remotely, but should include an initial face-to-face session and/or be followed up by a face-to-face session.

• **Foster collegial support**
  > Encourage “corridor chats”, provide a supportive environment, in which everyone shares good practice and it is safe to experiment.
Recommendations on how to run a successful technology trial in HE

• **Take a sustainable approach**
  > Plan the use of equipment after the trial has finished, and the provision of technical and pedagogical support. Choose a wide scope to allow participants the freedom to pursue individual innovative approaches. Keep the focus on the future.

• **Share the load**
  > While it may take only one person to manage a trial, the change will be sustainable when other academics are on side, who will then drive the trial to adoption. Sharing the load among several champions will increase the momentum.

Recommendations on how to run a successful technology trial in HE

• **Focus on dissemination**
  > Provide a workload allocation for a research assistant, other than the project leader, who will analyse data and support dissemination and report writing. Collect best practice examples, communicate upwards and sideways. Create a mechanism for tapping into the enthusiasm of participants for dissemination of outcomes.

• **Overcome fear of change**
  > Disseminate best practice examples to ITS, management and administration.
Conclusions

- These are first outcomes of the comparison; more thorough investigation under way
- Coming: Evaluation of USQ Fellowship project, and student tablet project
- The list of recommendations is expected to be modified and extended
- This has been a very worthwhile exercise!