iPads - A School of Science Story
Dr Mark J.P. Kerrigan, Dr Richard Blackburn, Zahin Amin, Katie James, Eben Scott-Jones, James Yorke & Simon Walker

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A multi-faceted rationale:

1. Employability;

2. Enhancing digital literacy;

3. Improving the student experience;

4. Embracing new technologies;

5. Staff development...
We did, we do...

1. Blackboard & chalk; whiteboards;

2. OHPs;

3. Using Powerpoint / Prezi / Keynote;

4. Developing online repositories;

5. Integrated web-based resources...
‘New technologies’ are just new ways of approaching evolving needs...
How to achieve that rationale?

- Innovative & open-minded approaches:
- The adoption of approaches & practices that are familiar to new generations of students;
- Effective use & enhancement of pre-existing skills;
- Working towards ‘cultural change’...
None of the things they learn, should ever be made a burden to them, or imposed on them as a task.’

John Locke (1632-1704)

Learning should be integrated with social interactions
### 'Learning by doing'

What we did

<table>
<thead>
<tr>
<th>Low level</th>
<th>Medium Level</th>
<th>Advanced level</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Displacement)</td>
<td>(Enrichment)</td>
<td>(Transformation)</td>
</tr>
<tr>
<td>iPad used only as a web browser</td>
<td>iPad integrated into the practical instructions</td>
<td>iPad fully integrated into pedagogy</td>
</tr>
<tr>
<td>Students read information from their iPad – no difference when compared to paper</td>
<td>Tutor-led instructions on which applications to use</td>
<td>Students share and recommend applications based on personal experience.</td>
</tr>
<tr>
<td>No suggested Apps are used in teaching</td>
<td>Apps used to support practical delivery</td>
<td>Apps used to support practical delivery as well as pre and post work</td>
</tr>
<tr>
<td>Hardware features of the iPad are not used (GPS, camera, microphone)</td>
<td>Hardware features of the iPad are used (GPS, camera, microphone)</td>
<td>Students suggest ways iPads can be used to meet the LOs and competences.</td>
</tr>
<tr>
<td>iPads used as a silo piece of equipment within the laboratory</td>
<td>iPads are used partially across the curriculum</td>
<td>Evidence of linking practical activities to other learning environments – fully cross curricula</td>
</tr>
<tr>
<td>Data collection is by stylus only as suggested by the tutor</td>
<td>Different data entry methods are used as suggested by the tutor</td>
<td>Students can choose their own data entry process to meet the outcomes of the session</td>
</tr>
</tbody>
</table>

Adapted from Jisc InfoNet Mobile Learning infoKit, 2012
Pre-laboratory activity

**VLE based:**
- Engaging with practical information and techniques
- MCQ
- Video
- Reading
- iPad applications

In-laboratory activity

**iPad based:**
- Hardware driven activity
- Application driven activity
- Practical driven activity

Post-laboratory activity

**Application based:**
- Moodle
- MS Office
- Dedicated software

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'Learning by doing'

What we did
What we did

- Build confidence with staff
- Ensure parity of the student experience
What we did

• A choice of iPad covers so they could be used in labs with micro-organisms as well as chemicals/fluids.
• Had to develop rules and procedures for students;
• Insurance;
• Loan agreements;
• Apps.
A bit of data (early during the project)

Using iPads in the lab

Confidence using online resources

I recommend apps to my peers

Requires little training
A bit of data (early during the project)

- Has made my study more effective
- Increased my engagement
- Made starting university easier
- Now use in other aspects of life
A strategic driver for the university is the development of staff and student digital literacy. The iPad is an excellent vehicle to achieve this goal.

Juliet Hinrichsen & Antony Coombs