Forum Insights

PROJECT TITLE:
Technology Enhanced Learning: What Works & Why?

Overview of the project
The What Works & Why project, funded by the National Forum for the Enhancement of Teaching and Learning for Higher Education, aims to build digital literacy and engagement for students and teachers by exploring the question: "What works and why?".

The basic premise is there is no 'one-size-fits-all' approach to the effective use of new digital technologies for teaching and learning (Henderson, Selwyn & Aston, 2015). The project has a strong focus on the discipline specific contexts in which teaching and learning takes place, with a common goal of helping to promote better outcomes for learners. To help achieve this goal the project adopted a multi-dimensional implementation strategy ranging from supporting conventional workshops and seminars to fostering special interest teaching groups and enabling a number of TEL innovation projects.

The What Works & Why project supported:

- 34 separate development events including workshops, seminars and drop in clinics between January and June including a TEL Week which ran from March 7th to 11th
- Launch of 12 Teaching Groups and three inter-institutional Teaching Groups
- Funding for 26 TEL Innovation Projects across a range of disciplines and functional areas
- A staff survey of the impact on practice of the project
- A series of briefing guides produced by funding recipients on What Works and Why initiatives
- A wide range of shareable resources in many disciplines
- A student produced video wall of "what works and why" in practice

Partners
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Key outcomes of the project
Development Events: Over 160 staff members across participating institutions attended events and workshops organised as part of TEL Week. The workshops were varied and were designed to share learning technologies in action in differing contexts. Some of the topics included:

TEL Tales	M-enabling formative assessment
Google Apps: using Google Apps for student collaboration and co-operative learning	Screen casting for learning, assessment and feedback
Learning Analytics	Mastering Moodle
Technology Enhanced Feedback Approaches	Universal Design for Learning (UDL) - using advanced PowerPoint to create interactive resources
Eportfolios using Google Drive	Using Socrative for formative assessment and classroom interaction
Enhancing Feedback using rubrics in Turnitin and Moodle	Peer Assessment for learning
Skype for Telecollaboration	

Teaching Groups: Teaching groups – essentially peer mentoring circles - were formed by teachers for teachers to discuss and share information on varied topics. Some met online, some facilitated small workshops and others organised large scale events but all with the aim of sharing TEL approaches with peers.

Innovation Projects: The TEL innovation project funding recipients pursued varied discipline specific initiatives. Some of these initiatives included:

- Online Resources for Computing Students – Engineering & Computing
- The application of headcams to enhance the educational experience in chemistry laboratories
- Technology Enhanced Teaching within the Clinical Practice Setting
- Using OERs, PERs, Blending and Flipping to Deliver a Computer Systems Module for Year 1 Students
- iPads as Virtual Hard Back Notebooks – science students documenting their own learning experience
- Developing a Technology Enhanced 'Aura' in Science Education
- Interactive audio-visual support and reinforcement for music ensemble learning and teaching
- The Midwifery Peer Assisted Learning and Support (My PALS) Project

Shareable Outputs: The teaching and learning impacts of these technology enhanced learning initiatives are captured in Briefing Guides completed by participants and are available on www.whatworksandwhy.ie.

The What Works and Why project team designed information cards, based on TEL tools showcased during the workshops, to be displayed in public areas to further share key learning technologies to the wider university teaching staff. Selected recordings of CPD events are available at https://whatworksandwhy.ie/tel-week/seminar-recordings/. Project outputs of quizzes, videos and screencasts across many disciplines will be available from the website shortly.

Student Voice: The voice of the student was captured via a series of videos which are available at https://whatworksandwhy.ie/what-works-for-students/. An information card was also designed for students to highlight some of the TEL Innovation grant projects that are developing resources specifically for student use, namely: Diigo bookmarks embedded into student profiles, Student Assignment Notification in Google Calendar and a Digital Portfolio platform.

Outline how the project benefited students, staff and community

There are 3 main benefits that arose from the project. Firstly, an engagement with and improvement of teacher digital literacies. Workshop participants completed evaluations based on the Coolbear & Hinton (2013) Impact Evaluation Framework. Results indicated the CPD events were perceived as very positive. Some feedback from participants included:

Impact on Practice	"It gave me confidence to try new things" "Yes, I am using the idea of feedforward in my lectures" "They have increased my awareness of the potential of technology and my need for training" "I think it really helped that the session narrowed down the most appropriate tools available for lecturers, definitely saved me a lot of time searching myself." "A hugely beneficial initiative - would like to see more of it next semester."
Impact on Learners	"Yes it has made me more aware of students and learning needs" "Given me practical examples of technology-enhanced pedagogy to share with my students"
Impact on Project Team	"Yes I've shared some information with colleagues as a result of giving one of the TEL tales talks myself since the event."

Secondly, a sharing of expertise across communities of practice. A total of 12 teaching groups have been founded in many discipline areas, including Computing, Humanities, Business, Education and Science. The establishment of these groups has laid the foundation to support the long-term impact of the project by enabling the formation of communities of practice within discipline specific contexts.

Thirdly, a series of innovation projects were fostered which have encouraged staff to explore new models and approaches to teaching and learning across a range of disciplines. Some projects were directly informed by student demand and outputs from these projects will benefit students over coming semesters through TEL tools to streamline productivity and support the creation of digital portfolios.

Outline how the project benefited the higher education sector nationally

The project has benefited the wider higher education sector in four main ways.

Firstly, preliminary findings from the What Works and Why project have been widely disseminated throughout the higher education sector. Seven presentations from the What Works and Why family have been given at the Edtech 2016 conference A related benefit is that presentations from the project are will be shared with participants at the Association of Learning Technology (ALT) conference in September.

Secondly, a notable feature of the project has been the active engagement through social media and particularly Twitter. With over 360 followers, this has allowed project activities and outcomes to be more widely and regularly shared with a national and international audience. As a result, there have been a number of follow up enquiries and discussions that have helped to make connections and share experiences.

Thirdly, the project has generated a suite of resources that are now available to the sector. These resources include literature reviews and other project outputs that should be of benefit to other higher education institutions. Examples of these shareable resources include:

- Moodle Plugins for Student Orientation and Blended Learning
- Computing Quizzes and screencasts for several computing modules including: Introduction to Computer Systems, Introduction to Computer Hardware, Computer Programming I, Computer Programming II and Introduction to Operating Systems and a set of lesson on Lego Mindstorm Robot
- Eportfolio literature review
- Universal Design for learning supports including: Examplar screencasts, a podcast episode with accompanying transcript, a best-practice guideline for a process whereby people can check their materials to ensure they are accessible
- Assistive technology screencasts
- Database of questions for mathematics teaching in Engineering

Fourthly, briefing guides from TEL Innovation Projects and Teaching Groups including Approach, Results and Recommendations are available to all from the What Works and Why website.

Who to contact for more information/next steps

Please see www.whatworksandwhy.ie or contact Mark Glynn for further information on the project or for access to any of the shareable outputs.