Technology Enhanced Learning

Fab or Fad?
What is this:

Source: Google Trend Data June 2016
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Objectives

Think about:
• What do we consider to be “Technology Enhanced Learning” (TEL)?
• Where do we use TEL as academics?
• What do our students think of how its used?

.......so what?
............................what next?
........................................why is this important?
Personal Background and Motivation

• Impact on student teaching and learning
• Aligns with areas of personal interest
• SOLSTICE Fellowship work
• Introduction of the Teaching Excellence Framework
• Possible research output
Technology Enhanced Learning

Technology Enhanced Teaching
Technology Enhanced Teaching

Using technology to deliver something to a group of students that does not require them to engage technologically with the content, examples include:

• Presentations – PowerPoint / Prezi
• Video clip - Youtube
• Slideshare
Limitations

There are a number of limitations and problems associated with Technology Enhanced Teaching:

• Hardware Problems – lack of access to rooms with projectors for example.
• Software problems, including lack of compatibility and errors which occur switching from PC to Mac based presentations
• Issues with internet access (if it’s a cloud based programme like Prezi)
Limitations

Over use –

often seen as:

“Death by PowerPoint”.
Technology Enhanced Learning

Learning that takes place when the learner (the pupil) is required to use technology to access original material that furthers (or reinforces) their understanding of something.
Advantages

There are many advantages associated with technology enhanced learning, some of these include:

• Information can be accessed in a unique way
• Due to the technological interaction some pupils remember things better
• Possible to do, and experience, things that cannot be done in lessons by any other means
• Personalised differentiation of materials to suit individual learner needs
Limitations

There are a number of limitations and problems associated with Technology Enhanced Learning:

• Volume and cost of hardware and software – eg. have you got enough tablets for each member of your lecture, seminar or session to have one?
• Reliability; problems with battery life and wifi connections
• Seen as a gimmick, some learners get distracted from by the interaction with something technological
• Reliance on BYOD technologies – then capability come into play, also; equity – should a fee paying student be expected to have to rely on their own technology to access learning material?
• Staff resistance to implementation and adoption. Attributable to many reasons; apathy, time management, lack of understanding, fear, not valued and so on.

"It is not the strongest of the species that survives, nor the most intelligent that survives. It is the one that is most adaptable to change".

Charles Darwin
Online Tools

- Quizzes
- Puzzles
- Presentation Software
- Repositories
- Blogs
- Survey Tools
- Drawing Packages
- Modelling Packages
Pedagogical Gain: Blooms Taxonomy ....for apps
Pedagogical Gain:

Gardner’s Multiple Intelligences
The Higher Education Funding Council for England (HEFCE) in their revised e-learning strategy (2009) define TEL as ‘Enhancing learning and teaching through the use of technology’. While this is unclear in its characterization of enhancement, the document does identify three levels of potential benefits that TEL might bring (HEFCE 2009, 2):

- **Efficiency** – existing processes carried out in a more cost-effective, time-effective, sustainable or scalable manner.
- **Enhancement** – improving existing processes and the outcomes.
- **Transformation** – radical, positive change in existing processes or introducing new processes.
Undergraduate Framework

Approved in May 2008 the framework contains the guiding principles for the design of all undergraduate awards validated by the University. Edge Hill's Undergraduate Degree Framework provides both structural guidelines and a signpost to matters of policy that the University requires to be embedded in its taught provision. Working within the current Academic Regulations, the framework is essentially permissive and aims to enable curriculum developers rather than restricting them and it also encourages the development of a contemporary curriculum.

Lenses:

The Undergraduate Framework contains a series of 'Lenses' focused on the student experience:

- Graduate Attributes

Technology Enhanced Learning

A guide to the integration of Technology Enhanced Learning into teaching and learning practices, the aim with this guide is to provide all colleagues with some tools to help with the process of:

- Thinking about any form of technology that could help in teaching and learning
- Presenting some worked examples of where it has been used in Edge Hill
- Helping to develop these ideas by mapping them out
- Making contact with the people who can help in working alongside to make it happen

Resources

Key Contacts
## Model for Technology Enhanced Learning (TEL): SOLSTICE

The SOLSTICE model adopts a learner-focused perspective, recognising that good learning design and implementation of new technology must take into account how learners experience and understand those designs. The model informs curriculum design by considering the role of technology in teaching and learning through conversations between academics, learning technologists and librarians. These conversations are focussed on achieving the alignment of *purpose* (learning) with the unique characteristics of learners (*audience*) and the *form* of teaching (*P + A ↔ F*).

### Purpose vs Audience vs Form

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Audience</th>
<th>Form</th>
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<tbody>
<tr>
<td><strong>Key questions when considering using different types of technology for teaching and learning:</strong></td>
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<tr>
<td>What will technology allow you to do better with regard to: engaging, supporting, challenging learners, and providing practice? <a href="https://mw.brookes.ac.uk/display/JISCle/?About">https://mw.brookes.ac.uk/display/JISCle/?About</a></td>
<td>How effective are the students as learners: how active and strategic, skilled in co-operation and dialogue, able to develop goals and plans, monitor own progress?</td>
<td>How &quot;developed&quot; is the technology? Is it still a &quot;trial&quot; product? Where does it sit in the Gartner &quot;emerging technology hype cycle&quot;? <a href="http://www.gartner.com/pages/story.php?id=8795.s.8.jsp">http://www.gartner.com/pages/story.php?id=8795.s.8.jsp</a></td>
</tr>
<tr>
<td>Will it be fully integrated; a compulsory add-on; an optional extra? Will students determine whether and how to use it?</td>
<td>How easy is the technology to use? How knowledgeable are the teaching team and students about the new technologies?</td>
<td>How accessible is it? Are there a number of processes involved in ensuring accessibility for students? <a href="http://www.techdis.ac.uk/accessibilityessentials">http://www.techdis.ac.uk/accessibilityessentials</a></td>
</tr>
<tr>
<td>Are there issues of the blurring of social and professional lives; of privacy and safety; of identity?</td>
<td>What range of support might your teaching team and students need?</td>
<td>Will it sit within the University operating system, or is it independent of that? How compatible is it with existing hardware/software?</td>
</tr>
<tr>
<td>What effect will the use of this Web 2.0 application have on the role and activities of the tutor? JISC Learner Experience Case Studies: <a href="http://www.jisc.ac.uk/elp_learneroutcomes.html">http://www.jisc.ac.uk/elp_learneroutcomes.html</a></td>
<td>Will your students and your teaching team have used the technology socially or in other contexts before? JISC Learner Experience Case Studies: <a href="http://www.jisc.ac.uk/elp_learneroutcomes.html">http://www.jisc.ac.uk/elp_learneroutcomes.html</a></td>
<td>Is it &quot;free&quot; for the university, or is there a cost (financial; advertising etc)?</td>
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<tr>
<td>Will the technology encourage &quot;active learning&quot;? How?</td>
<td>Will the technology deter a proportion of your students from being committed to the educational experience?</td>
<td>Will it be replacing an existing technological application, or is it enabling a completely &quot;new&quot; educational function to take place?</td>
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</tbody>
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Are there costs for the students (real or hidden)?
<table>
<thead>
<tr>
<th>Programme Code</th>
<th>Programme Description</th>
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</thead>
<tbody>
<tr>
<td>BAJ000171</td>
<td>BA (HONS) ENGLISH LITERATURE &amp; FILM STUDIES</td>
</tr>
<tr>
<td>BAS000258</td>
<td>BSC (HONS) BUSINESS &amp; MANAGEMENT</td>
</tr>
<tr>
<td>BAS000195</td>
<td>BSC (HONS) COMPUTING (APPLICATION DEVELOPMENT)</td>
</tr>
<tr>
<td>BAM000286</td>
<td>BA (HONS) FILM STUDIES WITH ENGLISH LANGUAGE</td>
</tr>
<tr>
<td>BAS000120</td>
<td>BSC (HONS) COMPUTING (SYSTEMS AND SOFTWARE)</td>
</tr>
<tr>
<td>PEP000001</td>
<td>PGCE POST-COMPULSORY EDUCATION &amp; TRAINING</td>
</tr>
<tr>
<td>BES000004</td>
<td>BA (HONS) SECONDARY ENGLISH EDUCATION</td>
</tr>
<tr>
<td>UDI000022</td>
<td>DIPHE PARAMEDIC PRACTICE</td>
</tr>
<tr>
<td>MAS000145</td>
<td>MA VOLUNTARY &amp; THIRD SECTOR MANAGEMENT (LLC)</td>
</tr>
<tr>
<td>MAS000260</td>
<td>MSC SPORT, PHYSICAL ACTIVITY AND MENTAL HEALTH</td>
</tr>
<tr>
<td>BAS000310</td>
<td>BSC (HONS) PSYCHOLOGY &amp; CRIMINOLOGY</td>
</tr>
<tr>
<td>PGB000061</td>
<td>PGCE BUSINESS EDUCATION WITH QTS (14-19)</td>
</tr>
<tr>
<td>PGB000075</td>
<td>PGCE SECONDARY (SCIENCE) BIOLOGY WITH QTS (11-16)</td>
</tr>
<tr>
<td>BA2000002</td>
<td>BSC (HONS) ENGINEERING MANAGEMENT</td>
</tr>
<tr>
<td>BAS000340</td>
<td>BA (HONS) CREATIVE WRITING</td>
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Programme Level Specific Example:

Technology-enhanced Learning All modules on the programme are delivered using face-to-face teaching and learning sessions. An appropriate VLE such as Blackboard 9.1 will be used to support the delivery of all modules and independent learning through, for example, providing module handbooks, assessment details, active learning activities (e.g. quizzes, forums), web-based and computer-based learning resources, and to share programme-level information. In addition, the provision of feedback through email may be used in some modules.
Sample

Section 24: Teaching and Learning

Technology?
TEL?
# Learning Edge Baseline and Baseline+ (updated 7th December 2015)

<table>
<thead>
<tr>
<th>Categories</th>
<th>Baseline</th>
<th>Baseline+ (Indicative)</th>
<th>Baseline++ (Indicative)</th>
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</thead>
<tbody>
<tr>
<td>Administration and Orientation</td>
<td>Programme and/or Module handbook (depending on area) (PDF format for mobile and operating system accessibility— see also Resources below) Link to timetables</td>
<td>Staff contact details including photograph, availability, contact information Use Calendar tool</td>
<td>Tutors talking head video introductions(^1)</td>
</tr>
<tr>
<td>Structure and Navigation</td>
<td>Page items presented in a logical structure and sequence (usually chronological) Links checked to ensure still live. Broken links updated or removed</td>
<td>Faculty, Departmental or Programme templates used for consistency</td>
<td>Students guided through course by timed release of content</td>
</tr>
<tr>
<td>Communication</td>
<td>Announcements tool for urgent information updates e.g. room changes, cancellations (one way)</td>
<td>Q&amp;A Discussion fora provided for 2-way communication. Purpose of fora and how to engage is provided</td>
<td>News panel displayed on VLE home page owned and managed by Faculty or Department. Provides local, non-urgent information(^2)</td>
</tr>
<tr>
<td>Resources</td>
<td>Preparatory materials available up to 1 week before session. Presentation slides, notes, hand-outs available via the VLE within 1 week of session. Cross-platform and mobile-accessible PDF format used unless documents need to be accessed for editing Support learners with additional requirements by making alternative resources i.e. transcripts for videos (if used) and use of colour contrast, font and text size in content(^3)</td>
<td>Compress files to minimise file size and aid students viewing on mobile devices. File size and type displayed alongside the filename e.g. Introduction to infection control 34MB PDF 68KB Teaching content in presentation software, e.g. PowerPoint enhanced by multimedia/ narration/ quiz functionality e.g. via iSpring plugin. Renders on any device (and mobile accessible) Allow students to revisit lectures using lecture capture streamed via the VLE Use webcam or personal screen/desktop capture software to produce audio/video e.g. to highlight key concepts to students in any given topic</td>
<td>Bespoke content that requires specialist skills e.g. simulations, games, videos(^4), interactive resources Videos, links, images and texts display well on mobile devices including smartphones Activities specifically designed to harness mobile device features (e.g. camera, apps) to aid ‘anytime, anyplace learning’</td>
</tr>
</tbody>
</table>

\(^1\) For example, could be self-produced by webcam or commissioned from Learning Services Media Development team

\(^2\) Part of Learning Services LTD development activity, working with Faculties/Departments between now and next academic year. Will move to baseline+ then baseline once rolled out.

\(^3\) Accessible documents and presentations: [http://www.jiscitechlis.ac.uk/techlis/resources/accessinfores](http://www.jiscitechlis.ac.uk/techlis/resources/accessinfores)

\(^4\) Role of LS Media Development — providers of video content that academics cannot be expected to build for themselves.
Learning resources

16 - The library resources and services are good enough for my needs.

17 - I have been able to access general IT resources when I needed to.

18 - I have been able to access specialised equipment, facilities or room when I needed to.
“I use technology all of the time – why single it out as something special? Its something I have experienced since primary [school] in lessons, at home, at college and now at uni. I always have something that I can connect to the web with on me; phone, ipad, laptop. I use it in lectures to enhance what I’m being taught, if I don’t know something I can look something up, or I can follow along with the slides – especially if I can’t see, like in H1 or E1 or if the lecturer has used bad colours, or the font is too small”

Maths Student 2
“I use my own stuff to access web based content in lectures and seminars, sure I know others don’t, but some do, it works best for me so that’s what I do. Yes students go on facebook, ebay, yik yak, snapchat or whatever, but that’s their choice isn’t it? I get irritated by lecturers that just read off powerpoint, do they not think I can read? What's the point of me coming [to a session] if that’s all they do? I might as well stay at home”

Maths Student 4
“I expect every lecture to have some kind of technology input; presentation, slides, videos whatever. Blackboard is a place where I get stuff from, its not really interactive, although I do submit reports and assignments there, so maybe it is, I don’t know.”

Design and Technology Student 1

“We use technology all of the time in our subject, we make things, we learn with it and about it, we even have to teach it, so I expect it to be there and for lecturers to know about how to use it – its part of their job isn’t it?”

Design and Technology Student 4
“We all use social media, we have a Facebook group, but WhatsApp is the one we tend to use more, it’s instant and quick and easy to share things on, even our course leader uses it to contact us. Is this technology enhanced learning? I’m using technology to learn, so I think it is – it’s not in sessions, or even in university time, but it is a vital way for us to communicate and I think our cohort would be lost without it”

Religious Education Student 2
General Themes

Students expect:

• Staff to use it!
• It to enhance their learning, and expand on what is delivered on campus,
• Not to interact with BlackBoard really – its where we get things from,
• Have to bring our own stuff (laptop, tablet, phone etc..)
• Often expect that they know more about technology than staff teaching them
Two references only to technology......

But Seventy Two to learning
To Conclude....

Has thinking moved on so much that technology enhanced learning is learning? It’s the expectation of so many, including those we teach, that its integral in what we do. Even the forthcoming TEF document neglects to single it out.... So is that because its no longer important, or is that because we have moved away from defining modes of learning which utilise (or do not) technology?