2022

Unlocking student engagement opportunities in learning, teaching and assessment through active blended practice in the Faculty of Business

Faculty of Business, Technological University Dublin

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OLLSCOIL TEICNEOLAÍOCHTA
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Foreword

This new Faculty of Business Collection celebrates and highlights the transformative work of our staff and aims to inspire aspirant disciplinary teams to be innovative and bold in their thinking as they plan their programmes and modules going forward. I am delighted to provide the foreword for this inspiring collection that will no doubt exert an impact in the Faculty on all those interested in exploring blended learning opportunities in their practice.

The Faculty of Business VIT&L events in November 2021 were part of a National Forum for the Enhancement of Teaching and Learning funded initiative for the higher education sector in Ireland and provided an ideal opportunity for the first teaching and learning events to take place within the new Faculty structure. The aim of the events was to showcase staff innovations in blended and online learning from a time of change, and all were undertaken in the shadow of Covid-19 in 2020-21. During lockdowns in 2020, the use of technology in our practice began to bloom. The two events brought together staff from multi-campuses in TU Dublin Business, but who all shared the same goal from that challenging time - achieving positive change in learning, teaching and assessment (LTA), and enhancing student success. I was impressed by the innovative work of staff disseminated in the VIT&L events, their focus on creativity and student centricity, and wanted to capture it in one place; thus the idea for the first cross-faculty collection emerged. The contributions in this publication are about innovation-based education and the 21st century learning skills of critical thinking, communication, collaboration and growth mindsets; they are showcasing strategically aligned, sustainable work that can maximise the impact of the Faculty of Business LTA practices on the student and staff experience.

In the Faculty, we are committed to supporting the enhancement of LTA in the disciplines, and the recent VIT&L events were a useful reminder that real change in institutions is often driven by high performing people and teams. This collection which emerged from the VIT&L events provides a key route for acknowledging, celebrating, and making visible the transformative collaborative work happening within the Faculty. As always, effective student involvement is key, and many of the staff innovations showcased here demonstrate how students can actively participate in positive change. Creative individuals change things, but creative individuals rarely work alone. Dynamic collaboration, with each member of a team bringing their own skills and creativity into the mix, can be a game-changer in challenging times and circumstances.

This collection is being published in what remains extremely challenging times for higher education and society - a time when the restrictions of a pandemic have tested our capacity to collaborate effectively. As this collection demonstrates, it is through learning from each other, working together and sharing good practice that we can move on and create new solutions for the future. This publication is designed to recognise and celebrate this approach and plant the seeds for a better future for our students. The collection highlights clearly the benefits of effective and transformative collaboration for student learning, staff innovations and disciplinary reach.

Accompanying the valuable staff scholarship showcased in this publication, the student voice was an integral part of the work. A thematic analysis was undertaken of cross-faculty student surveys from 2020-21, with a particular focus on their experience of the impact of remote learning. A student panel was formed to hear directly from UG and PG students and alumni and a range of other students were invited to make a short video on what student success means to them. You can see the results of these powerful words on the cover of this collection.

The combined impact and influence of the staff innovations and student experience is channelled into a set of recommendations for informing the emergent near-future blended learning enhancement in the Faculty of Business. It is important for us to note that Staff CPD was prioritised by students. Here are some further recommendations to help foster successful online and blended learning experiences for our students:

1. Create opportunities for learners to collaborate.

2. Partner with your learners to create 'active engagement.'

3. Be mindful of the cognitive load for your learners.

4. Provide feedback to your learners.

5. Create opportunities for synchronous and asynchronous learning.

6. Learn how to use your learning management system or other tools to connect with learners.

7. Create or curate.

8. Discuss and share your audio, video, and infographic prototypes with a colleague.

9. Be vulnerable and transparent and share your learning when it comes to online teaching with your students.

10. Be mindful that learning can occur online and offline, so plan accordingly, support learners to be agile, flexible, and responsive in developing their knowledge and understanding.

We anticipate that these innovations in this collection from colleagues, and indeed many others that are out there, waiting to be captured, form the basis of future LTA development work in the Faculty. As we reflect on our approach to remote teaching over the period of COVID-19 restrictions, I hope this report can inform our future directions and enable cultural, community and capacity change in the Faculty of Business. I see this collection as the first of a series that are in line with TU Dublin priorities and as the new Schools emerge from organizational design, for supporting the ongoing development of a strong foundation for enhancement of blended learning, teaching and assessment.

Dr Eoin Langan, Dean of the Faculty of Business, January 2022

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Section 1 : Valuing student engagement online

Section 2: Enhancing student employability

Section 3: Innovative technology use for LTA

Introduction

Since March 2020, the pandemic has posed unprecedented challenges for universities everywhere. As campus buildings shuttered in TU Dublin, and physical access on site was prevented, staff responded with immediate action by implementing "remote teaching" as continuity to keep all students learning. In Business, a wide number of staff embraced technology to drive innovation. This first cross-faculty collection captures and showcases a range of good practice case studies from across the early pandemic phase in the Business Faculty in TU Dublin. The case studies are covering themes of student engagement, assessment and feedback, graduate attributes, enterprise, employability, inclusion, flexibility. You are invited to celebrate our student's success in progressing during the pandemic through having a read of these shared experiences as we step beyond our emergency move to shape our practice in interactive blended learning for the future.

In order to showcase how learning, teaching and assessment innovation can support and enhance the adoption of good practice throughout the Faculty, and encourage the integration of new members of the Faculty Teaching and Learning Community, an expression of interest was sent out in October 2021, and 32 submissions were anonymously peer-reviewed by a panel of Programme Chairs. The calls were themed based on strategic priorities for TU Dublin. In November 2021, funding was successfully awarded from the National Forum for the Enhancement of Teaching and Learning to host events to celebrate and value innovations in Teaching & Learning (VIT&L). Some of these submissions were presented by staff at these events.

Why we are doing this work?

Work is ongoing to develop a faculty culture, and creating and nurturing the climate for innovation is important. But what is innovation for us? At present, the concept of 'innovation' features prominently across all industries and sectors. It's everywhere in Higher Education too, encapsulating research, entrepreneurship, technology, learning, teaching and business improvement. We all know that pedagogical practice needs to be innovative, and that adapting to the characteristics of our students and responding to their development is an inherent aspect of pedagogy. However context is very important - what may be innovative in one environment or class setting may not work for another. Equally important is how sustainable the change may be.

There are three sections to the publication, distributed as follows:

- Valuing student engagement — 10
- Enhancing student employability — 6
- Innovative technology use for LTA — 14
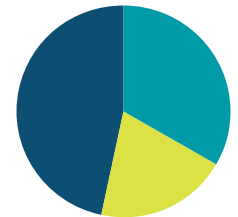
A brief, themed, summary of the staff innovations is noted below.

Section 1
Valuing student engagement online: How staff made best use of the time they had with their students in online contexts.

Section 2
Enhancing student employability: Developing curricula that teach job-relevant skills to help ensure graduates are ready for the workforce. How staff empowered students to confidently step in to their chosen occupations and impact positively on the world around them.

Section 3
Innovative technology use for learning, teaching & assessment: How technologies can support us to create dynamic learning opportunities and ensure learning is accessible and open to all our students and how alternative approaches to assessment can enhance student learning.

Importance of Context

All the cases in this collection provide meaningful insights relating to innovations, engagement, and practice. Universities may devote plenty of time and resources to innovation in higher education but according to Bearman & Chandir (2021), there is a dearth of research on how that innovation can be successfully sustained. They conducted a rapid review of 2810 papers which, at first glance, discussed the sustainability of innovation in higher education, only to discover that only 14 of these papers actually looked at how this works. However, these papers did highlight some common themes in terms of what sustainable innovation in higher education might look like. As many of us are already aware, context matters. Innovations which can be adapted, contextualised, and reinvented are more likely to be sustained, although according to Grove & Pugh (2017), the resulting practice may bear little resemblance to the original innovation. Similarly, innovations that build upon existing practices and reuse existing content, where possible, are more likely to be sustained – this may also help innovations be cost-effective, which is a benefit once the original funding and support structures are removed.

Support from senior leaders enables sustained innovation, including through shaping a supportive institutional culture – but equally important is engagement at the local level, utilising existing networks and collaborative partnerships. And we want to know the innovation works – there needs to be clear benefit to students, and examples of how this has been achieved. Also of importance for integrating innovation into 'business as usual' practices are funding, time, and expert support, along with innovation champions, like those showcased in this collection. However, having an institutional and Faculty culture that supports risk-taking and innovation, and a collaborative, contextualised and customisable approach to innovation and capacity building enable both the initial innovation and its ongoing use. Integration of innovative practices can take decades, long after we have ceased thinking of it as innovative. Perhaps, as suggested by Bearman & Chandir (2021), when thinking of sustainable innovation, we should focus more on processes and what we do, rather than simply what has already been achieved.

The innovative ideas shared in this collection take the form of a short written case, and in many cases, there are also links to a range of short videos and URLs to view. In some instances, the discipline/programme/level are indicated, but a key point is to encourage colleagues to look at using some of these innovations independent of the area it came from.

The following themes are explored in each case:

Description of context & staff motivation: What was the stimulus for the idea for the professional context?
Impact on student experience

Supporting the achievement of the University strategy
Key success factors for Pedagogy & Technology
Staff reflections: What was learnt in terms of enhanced student learning opportunities as well as what worked less well?
Future: What future plans do staff have for it? How could this used by colleagues going forward? Is it easy to replicate?

In this collection we are seeing changes in approaches and technologies. Staff need to take time to reflect on major technology trends and their application in learning, teaching and assessment processes. This collection is offered at a time of **reviewing and reflecting on change**. Sincere thanks to all contributing staff and students for giving their time and energy to the VIT&L events and subsequently to this collection. We hope you enjoy reading and viewing the innovations!

Assumpta and Roisin, Faculty of Business VIT&L Organisers, December 2021

References
Bearman, M., & Chandir, H. (2021). *Sustainability in Teaching and Learning Innovations.*

Section 1:

Valuing student engagement online

1 FinBiz Sustainability Webinar Series

Staff Innovators and Discipline/Programme/Level
Mary Jane Webberley and Linda McWeeney, Accounting and Finance.

Context

We have created a brand, FinBiz Sustainability webinars. The aim is to imbed Sustainability across the curriculum at TU Dublin. The webinars are hosted by TU Dublin, presented by experts and recorded and uploaded to the TU Dublin FinBiz Sustainability hub. The webinars are also created and developed for assessment use across all disciplines and all campuses. Panelists include professionals in the area of sustainability speaking on topics such as sustainable practices and policies, risk management and sustainability, future trends in the area of sustainability, accounting for sustainability and sustainability frameworks. We also had a guest speaker who spoke about mental health prior to our students' exams, good health and well-being is highlighted in Sustainability Development Goal 3. TU Dublin students are encouraged to complete the 'Sulitest'. The Sulitest is a global educational project that assesses sustainability literacy.

Impact on Student Experience

We have received very positive feedback from our students. The webinars are a new and interesting way of obtaining an insight into industry and have enhances the student experience. A number of our students completed the Sulitest prior to attending any webinars and were then asked to take the test a second time so we could compare their results. We found that knowledge and awareness of sustainability had increased. Our mental health webinar which took place prior to exam time was also well received by our students.

Supporting the achievement of the University strategy

TU Dublin strategy specially details the challenges facing the university through the lens of the UN Sustainability Goals. The three pillars of the TU Dublin Strategy being People, Planet, and Partnership. By listening to our webinars and completing the Sulitest, we are creating awareness of the SDG's. Through our webinars we are educating a new generation of TU Dublin graduates that will be future leaders pushing the sustainability agenda for both the public and private sectors, and influencing national economies.

Key success factors

The key is to have engaging speakers for our students and to ensure any assessment from the webinars are interesting and motivate students to explore aspects of Sustainability.

Staff reflections

The webinars do require a lot of thought and work as there are many factors to be taken into account such as the target audience, length of the webinar, number and type of speakers, day of the week, time of the day which will be most suited to the target audience, GDPR, IT and marketing support, notice of webinar, type of assessment, learning outcomes, interaction with audience, integrated video clips, recording to allow for on-demand webinars perhaps, surveys upon completion. However, we found that the benefits outweigh the negatives, as knowledge is acquired from professionals in the area of sustainability and students overall learning experience is enhanced through listening to the webinars and the follow up assessments.

Future

Our webinars are recorded and uploaded to our FinBiz Sustainability hub for use by other lecturers and modules for assessment use across all disciplines and all campuses. All webinars are recorded and are easily accessible from our hub. We would welcome more lecturers to engage and produce webinars on different aspects of Sustainability that may be of particular interest to their modules.

Figure 1: Our Sustainability hub www.finbiz.ie (currently in progress)

2 Tenjin Technology

Staff Innovators and Discipline/Programme/Level
Linda McWeeney. Business/Accounting and Finance/Levels 6 to 8.

Context

Tenjin technology is a web-based software application that supports the teaching and learning of accounting and finance. It enables dynamic generation and delivery of accounting and finance educational content. It generates original accounting and finance exams and quizzes on demand. SCORM packages can be generated for deployment in Moodle. It is accessed through a link on the Moodle course page.

Impact on Student Experience

The purpose is to formatively assess students in accounting modules. Tenjin will aid in revision for students, while helping students/lecturers to identify areas of weakness. Tenjin provides questions and solutions to users in many forms, including MCQ's, Quiz, Short and long questions. Tenjin aids in student revision and enables students to work at their own pace, in their own time and is available online. It was a great advantage to students during the Pandemic. There is also an opportunity going forward to use this for summative assessment.

Supporting the achievement of the University strategy

This provides a pathway for all to experience as it can be deployed across all accounting modules, economics, taxation, all modules that require practice questions for revision. It also nurtures bright minds as it provides a means for endless practice and improvement. It also provides for an increased external network as Tenjin is an external provider with many links to other universities and educational resources. Tenjin is used by DCU and Accounting Technicians Ireland also as an educational resource.

Key success factors

Students learn in a practice-based environment informed by research and enabled by technological advances. Application of innovation and technology is important. While helping students/lecturers to identify areas of weakness, Tenjin provides questions and solutions to users in many forms, including MCQ's, Quiz, Short and long questions. SCORM packages can be generated for deployment in Moodle. There is an infinite amount of questions provided, with hints and/or solutions. Students get to try similar questions in different forms with a change in figures over and over again. The key to accounting and financial module success is practice.

Staff reflection

Online material needs to be constantly reviewed and updated and kept at an appropriate level. Engagement needs to constantly take place between the lecturer and the students as students are not good, particularly first years, with self-directed learning. It takes time to ensure the correct material is available and being assessed correctly online. Usage activity is available from Tenjin but again requires time to analyse and act on this data.

A short video can be found here: Tenjin - How this works — Financial accounting multiple choice, accounting problems, accounting double entry

Future

This can be used by staff as an extra resource made available to students to practice and revise. I would envisage it being rolled out to all business/accounting students across all campuses. It has recently been deployed for taxation modules and next year will be rolled out for all accounting modules in the new Accounting and Finance degree. The benefits of processing include the specific self-assessment and revision activities of each identified End User that shall be recorded by Tenjin on behalf of the Client shall be:

~ Date and time of on-screen quiz generation or PDF file download;

~ Subjects for which on-screen quizzes are generated or PDF files downloaded;

~ Question ID reference numbers included in each on-screen quiz generated or PDF file

~ downloaded;

~ Whether the types of questions included in each on-screen quiz generated or PDF downloaded were multiple-choice, short computational or long computational;

~ Whether an on-screen quiz is generated in 'learning' mode or 'exam' mode;

~ Whether the question difficulty type is 'basic' or 'advanced';

~ First actions taken by the individual in an on-screen quiz as follows:

~ Whether a question is viewed (Yes or no);

~ Whether a question is attempted (Yes or no);

~ Whether an attempt is correct or incorrect (Yes or no);

~ Whether the hint is viewed (in 'learning' mode) (Yes or no);

~ Whether a 'similar question' is selected (in 'learning' mode) (Yes or no);

~ Whether the solution is selected (in 'learning' mode) (Yes or no);

~ Option selected for multiple-choice type questions ((a), (b) or (c));

~ Values input for short computational questions.

~ This information can be used to identify areas of weakness in accounting and finance modules for lecturers and students. It has already been through the GDPR process and therefore a link to moodle pages is all that is required for set up.

1714 The following balances are available in respect of Jimmy Heaney's business at 28 February 2020:

	€
Noncurrent assets	14,415
Current assets	4,310
Owner equity capital at 1 Mar 2019	5,070
Drawings	2,155
Current liabilities	4,810
Noncurrent liabilities	4,800
Equity capital introduced during the year	3,549

Based on the available information, what is the amount of Jimmy Heaney's profit for the year ended 28 February 2020?

[   ] [submit]

[prev] [hint] [solution] [similar question] [next]

1714 The accounting equation states that assets minus liabilities equals equity.
Calculate Jimmy Heaney's total equity at 28 February 2020.
Then adjust for the known equity components to derive the profit for the year.

Above shows the hint – if the students requested a hint

1714 Solution

	€	€
Noncurrent assets	14,415	
Current assets	4,310	
Total assets		18,725
Noncurrent liabilities	4,800	
Current liabilities	4,810	
Total liabilities		(9,610)
Total equity at 28 Feb 2020		9,115
Adjust for following equity movements:		
Opening equity capital	(5,070)	
Capital introduced during the year	(3,549)	
Drawings	2,155	
		(6,464)
Profit for the year (balancing figure)		**2,651**

Tutorial notes:

The profit for the year is calculated by reference to the accounting equation: assets minus liabilities equals equity.

Profit for the year is one component of equity and can therefore be derived.

Questions can come in short or long format or in the form of multiple choice questions. A hint can be requested and then the solution given and the student can request another similar type question.

Likewise, the lecturer can have the hint/solution removed, depending on the assessment.

3 Using Authentic Assessment to enhance student engagement online

Staff Innovators and Discipline/Programme/Level
Amanda Dixon

~ Sports Regulation - Sports Management & Coaching Programme – Level 7 & 8
~ Business Regulation - Digital Marketing Programme – Level 7 & 8
~ Business Regulation - International Business Programme - Level 7 & 8
~ Business Regulation - Business & Information Technology Programme – Level 7 & 8
~ Sustainable Business Practice - General Business Programme – Level 7 & 8
~ Sustainable Business Practice - Accounting & Finance Programme – Level 7 & 8

Context

Authentic assessment with timely formative feedback was introduced to a number of regulatory modules across the School of Business during the emergency remote teaching period. Regulatory modules are mainly theoretically based and the introduction of authentic assessment added a practical dimension to the modules. Authentic assessment enables the application of a theoretical component to real life situations and can be defined as a "direct measures of students' acquired knowledge and skills through formal education to perform authentic tasks" (Mueller, 2005).

Impact on Student Experience

With the introduction of authentic assessment and weekly formative feedback the module became more student centred. The authentic assessment created a collaborative learning environment and in turn enhanced the student experience (Panitz, 1999). Student engagement with the module improved, both from the perspective of attendance, active participation and submissions of assigned work. Student feedback was very positive. They acknowledged that the use of authentic assessment was engaging and interactive. The combination of authentic assessment together with feedback, created a supportive learning environment for them.

Supporting the achievement of the University strategy

The introduction of authentic assessment supports the PEOPLE pillar of the TU Dublin strategy. Authentic assessment by its very nature focuses on the application of the knowledge acquired in the modules to "real world" tasks. It promotes academic excellence as students can identify how theoretical components can be applied in the business environment. The formative feedback provides opportunities students to continuously improve over the course of the academic year.

Key success factors

The key success factor of the use of authentic assessment in the regulatory environment was that overall it improved the student experience with the module in the online learning environment:

~ Student engagement with all the modules increased.
~ Academic performance in the some modules improved.
  Further research is required in this area.
~ The inclusion of weekly formative feedback to students gave them the opportunity to improve their academic skills and knowledge over the course of the semester.

Staff reflections
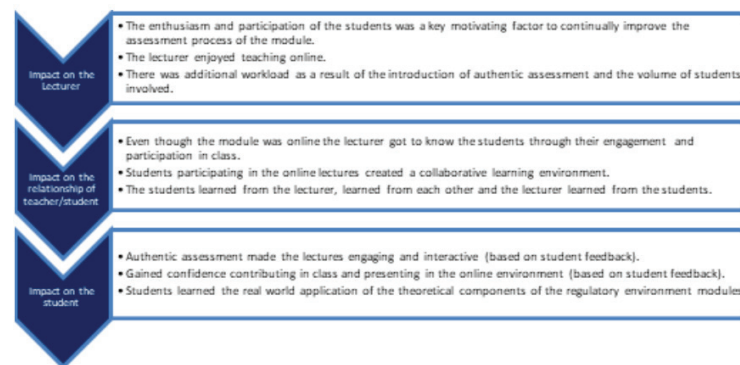
Adapted from "A Theoretical Model for Authentic Assessment of Teaching" (Rennert-Ariev, 2005)

Future

Authentic assessment can be embedded into any theoretical module assessment component in full or in part. For example you could still keep your end of semester invigilated exam if you wish and introduce authentic assessment as part of your continuous assessment. It works best to start with small incremental steps and identify practical ways to improve the assessment process. Authentic assessment should be used in conjunction with formative feedback.

There are a number of supports for academics in existence in TU Dublin for authentic assessment. TU Dublin IMPACT project currently have an "Authentic Assessment Scholars and Supporters Scheme (2020-2021)". The theme of the scheme was "Developing sustainable Authentic Assessments for TU Dublin". The IMPACT project is also creating an Authentic Assessment Community of Practice. The introduction of a Champion for Authentic Assessment in the Faculty would encourage and support the introduction of authentic assessment. Future plans for authentic assessment include an improvement of the current format and a collaboration with TU Dublin colleagues on an entrepreneurship project next semester.

References

Mueller, J. (2005). The authentic assessment toolbox: enhancing student learning through online faculty development. *Journal of Online Learning and Teaching*, *1*(1), 1-7.

Panitz, T. (1999). *The Case for Student Centred Instruction via Collaborative Learning Paradigms*.

Rennert-Ariev, P. (2005). A theoretical model for the authentic assessment of teaching. *Practical Assessment, Research, and Evaluation*, *10*(2).

4 Putting Pedagogical Theories and Principles into Practice in the Pandemic

Staff Innovator and Discipline/Programme/Level
Tom Mulvey, Lecturer in Management and Strategy, School of Business, Blanchardstown Campus.

The online learning that I refer to below was delivered to (i) Level 9 Master of Business (MBS) students; (ii) 3rd and 4th yr BBS general business students and (iii) 2nd year BBS Business and IT students.

Context

Blended learning; Active learning; Action research; Flipped Classroom; Problem based learning (PBL); Inquiry based learning; Rapid research; Reflective practice; Teamwork – putting the theories into practice.

Impact on Student Experience

I used the following pedagogical theories as the fundamental principles guiding all my online lecturing during the Pandemic: Blended learning; Active learning; Action research; Flipped Classroom; Problem based learning (PBL); Inquiry based learning; Rapid research; Reflective practice; Teamwork. Students therefore benefited by changing their default learning mode from passive to active. They were learning-by-doing and therefore retained material and developed their employability skills to a much greater extent. The student experience of these online learning activities was therefore much more satisfying as evidenced through informal and formal feedback received through the Quality Assurance processes.

Supporting the achievement of the University strategy

People - In the TU Dublin Strategic Intent document (Strategic Plan), it says *"we are preparing people to confidently tackle the challenges that the world faces in creative and balanced ways."* My online lecturing classes used rapid research, flipped classroom, inquiry based learning and teamwork as underlying principles empowering students to collectively develop confidence and creativity for their future workplaces. **Planet** - In the Strategic Intent 2030 document it says *"solve some of the world's most pressing problems."* Students were encouraged to consider how they would approach solving some of the sustainability issues impacting our planet at present, using PBL (problem based learning) as a tool. **Partnership** - In the Strategic Intent 2030 document, it says *"We Can, We Will, We Do."* The emphasis in my online lecturing during the pandemic was on **"Doing"** (Action learning, Action research, Problem solving, etc).

Key success factors

The key success factor was "engagement". Continuous online learning from screens can be deeply mundane, un-motivating and verging on depressing. When students are engaged, participating, contributing and regularly responding then they are active and they are learning. Attending such online classes does not appear to the student as such a passive "chore" any more. They know they are going to be busy and at the end of the session they will have created outputs facilitating their own learning and assessments.

Staff reflections

What I learned from student feedback is that even though the primary delivery mechanism was "virtual" a lot of students still benefited from physical hard-copies of core text books, to supplement their learning. This surprised me a little as I had expected that eBooks would have been preferred by the majority. I also learned from student feedback that setting up a "buddying" system between fellow students at the start of an online module could be beneficial. Feedback indicated that buddies could assist each other and ameliorate some of the isolation associated with remote online learning. "Team-working" through breakout rooms was also much appreciated by the students and provided a welcome opportunity for inter-student debate/conversation/discussion. Another learning for me was students reported that they preferred when they could see on their screens what their classmates were uploading during the various in-class activities. Examples would be when Padlet was being used for an in-class activity or even a simple Moodle forum where every student's input was immediately visible to the class. This created collegiality and in some cases a playful sense of competition!

Future

The above theories can be turned into practice by staff using some of the tools I used e.g. Padlet, Henry Stewart Talks (HS Talks), MS Forms, Moodle forums, Mini-formative Assessments, Reflective Journals, MS Teams and Breakout rooms, online contributions reports, Mini Video case studies, eBooks, Voice recordings, etc. This would be easy to replicate especially in settings where students have a keyboard & screen in front of them (e.g. computer lab etc.). It involves tight time management to ensure several short activities can be completed within a time-frame. It can also be replicated in rooms with white-boards/flip-charts, again with tight time management.
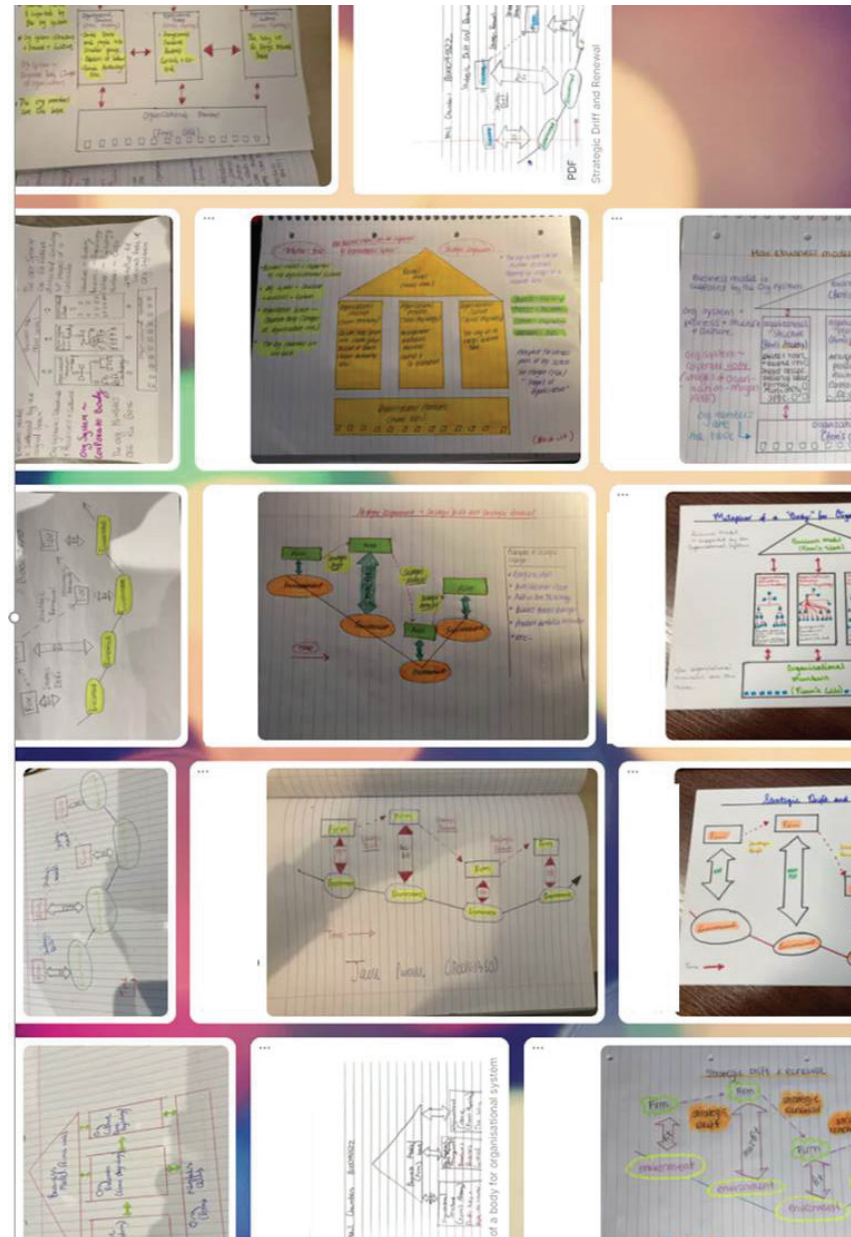

Figure 1: Screenshot from in-class online active learning exercise through Padlet

5 'Formality and Familiarity': Checklist for Sustaining Collaboration in Online Delivery

Staff Innovator and Discipline/Programme/Level
Niamh Imbusch, (Module PRJM9002 Team Building and Leadership, MSc in Product Management, Level 9)

Context

If you love teaching, there is nothing quite like the feeling of exhilaration that comes from walking into a classroom full of eager learners, where face-to-face interaction readily enables a constructivist pedagogy; forced online, things are turned on their head. By adopting a 'formality and familiarity' approach, the teacher/student collaboration is sustained. This approach – which informs content architecture and interactive facilitation - underpinned the repurposing of a 3-day in-person block release module to fully online delivery, effectively flipping the traditional approach. The programme is the MSc in Product Management; the module is PRJM9002 'Team Building and Leadership'.

Impact on Student Experience

Clear content architecture and exaggerated facilitation skills ensured that student experience was positive. Engagement with online materials was tracked in real time, resulting in timely adjustments to content. Feedback was actively invited and influenced the balance of synchronous and asynchronous activities on offer. Summative feedback was positive:
"... *On our last remote teaching day she kept me really interested to the very end and also drove me to think about the content for a long time after. I wish I could sit in a classroom under her guidance for many days and learn much more about this subject. Her style of teaching is really exemplary.*"

Supporting the achievement of the University strategy

The strategic 'people' pillar aims the foster individual talents in an ever-changing world; the 'formality and familiarity' approach enabled this lecturer to respond proactively to ensure that radically altered student needs were accommodated. Student engagement was sustained despite the profound changes to education delivery imposed by Covid-19.

Key success factors

The key success factor was the adoption of: (1) formality – while module learning objectives and foundational content remained unchanged, the adoption of a more formal approach to the content architecture, harnessing the Brightspace platform, supported by clear signposting of structure, content and expectations, ensured that students could access and self-direct through the module without disruption; and (2) familiarity – what might be described as an exaggerated interpersonal facilitation skills were adopted in teaching style, again underpinned by clear signposting, use of names, use of online engagement tools (polls, hold and share, breakout groups), and attentive response to email ensured that students' engagement experience was collegial and inclusive.

Staff reflections

In advance of delivery and in the absence of additional supports, the lecturer's role expanded beyond the traditional remit; she was required to consider and anticipate every need of the learner, from access to reading materials, provision of technical support with the VLE platform, as well as student registration status which might hinder access to the VLE (e.g. due to non-payment of fees). While such might have been unavoidable in the emergency online teaching scenario, it is not optimal in the context of planned remote teaching and consideration ought to be given to providing the necessary technical and other resources necessary.

Future

As the Faculty continues to deploy online and blended learning, particularly at post-graduate and executive education levels, students' access to learning materials and ability to (self-) navigate module content is critical. 'Formality' enables staff to consider content architecture (content sequencing, format and delivery) and sign-posting. 'Familiarity' hinges on strong interpersonal facilitation skills, described here as *exaggerated* to signify going beyond the didactic approach.

With the appropriate stakeholder support, this approach could be replicated and rolled-out across multiple faculties. Facilitation skills might be embedded in stand-alone teaching development programmes or through existing activities such as staff induction and/or other teaching and learning CPD offerings. Similarly, approaches to content architecture might be shared through VLE training events. A simple checklist has been developed (see below), which can be shared for use as an aide memoire.

> "*On our last remote teaching day she kept me really interested to the very end and also drove me to think about the content for a long time after. I wish I could sit in a classroom under her guidance for many days and learn much more about this subject. Her style of teaching is really exemplary.*"

6 Fostering Student Engagement using Polling Software and Anonymous Question Boards

Staff Innovator and Discipline/Programme/Level
Alice Luby, Lecturer in Accounting, Business City Campus

Context

Students learn best when they engage, whether it is in a lecture room or in a virtual room. For many years, I used polling software (TurningPoint) to engage students during a lecture, embedding polls within PowerPoint slideshows. This had multiple benefits both for the student and lecturer. From a student perspective, the use of polls during a lecture allows for an interactive environment, keeps them alert and helps them focus. Polls allow students the opportunity to check if they are understanding the concepts being presented during the session. This allows for feedback on how they and their peers are grasping the material. Importantly, students are no longer isolated, eliminating the fear that they are the only one who don't understand a question. From a lecturer perspective, polls provide an indication of how much the students have grasped allowing the opportunity to reiterate key points that may have been missed.

The initial virtual lectures delivered in March/April of 2020 were static lectures in Bongo despite being live with no student interaction at all. Unfortunately, Bongo converted slides to PDF files eliminating the opportunity to use animation and embedded polls. Two weeks into lockdown students indicated that it was harder for them to focus, looking at a screen for an hour-long lecture was challenging and they particularly missed the polls aspect of the on-campus lecture. It was now more than ever the engagement aspects of polls was needed. The solution was to use the screenshare option during Live Bongo (or Teams) and deliver the lecture with the polls embedded in PowerPoint in the same way as in a lecture room.

Impact on Student Experience

The improvement in the level of engagement was dramatic, I was no longer feeling I was the only person in the session, I was again able to engage the students throughout the session. I could gauge what they understood and reiterate key points when the results indicated they didn't understand certain concepts. Software such as Vevox, provides the opportunity to engage in a live virtual class and provides feedback as to how their knowledge is developing. Students indicated in surveys that the polls '*keeps me focused during the class*' and were '*Extremely useful because it helps you get quick feedback on how you are doing as well as how the class is doing*'. The polling questions also provided students with feedback on their own performance and the performance of the whole group.

However, I was still only seeing their responses to my questions. They were not posing questions to me. They were not comfortable using microphones or Bongo chat to pose their own questions. Addressing class representatives to explore why no questions were been asked in virtual lectures yielded the following comment '*no questions may not mean everyone understands, it can be the result of total confusion for some students... who then just zone out*'.

Thankfully I was piloting Vevox and had the option to use the Anonymous Q&A Board. This allows students to pose questions anonymously. Using the Q&A board resulted in a continuous flow of questions which really improved the learning (and teaching) experience. The wide range of questions posed and vastly exceeded the level of questions asked in the traditional lecture room. Students had many unresolved questions that they were reluctant to ask aloud. The Vevox Anonymous Q&A gave them the opportunity to ask the questions without fear.

A comment on a student survey illustrates the impact well '*the approach to learning through engaging the students during the lecture by using the learning apps to ask questions instead of just talking for the full hour played a massive role in my understanding. It helped keep me interested and focused all the way through because usually I would zone out or go on my phone when I get bored*'.

Importantly, the anonymous Q&A tool in Vevox provides the shy student with the ability to ask questions, facilitating engagement by a cohort who normally opt out.

Supporting the achievement of the University strategy

Using Vevox to facilitate engagement in online delivery provided students with a safe platform and demonstrates the caring culture of the college. The approach supports the People component of the University strategy, the use of Vevox provided students with opportunities to voice their questions in a safe way and helped them get the answers they needed to allow them to reach their full potential.

Key success factors

Anonymity was the most significant factor in the successful use of engaging students during the online lecture. As many students won't speak up in front of their peers, the anonymity gave them confidence to try answer the polling question or post a question asking for clarification on something they didn't understand. Comments on the student survey included *"like the way it's all anonymous so you're not embarrassed if you get a question wrong"*. Another comment stated, *"The anonymous question apps did really help and make it easier to ask any question you want"*.

The ability to engage in online learning was a key factor in the successful delivery of the accounting module. From the student survey *"The amount of interaction with the class made it more engaging especially the use of a word cloud where you got to see some of the other answers people had submitted"*.

Staff reflections

I found the Vevox really enhances the learning experience both from the student perspective and my own as the lecturer. I gain a greater awareness of student's ability and what they didn't grasp. This results in me regularly adjusting content within the delivery to make it more effective. Vevox works extremely well online and I generally there are no issues with its use or the student interaction with it. When Vevox is used in the lecture rooms occasionally moderation needs to be turned on in the Q&A board as some immature students, post inappropriate comments. This does not happen online where moderation is never needed. I find that it is a little cumbersome having to use two screens while delivering, one for projecting PowerPoint on the projector or via screenshare and the other to monitor the Q&A board.

Future

The site license for Vevox provides an exciting opportunity for TU Dublin staff to use the software and explore the engagement potential for their module delivery. The return to in person delivery doesn't mean Vevox isn't beneficial.   I have utilized polling software for many years in face-to-face delivery. A student survey respondent recommended *"introducing some of these anonymous question tools into the classroom if this has not been done before because I'm sure people would be more likely to ask questions big or small if this tool was available"*. I hope that the Community of Practice that I have set up, along with the training and publicity from the LTTC, will encourage and support the adoption of Vevox.

Figure 1: Benefits of using Polling Software

Figure 2: Valuing Student Engagement Online Presentation Slide

7 Using Teams to bring the world to your class

Staff Innovator and Discipline/Programme/Level
Nathalie Cazaux, Languages Open resources for all levels; aimed at Business students with a Language (International Business/Global Business but also Genera Business with a language elective)

Context

During Spring 2021 while we were extensively using Teams for classes, I interviewed one of our French Erasmus visiting student on Teams for a pre-departure session for the YEAR 2 (before their own Erasmus experience). He answered the questions and we used Teams in a 'fun way'.

During the same semester, we also invited a French student based in France for a special class for the YEAR 3 cohort. She was studying at the prestigious University of la Sorbonne in Paris, France and was able to answer the questions the students were asking. It was extremely interactive and exciting. This semester (Autumn 2021), we also organised a one-hour Q&A session between a secondary school in Balbriggan and our own 3rd year students. It was to celebrate the #ThinkLanguages annual event organised by the Post-Primary Language Initiative and LanguagesConnect. It worked well despite some technical difficulties.

Impact on Student Experience

Both times, students listened to their peers and they were able to ask questions online. There were both interactive sessions which were different from the usual classes.

Supporting the achievement of the University strategy

The university strategy focuses on people and this experience definitely created a bridge between the students and made their confined world a little less enclosed.

Key success factors

Exchanging world views, creating opportunities for intercultural communication, discovering differences and learning to adapt. Using what is available for us on campus is highly sustainable and efficient. We have technology (in this case 'Teams') and people, so we can pair them and create positive learning environments.

Staff reflections

Balance and diversity are important for pedagogically sound teaching. These experiences were easy to set up and meaningfully interactive but they need to remain a part of the overall learning strategy. Technical efficiency and help is paramount when organising such events. It needs to run very smoothly for a positive user experience otherwise it ends up being counter-productive.

Future

For the future, I would like to develop opportunities for spaces where we can invite key speakers for special events where students can share ideas, try new things and reflect on their experience.

See video here: https://web.microsoftstream.com/video/faa2538b-8667-42f6-91a9-b50adc440865

8 Use of Gamification to encourage, enhance and monitor student engagement

Staff Innovator and Discipline/Programme/Level

Lindsay Murray, Accounting and Finance, Tallaght Campus

Context

I use games such as 'Kahoot' to increase engagement and reinforce learning during on campus and online classes and use weekly graded Moodle games - 'Hangman', Crosswords and 'Snakes and Ladders' - to encourage and monitor participation on the module remotely.

Impact on Student Experience

Gaming has worked very well in my Audit module and feedback from students has been overwhelmingly positive. During our Programme Board meeting the class representative specifically mentioned the popularity of the weekly Audit games describing how they prompted discussions on the class social media groups with questions going back and forth on topics covered in the module during the week. A repeat student said he found the weekly games extremely beneficial as he now had an incentive to stay on top of the module on a weekly basis. 1% of the total CA was awarded for each game completed. Participation during 'live' online classes greatly improved when the external educational gaming platform Kahoot was used to summarise and formatively assess the weeks work. When used on campus during class, students applauded each other's achievements on the Kahoot score board. The winner's podium and upbeat background music created an uplifted atmosphere, reviving the class in an otherwise content/text heavy and somewhat unpopular subject.

Supporting the achievement of the University strategy

Honouring our commitment to developing a new model of education - 'a technology-enabled, modern university, that facilitates learners in an advanced digital world' Honouring our commitment to ensuring flexibility in structure and mode.

Key success factors

Continuous monitoring of gaming activity is required for a number of reasons:

~ to identify those not participating for early intervention

~ to identify difficult topics

~ to enable self-review, identifying questions that may be structured poorly

A small CA% must be awarded as an incentive to participate.
Ideally a large bank of questions should be created. This bank should include not only different questions but different versions of questions in a similar category meaning that questions can be 'pulled' at random and shuffled. This will ensure not all students receive the same question, in the same order, initially and in subsequent attempts.

The 100% pass requirement is easily achieved but often takes numerous attempts. These attempts are important, for each attempt students must revisit work covered that week. Unlimited attempts must be allowed to achieve the 100% pass.

The one week cut off is vital for success. This ensures quiz material is relevant to work covered that week and to prevent end of term panic.

Short 'Kahoots' are best to recapture student's attention at intervals during a long double class and in live online classes.

Staff reflections

When quizzes held a lower CA weighting students seemed less motivated to attempt each week. A shared CA schedule among staff is vital to ensure students are not receiving similar weekly quizzes or tasks in other modules. Recently this resulted in negative feedback and the number of quiz attempts in one module reduced.

Future

I use these games now in the current blended environment and have used weekly quizzes prior to going online in 2020. The graded games encourage weekly course participation, provide immediate feedback to motivate and improve performance and easily identify potential early leavers or those in difficulty. All of these improve the learning experience regardless of the environment in which students learn in. More lecturers are familiar now with Moodle resources due to online delivery. A short training session may be required around more advanced Moodle Games configuration and glossary settings. Questions can normally be exported from one LMS and easily imported into different LMSs or restored to various Moodle pages in the same course. The screen-shots below illustrate the different types of the games and quizzes available.

9 ENFUSE – Inspiring & Fusing Enterprise and Students

Staff Innovator and Discipline/Programme/Level
Róisín Vize, MSC Digital Marketing programme

Context

ENFUSE matches enterprises and social enterprises in Dublin with teams of Masters Level – University Students. During semester 2 (January-April) and as part of a course module, students work in teams of approximately 5 people with selected enterprises to help provide insights, propose solutions and ultimately present a bespoke and tangible plan that sets out how challenges and opportunities could be addressed by the enterprise. The plan and student work is aligned to a core modules and learning outcomes of the module. A pitch competition is held at the end of ENFUSE where shortlisted and finalist student teams represent their class / university and compete by pitching in front of industry / expert judges.

Impact on Student Experience

- Provide students with real-world consultancy and enterprise experience
- Perform a strategic assessment of a live enterprise scenario
- Conduct detailed research using secondary and primary data sources
- Analyse and interpret data and formulate tangible recommendations
- Produce and present plan to enterprise and shortlisted teams present to industry experts
- Work collaboratively and effectively as part of a team
- Develop enterprise ecosystem links and synergies between stakeholders and enterprises

Supporting the achievement of the University strategy

Aligns with TU Dublin's strategic intent to consider / facilitate the triple bottom line pillars of People, Planet and Profit within the University experience.

Staff reflections

Being involved with ENFUSE had multiple benefits for my students and for the companies involved. The students were completing their MSc in digital marketing. The students were required to develop a digital marketing strategy and an implementable digital marketing campaign for a company that was paired with a team of 5-6 students. Using a real company as their group assignment allowed students to develop and improve many practical skills in a limited time frame as well as gaining experience before seeking employment in a very competitive marketplace. Students improved their decision-making and communication skills working as a team but also interacting with the client ensuring they could identify specific needs and issues that needed to be addressed. Their ability to think creatively and analytically was essential for strategy development. Students were able to apply theoretical concepts and frameworks to a real-life setting as well as using cutting edge technologies and platforms for website auditing and digital brand performance, which enabled them to develop implementable digital campaigns for the companies going forward.

This is a sample of what students said about the ENFUSE project:

- It was fascinating for me to build a strategy from complete scratch for a business.
- Now I have a greater understanding of the importance of clear communication with clients, to learn what they may want to get out of a digital marketing campaign.
- I believe this group project played a huge role in preparing me to commence my role in a digital marketing agency as it exposed me to various different elements which are now highly relevant to my work placement.
- This project was an extremely valuable and informative learning experience. The importance of working with a live client that is also an SME cannot be underestimated as it allowed me and my team to develop critical skills that may not have been obtained with a hypothetical brief.

Future

Based on feedback from students and companies I will be adopting this assignment again this year. This can be replicated across other business modules at postgraduate level.

URL: https://www.localenterprise.ie/DublinCity/News/Press-Releases/ENFUSE.html

10 Transport for Ireland and the National Transport Authority – Smarter Travel Behaviour Change Student Awards

Staff Innovator and Discipline/Programme/Level
Róisín Vize, School of Marketing, BSc Marketing programme, Level 8 – year 1

Impact on Student Experience

~ Students get the opportunity to participate in and experience the benefits of a practical project that has potential to be implemented by the NTA

~ Students get a chance to apply theory to practice

~ Students demonstrate and showcase their newly informed skills, and expertise in the area of marketing

~ Positively promotes and supports the message of sustainable and active commuting while travelling to, from and on campus, which is linked to UN SDG's 4, 11 and 12 and TU Dublin's strategy for sustainable commuting and education for sustainability.

~ Provides students with an opportunity to develop a platform to build their CV or professional portfolio.

~ Student projects are judged by a panel of experts in their field.

~ Shortlisted student Finalists and all Lecturers involved will be invited to attend the National Student Awards Ceremony where projects will be showcased.

~ All shortlisted Finalists will be awarded a Certificate.

~ Prizes will be awarded for Overall Winners – Certificate, Medal & €100 voucher

Supporting the achievement of the University strategy

Aligns with TU Dublin's strategic intent to consider / facilitate the triple bottom line pillars of People, Planet and Profit within the University experience as well as TU Dublin's strategy for sustainable commuting and education for sustainability

Staff reflections

This is the first time my students will take part in this, but I believe it will have many tangible benefits and take-aways as highlighted above.

URL: https://www.nationaltransport.ie/tfi-smarter-travel/smarter-travel-campus/smarter-travel-student-awards/

Section 2:

Enhancing student employability

1 Automated Proctoring

Staff Innovator and Discipline/Level

Christine Nangle. Accounting and Finance. Level 7 & Level 8 Bachelor of Business in in Accounting & Finance.

Context

The Accounting, Finance and Professional Studies department engaged in online proctoring for the May examination session. This involved all year 3 and year 4 students partaking in mandatory proctoring during specific exams (professional body accredited modules). Increasingly we were concerned about whether the professional bodies would continue to allow professional body exemptions in a remote exam environment, considering the potential impact on academic integrity. For this reason, we engaged in a trial of a proctoring solution that recorded students while taking their exams remotely. This also allowed us to return to close book exams.

Impact on Student Experience

While many students were anxious about 'being watched' during the exam 81% of students reported a positive experience. Some students reported that it improved their study technique, as the remote online exam environment had caused them to over rely on books, which they then did not have time to consult during the exam. The students were provided with training videos on how to connect to the proctored exam and were provided with an opportunity to engage in mock-proctored exams prior to the live exam. Further, a live support ran alongside the proctoring for immediate response to any difficulties incurred, which put the students mind at ease about technical difficulties arising during the exam.

Supporting the achievement of the University strategy

Under the 'People' pillar, we aim to foster individual talents in an ever-changing world. As the students move forward into professional exams, they will be increasingly required to partake in proctored examination sessions (professional exams) and exposing them to these environments, better prepares them for these further interactions. Further, we wanted to enhance the quality of the degree by ensuring it was undertaken in an environment that supported academic integrity. Under the 'Partnership' pillar, we aim to maintain a strong reputation with our employers and by

providing comfort over academic integrity, we thereby maintain their confidence in the quality of our awards. Further, in a bid to become more 'global', attracting international students is going to require us to rethink the physical exam environment. Proctoring will offer us a solution to allow increased interaction with a global audience.

Key success factors

Lecturers could clearly see an improvement in academic integrity, where students submitted independent work. 70% of students reported that they readjusted their approach to study, withdrawing from habits gained during remote open book exams that had left them over reliant on books and materials during the exam.

Future

Should we need to, or wish to engage in online exams in the future, proctoring is going to have be part of that strategy, if we are to maintain academic integrity. This needs to be driven at a university level initially, with programmes then opting to engage with the proctored environment, where appropriate.

Our Faculty Dean is already in the process of supporting a tender to pursue a proctored solution. Engagement sessions with key stakeholders from lecturers, students and support functions would need to take place to inform that tender process.

Preparation, a strong risk assessment and communication is key for proctored exams to be a success, as can be seen from some of the very public failures of proctored exams during 2021.

2 International Digital Marketing Week

Staff Innovator and Discipline/Programme/Level
Edel Foley, TU903 Year 3

Context

Digital Marketing Week. A three-day programme of digital talks and activities jointly run by TU Dublin School of Marketing and University of Applied Sciences Amsterdam.

Impact on Student Experience

Facilitated learning about developments in the digital world through an industry and academic speaker panel. Cultural exchange between Dutch and Irish undergrad students, A student team Hackathon to allow the students develop and deliver a digital idea in response to a brief, with prizes for the best ones. Developed student confidence around working in an intercultural team.

Supporting the achievement of the University strategy

It fostered the development of ideas and skills with the participating students (150). The cultural exchange within student groups gave an insight into student and professional life in both countries. This was the third year of our partnership, and we are working on ways to develop it further.

Key success factors

The willingness of both partner universities to identify areas of common interest and work to achieve a good experience for the students. The willingness of students to interact and build teams.

Staff reflections

It is entirely possible to pivot from in-person to virtual events. However, it needs extensive planning and admin support. There must be a Plan B for everything.

Future

Investigate the potential for partnership relationships and events with other universities, near or far. We are investigating the potential to do a similar programme for postgraduate students in the business faculty of TU Dublin. We are also considering opening the audience for the talks to a wider audience to develop more connectivity throughout the TU Dublin Faculty of Business.

3 Student Transformative Learning Record (STLR); Enhancing Student Employability

Staff Innovator and Discipline/Programme/Level

Amanda Dixon

Sports and Management – Sports Management & Coaching Programme – Level 7 & 8
Marketing - Digital Marketing Programme – Level 7 & 8
Business - International Business Programme - Level 7 & 8
Business - Business & Information Technology Programme – Level 7 & 8
Business - General Business Programme – Level 7 & 8
Accounting - Accounting & Finance Programme – Level 7 & 8

Context

The Student Transformative Learning Record (STLR) is an award winning initiative that was implemented in TU Dublin as a way to encourage, measure, and record students transformative learning growth in five core competencies. While the traditional academic transcript gives a snapshot of students' Discipline Knowledge, STLR captures students' growth in these core competences (Civic Knowledge Skills and Experience, Global Culture Competence, Health and Wellbeing Development, Leadership and Teamwork, Research and Innovation Competency Building).

Impact on Student Experience

Transformative Learning is core to the STLR programme. Transformative Learning requires students to reflect about their experiences as part of their completion of class assignments and participation in events. Students can download a STLR export from the dashboard to share with graduate schools and perspective employers. Employers acknowledge the need for transversal skills that go beyond discipline skills. The STLR programme provides an opportunity for students to develop these transversal skills (soft/employability skills).

Supporting the achievement of the University strategy

PEOPLE - STLR helps students grow across the five core competencies above, helping students reach their full potential and develop capabilities beyond their academic discipline.

PLANET – The Civic Knowledge Skills and Experiences competency engages students in community volunteer and service activities which nurtures civic responsibility, caring, and community-mindedness, ethical, critical reasoning and deliberation; and working for the common good of everyone.

PARTNERSHIP – The Research and Innovation Competence Building encourages students to approach life with a spirit of enquiry, to develop a problem-solving mentality. STLR works collaboration with a network external partners to provide opportunities to students to enhance their learning experiences.

Key success factors

The key success factor of the STLR programme is that it increases students' employability. Student feedback has confirmed that their engagement with the STLR programme enabled their ability to secure employment and increased their employment prospects.

Why? STLR gives students the tools to measure and articulate their own effectiveness as citizens and employees. Students develop skills beyond academic learning. STLR expands students' perspectives of their relationship to self, others, community and environment. It also places students at the centre of their own active and reflective learning experiences.

Staff reflections

TU Dublin graduates acknowledge through feedback that their engagement with STLR is a key differentiator whilst securing employment:

> *"STLR helped me accomplish soft skills that complimented my academic knowledge and helped me progress as a graduate. It gave me that extra bit of armour when it came to standing out from the crowd in interviews."*
> (TU Dublin Accounting & Finance Graduate, 2020)

Employers also acknowledge the role STLR plays in enhancing student employability:

"Employers today are looking for employees with well-developed soft skills such as team-working and problem solving. STLR helps develop these and others. Why hasn't STLR been done before?" (STLR Industry Panel Member)

Future

STLR adds an extra dimension to taught academic modules that are in existence. Staff can place students at the centre of their own reflective learning experiences. Staff have the opportunity to STLR tag existing assignments and events or guest lectures they have organised for students. It is a very simple process supported by the STLR team and the STLR dashboard. The STLR rubric with three levels of transformative learning (Exposure, Integration and Transformation) is available on the dashboard for staff to award a STLR achievement.

The infrastructure is in existence – dashboard, STLR team, sponsor and project manager. The STLR programme have developed training resources, quality manual and a technical solution which would support and enable the replication/rollout of the programme across the faculty. The STLR programme started in the School of Business Blanchardstown and has recently been rolled out in the Accounting and Finance Programme on the Tallaght campus.

https://www.tudublin.ie/explore/our-campuses/blanchardstown/stlr/

STLR
STUDENT TRANSFORMATIVE LEARNING RECORD

Student Transformative Learning Record

An award winning initiative to record students' Transformative Learning in TU Dublin and display their improved soft skills to potential employers

The Education Awards 2020

*STLR is a trademark of the University of Central Oklahoma.

Fingal Dublin

@STLR_TUDUBLIN_   Email: stlr@tudublin.ie   @STLR_TUDUBLIN_

People

STLR helps students grow across five core competencies helping students reach their full potential and develop capabilities beyond their academic discipline.

Planet

The Civic Knowledge Skills and Experiences competency engages students in community volunteer and service activities which nurtures civic responsibility, caring, and community-mindedness, ethical, critical reasoning and deliberation; and working for the common good of everyone.

Partnership

The Research and Innovation Competence Building encourages students to approach life with a spirit of enquiry, to develop a problem-solving mentality. STLR works by collaborating with a network external partners to provide opportunities to students to enhance their learning experiences.

4 The Mindfulness Project

Staff Innovator and Discipline/Programme/Level
Maria Kenneally & Colm McGuinness

Business | Year One Students on all Programmes in the School of Business, TU Dublin Blanchardstown Campus | Level 7 & 8

Context

The Mindfulness Project is a School of Business Blanchardstown initiative which embeds mindfulness in the curriculum. During a six-week period in both semesters of year one SoB students can learn about the evidence-based benefits of mindfulness and practice it for 10-minutes each week in a set lecture. In this way students are encouraged to pause and reflect as part of their TU Dublin teaching and learning experience.

Impact on Student Experience

The Mindfulness Project is in its second year and developed from a pilot project in the SoB in autumn 2019. Anonymized data (both quantitative and qualitative) is gathered at different stages of the intervention and evaluates its impact on students. Post-pilot project focus groups revealed that the intervention had positively impacted participants' ability to focus, to be more present, to take greater self-care and to manage stress. June 2021 quantitative data indicated that 87% of surveyed SoB students wanted mindfulness to be part of their university education.

Supporting the achievement of the University strategy

It is envisaged that the Mindfulness Project will run for the duration of our year one students' college career. During each of their four years in higher education they will be offered the opportunity to practice mindfulness, to develop skillfulness and to build resilience. By making mindfulness an important component of the education we provide it can contribute to the cultivation of wisdom and creativity in our graduates.

Key success factors

Staff resourcing is key so that each stage of the Project can be designed, delivered and researched. Research crucially informs the development of the Project. Also very important is the dissemination of findings so that staff can choose to facilitate the intervention in their lectures and perhaps consider the incorporation of contemplative practices in their own TLA.

Staff reflections

It has been encouraging as an educator to see the impact that mindfulness can have on, not only, our students' studies but also on their overall wellbeing. The Mindfulness Project can develop in them important life skills for work and their place in the world.

Throughout the Project we consistently review the appropriateness of the module in which it is set and the mode of delivery. We will continue to do this as we navigate external factors that are continually in flux.

Future

Staff are invited to participate in mindfulness workshops and to facilitate the roll out of the Mindfulness Project in their lectures. There is a plan that an accredited 'Mindfulness in Teaching, Learning & Assessment' module will be designed for staff and students.

The online mode of delivery (live-streamed mindfulness sessions with students) means that it can be replicated and rolled out across the Faculty of Business at TU Dublin.

Images/URL

URL: www.peei.ie (Centre for Psychology, Education and Emotional Intelligence at TU Dublin) – an introductory talk on mindfulness and videos of mindfulness practices are in the News section of this website.
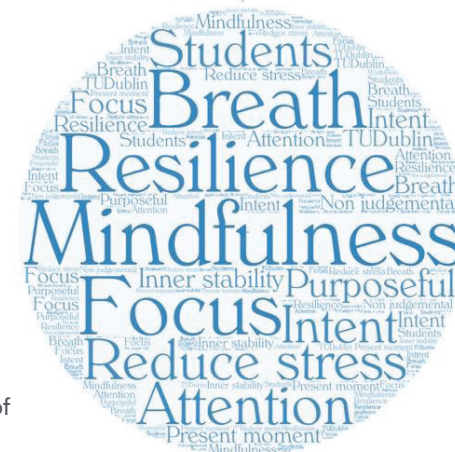
5 Transitioning towards authentic assessment

Staff Innovator and Discipline/Programme/Level
Dr Lucia Walsh, Faculty of Business, School of Marketing

Context

Authentic assessment is linked with 'real world' tasks to which students' knowledge and skills are applied to solve a problem or meet a need (Raymond *et al.*, 2013; Swaffield, 2011). This approach seeks to design and implement a more meaningful and engaging assessment activity while maintaining academic rigour. The pandemic and the move to online teaching, learning and assessment in 2020-21 academic year expedited my transition from traditional to authentic assessment. As I re-evaluated assessment strategies in relation to learning outcomes for each of my modules, I thought about them in relation to global citizenship and education for sustainable development too.

Example 1 – Strategic Marketing module (MSc in Strategic Management)

The individual assignment is built around addressing a sustainability issue through: 1. completing Sulitest (UN supported sustainability literacy test) (not graded), 2. reflecting on it using DIEP framework and 3. choosing one issue and then creating a short video aimed at marketing practitioners which the students post on LinkedIn. The students also engage in peer learning by engaging and reflecting on each other's works.

In the group assignment teams are matched with real clients through Dublin City Council/ Local Enterprise Board ENFUSE enterprise competition. The teams work with their client on addressing specific strategic marketing challenges. Each team complete a marketing plan and present their work to their client. The best teams progress into final along with other top teams from Dublin universities with the winner securing funding and mentoring support for their client to implement the proposed ideas. Teams from this module won the overall prize twice in a row which demonstrates that this assessment was truly authentic, engaging and impactful.

Example 2 – International Management (BSc Business & Management/Business & Law, Yr3)

Individual assignment - The students in this module also engage with sustainability literacy-based assessment comprising of the 3-step approach outlined above and was reflective of the level and discipline. Most of the students look for their work placement in the first semester so setting up their LinkedIn presence and posting their videos was a very beneficial exercise for them. This assignment was integrated with Supply Chain Management module led by Alacoque McAlpine for which they completed additional piece of assessment linked to activism actions.

The group assignment involved student teams choosing a topic of interest within international management, researching it using peer-reviewed resources and recording a podcast episode of up to 15 minutes. This task was supported by detailed guidelines, links to tutorials, access to recording studio on campus and a guest lecture from an experienced podcaster.

Example 3 – Business Sustainability (BSc Business & Management/Business & Law Yr4, BSc in Marketing Yr3)

This new module is centred around authentic learning and principles of co-creation. Apart from the Business Sustainability module, discipline specific variants are delivered to students and staff in bio-pharma, food science & tourism. Students and staff from different disciplines co-create and solve problems through 3 cross-disciplinary workshops followed by creating of digital artefacts as their assessment. 1/3 of the module involves seminars with discipline-specific industry experts and students subsequently reflect on issues raised through the guest seminars and link them with relevant materials for their second assignment. The last piece of assessment is linked to working with a local sustainability focused Instagram group with over 45,000 followers, and creating business sustainability content based on peer-reviewed research.

All of the students' work is also curated through e-portfolio using Wix website and students are encourage to use it to showcase their other work which they can present as their digital CV when seeking employment.

Impact on Student Experience

Through authentic assessment approach, module learning outcomes can be met in a meaningful and impactful way. The learners are able to apply theoretical concepts to real situations and develop not only their module-specific knowledge but also other relevant global citizenship skills such as critical thinking, reflection, creativity, confidence, digital skills, professional networking skills, team work and project management. Many of the students also set up their LinkedIn profiles for the first time. They also develop competencies around using peer-reviewed materials and communicating complex issues to suit different audience using appropriate means of communication. Thus authentic assessment, when linked to learning outcomes and meaningful real work tasks and contexts, builds skills, competencies and mindsets that have long lasting impact.

In students' own words:

The guest talk and my reflection on the issues that were raised by Ali had a profound impact on me. I personally will be starting to hold myself accountable for decisions that I make. I will reflect before I make a purchase and think whether I really need it or will it just contribute to further unnecessary overconsumption. (Business Sustainability student reflecting on a guest talk)

This assignment has developed my teamwork skills. The consultancy nature of the assignment with a real client reliant on the assignment output, somewhat changed the dynamic compared to other group assignments in different modules. This assignment called for a sound knowledge and application of marketing theory... the assignment developed my experience in assuming a leadership role within a team, ensuring work was assigned fairly and delivered on time by all team members. (Strategic Marketing module student on Enfuse consultancy project)

Supporting the achievement of the University strategy

Authentic assessment approach is aligned with TU Dublin strategy and its three strategic pillars very well. It is also aligned with AASHE-STARS and PRME and global citizenship skills frameworks such as STLLR that is being piloted in TU Dublin.

Key success factors

Authentic assessment that is carefully designed and aligned with module and programme learning outcomes, provides students with learning opportunities that are engaging, impactful and long-lasting. Authentic assessments can be challenging for students as they can require different approach and skills that are needed for successful completion of the assignment. Authentic assessments that are conducted in collaboration with industry clients/set in real world add extra motivation as the students' work will have real impact.

Students learn to communicate complex issues in an audience appropriate way and digital medium (such as a podcast or social media post), which is one of the essential graduate employment skills. When students feel that the assignment is engaging, they are motivated to perform better.

Staff reflections

I have tried different types of authentic assessment over the last few years and some of my learnings are:

- ～ It is very important to scaffold the assignments very well with clear and very detailed instructions, guidelines and rubrics.
- ～ I learnt very quickly that despite most students being digital natives, they need to be guided and supported with regards to mastering digital tools. This can include providing links to useful 'how to' videos, doing tutorials with the students or having experts to share their experience (e.g. business podcaster doing a guest talk on how to create a podcast).
- ～ When working with clients, it is essential to agree project scope and deliverables clearly. Regular client-student updates and opportunities to ask questions lead to much better results too. It needs to be a win-win for both sides.
- ～ Reflection and peer evaluation are incorporated into most of my authentic assessment pieces. Through reflections the students think deeply about the process of learning and its meaning. Peer evaluation process that is clearly scaffolded is also vital in team work with mechanisms allowing for individual grades to be adjusted as result of peer review & supporting evidence (such as logbooks).
- ～ When students engage with design of authentic assignment, they tend to be even more engaged. For example, in one of my modules where different teams work with one client through Students Learning with Communities, I gave the students a choice of 4 clients (without disclosing the clients' names) and let them choose.
- ～ Lecturer's own reflection is also very valuable. Pausing and thinking through some issues can lead to valuable improvements.

Future

I will continue to learn about authentic assignment and continuously improve my approach to increase impact on students' learning. I am a member of a number of Communities of Practice in TU Dublin (such as the SDG Literacy and the Authentic Assessment CoP) and I would recommend others to join one of the many relevant CoPs as peer learning is very valuable. When looking for clients to work with, colleagues can tap into their own professional networks or source clients through Students Learning with Communities, Hothouse, Enfuse competition or by contacting relevant clients directly.

Authentic assessment approaches that I described can be easily adapted by other colleagues in different disciplines. I would be very happy to share more details of my experiences with colleagues who would find it relevant and interesting.

6 Charity Event Assignment

Staff Innovator and Discipline/Programme/Level
Prof Tom Cooney, Business, Business & Management Degree (TU903), Year 3

Context

The purpose of the Charity Event Assignment is for students to experience entrepreneurship in action by undertaking a fundraising initiative and then understanding what they had learned from it by writing a Reflection Paper. The assignment requires students to generate their own ideas for online fundraising, organize the fundraising initiative and write a paper reflecting upon their experiences. The students self-select their own groups (maximum of 3 students per group), the charity whom they wish to support and the nature of their fundraising initiative. Each group is given a target of €2,000 to donate to their chosen charity and they interact with their chosen charity so that they better understand the work of the charity and fundraising activities. As an example of the success that can be achieved, at the end of Semester 1 2020/21, the students (broken into 12 groups) had raised a total of €31,776 for various charities which far exceeded expectations during the COVID-19 lockdown. This assignment has been running for over 16 years and across that period, students have raised more than €800,000 for various charities.

Impact on Student Experience

The reaction from students to this assignment has been hugely positive. The following quotes are from 2020/21 students via their Reflection Papers.

I would like to say that I thoroughly enjoyed the experience of running my own fundraiser with my group as an assignment. I have learned that if I want to achieve something, I need to put my head down and work for it rather than sit back and let other people take over and do the work when I feel I could do a better job. Teamwork, communication, time management, computer skills and diligence were skills that we used over the last few months, and I am proud of the amount of money we have raised for the charity 'Depaul'.

I never realised the magnitude that the challenge would have on everyone involved, but I think the challenge really lifted everyone spirits during this time. It was all anybody who was involved in the challenge was talking about for the month of November. This challenge gave us a focus and helped us keep our fitness up during this lockdown. It motivated us to get out of the house which not only helped our fitness, but our mental health too. I was so happy to hear that it motivated so many other people to do the same and I was thrilled to hear that so many people felt the positive impact on their mental health.

I have enjoyed every moment of the assignment. It brought many emotional highs and lows, but I can undoubtedly say that the highs outweighed the lows. I have learnt so much about teamwork, organisation, interpersonal skills and most importantly kindness. The kindness we as a group received from our families and friends, the 'Alone' charity and most importantly each other was phenomenal and I am so grateful to have had this amazing opportunity from TU Dublin and my lecturer. My outlook on life has changed over the last two months and I have realised what is most important is human interaction and community spirit. Without our communities combined efforts and generosity this goal would have been unattainable for us, and I am forever grateful to them for raising awareness and funds for such an outstanding charity.

Supporting the achievement of the University strategy

The primary goal of the assignment is to enable students to understand that each of them has the capacity to behave in an entrepreneurial manner. This assignment enables students to self-reflect upon their strengths as potential entrepreneurs and to identify areas for future personal development. Another goal is to demonstrate how behaving entrepreneurially can benefit people who are less fortunate in society, and this contributes to Goal 10 (Reduce Inequalities) of the UN Sustainable Development Goals. The assignment also aligns with the TU Dublin strategy, specifically the pillars relating to People and Partnerships. While COVID-19 presented substantial challenges for individuals and businesses across the globe, this assignment proves to students how a person can alter their way of doing business to adapt to new and challenging situations, and with a positive mind-set, they can still succeed. It is a regular occurrence that some groups support charities relating to mental well-being and in the Refection Papers, some students highlight how the assignment has given them a strong sense of purpose during lockdown and made them feel good about themselves as they were contributing to society.

Key success factors

This work covers many aspects of entrepreneurship and business studies more broadly since much content for class lectures needs to be considered when initiating and organising a fundraising initiative. The three key theories covered are: (1) Process of entrepreneurial behaviour; (2) Effectuation; and (3) Business planning. The key learning innovation is the application of these theories into a real-life situation rather than using traditional approaches such as textbook case studies. Another innovation is the use of External Partner organisations to support the learning process. Having an online donation platform (iDonate. ie) supporting the initiative is extremely helpful, but the most impactful support was the Business Mentor (BDO Ireland) provided to each group. It should be noted that all this support is provided on a voluntary basis, but the work is recognised through social media posts promoting the efforts of the organisations in helping the entrepreneurship students. Students are also required to learn about issues such as Health & Safety and Event Risk Assessment which are topics not usually covered in an entrepreneurship class. By the end of the assignment, every student is very familiar with the need for effective Health & Safety protocols when organising an event (even if it is online) and how to undertake a high-quality risk assessment of their event. The initiative is also supported by TU Dublin Health and Safety Office as the students must undertake online Health and Safety modules, plus submit a Risk Assessment Form relating to their initiative. Additionally, Marsh Insurance (which is the insurance agent for the university) evaluate every proposal for risks relating to insurance. Furthermore, the initiative is organised under the umbrella of Students Learning with Communities office.

Staff reflections

The major learning of teaching an entrepreneurship module using this assignment is that a lecturer needs to become a Coach as much as a Teacher. It is very important to work with the students to encourage them to utilise their entrepreneurial capabilities to achieve their targets. At the beginning of the assignment, most students believe that the target of €2,000 is too high and therefore some time is needed in class to address this concern. An evaluation panel was created to provide feedback to the initial proposals provided by the groups regarding their ideas for online fundraising. This provided very valuable direction regarding their work, and it meant that some groups needed to significantly reimagine

their planned activities. Supporting students through the Health & Safety and Event Risk Assessment stages were also critical as this was a new learning experience. Initially, the forms were completed in a cursory manner, but when these were rejected by the relevant offices, then the students realised that more research and work was needed if they were to be given permission for their initiatives to proceed. The number of online meetings with students and the answering of emails to their queries was substantially higher than traditionally delivered modules as they sought information reassurances regarding their work. It was in these communications that the role of coaching was particularly evident.

Future Plans

Similar assignments are already being undertaken by staff at TU Dublin, plus this assignment is being trialled by universities in the EUt+ Alliance. The major challenge to replicating the assignment is the amount of time required by a lecturer to organise it and ensure that all group activities meet Health & Safety standards.

This assignment won a European Award in 2021 for the 'Best Learning Innovation in Entrepreneurship Education' see: https://www.tudublin.ie/explore/news/archive-2021/prof-tom-cooney-wins-european-award-for-best-learning-innovation.html

> *I have enjoyed every moment of the assignment. It brought many emotional highs and lows, but I can undoubtedly say that the highs outweighed the lows. I have learnt so much about teamwork, organisation, interpersonal skills and most importantly kindness…"*

Section 3:

Innovative technology use for LTA

1 LessonSquared: a web tool for better virtual lab sessions

Staff Innovator and Discipline/Programme/Level
Neil O'Connor, Information Systems on the Business Computing programme (Level 8)

Context

Anyone who is familar with running lab or tutorial sessions will know the value of roaming the room to see how students are getting on. The move to fully online teaching in 2020/21 took this valuable feedback away from lecturers. Our virtual classroom tool, Bongo, has a number of limitations for running lab sessions remotely. Specifically it doesn't support monitoring student progress, prompting those who are struggling, or easily jumping into a one-to-one with a student to help them. I built a web tool called LessonSquared that supports these activities, and made it available to staff in September 2020.

Impact on Student Experience

Students are not always good at asking for help. By monitoring their progress a lecturer can prompt struggling students to "share their screen" and talk through what they're working on. Students experience a more attentive lecturer because the lecturer has better insights about the students.

Supporting the achievement of the University strategy

We want to equip our graduates with skills and not just theory. Labs and tutorials are the core mechanism for developing skills in many topics; practice makes perfect. If we want to offer a blended learning style then we need better tools for running these sessions.

Key success factors

Running labs online is no substitute for observing and assisting the students in person, however the key success factor of LessonSquared is that it brings the lecturer 3 steps closer than Bongo: 1. Observe student progress 2. Prompt struggling students to ask for help 3. Assist students one-to-one via screenshare.

Staff reflections

We learned that students engaged well with the tool and they had very positive feedback on their experience. In particular it benefited students who might not feel confident asking for help in front of the class, or who might try to disguise the fact that they were struggling. The tool revealed their true progress to the lecturer. The most challenging part of remote labs was getting the students to turn up and work on the exercises. This was outside the scope of the tool, but it was the biggest factor in some students disengaging and feeling disconnected.

Future

The LessonSquared platform is freely available to lecturers at lessonsquared.com. It currently uses Google Meet for screensharing one-to-one with students, so future work is to integrate Microsoft Teams.

URLs

Website: https://lessonsquared.com/
Demonstration: https://www.youtube.com/watch?v=d_ClW-4sx3E

2 Using Video Assignments and Auto AnalysisTM in Bongo

Staff Innovator and Discipline/Programme/Level

Valerie Gannon, Advertising, MSc in Advertising, Post-graduate

Context

Increasingly offering students choice not alone in curriculum construction but also assessment is acknowledged as a valuable engagement and learning tool. Enabling a wider range of assessment submission modes is increasingly encouraged. Staff may already be aware that Brightspace enables video submissions via the main VLE portal. But not everyone may be aware that Brightspace integrates a dedicated video assignment tool from Bongo. This can be selected via dropdowns Brightspace/Assessment/Video Assignments. This video assignment option offers the Auto AnalysisTM tool which enables peer and self-review. The context for my use was teaching Presentation Techniques as part of a wider Advertising Practice module on the MSc in Advertising, School of Marketing, College of Business.

Impact on Student Experience

Auto AnalysisTM offers quick valuable quantitative feedback for self-review. Students can review speed, fluency, speaking rate and perfect their presentation via reviewing the automatically generated transcript. In addition, students can be required to self-review using a transcript. (See Figure 1).

Figure 1: Self-Review of Vocal Presentation

Peer review is enabled, and can be set to any number of anonymized peer reviews, which take the form of descriptive feedback, offering qualitative third person perspectives. (Illustrated in Figure 2).
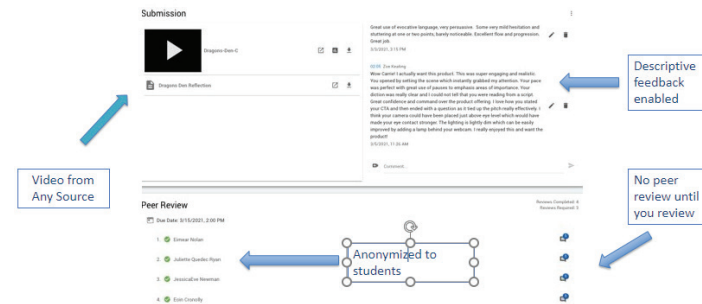

Figure 2: Peer Review

Supporting the achievement of the University strategy

The people strategic pillar of TU Dublin strategy encourages embedding of creativity in the curriculum. The partnership strategic pillar is addressed via creating the capacity for online presentations that can be shared, viewed and rated by external partners, where relevant (TU Dublin, nd). Here students are encouraged in creative video presentation techniques. Peer review and self-reflection is acknowledged as best practice in pedagogy (Ni Bheolain et al., 2020), and recommended in National Forum Teaching and Learning strategies (National Forum, 2016).

Key success factors

Skills are built, and reflected upon, with peer support. Scaffolding of learning is achieved with feedback and review. Student viewing of video materials can be chunked and monitored in classroom via Brightspace analytics. Workshop exercises generate peer engagement and enthusiasm. Student confidence is built in the development of a personal presenting style.

Staff reflections

Student feedback was excellent, and they noted the ease of self-review and the fun of use. The system has its limitations though, focused on technique rather than content. And the Auto-Grading facility scored no student under 80 in my group (See Figure 3). So, the Auto-Grading facility is not a substitute for lecturer judgement of content and for the need to assign a final grade, if that is required. But it is a very useful tool to enhance the quality of student presenting techniques.

Auto-Grading

DS — Published — 94 — Pass
EN — Published — 95 — Pass
EC — Published — 97 — Pass
EC — Published — 83 — Pass
GF — Published — 83 — Pass

Assigns a Score
(limitations)

Future

Enhanced focus on feedback and integration of peer review is recommended by all contemporary research on authentic assessment (Ashford-Rowe et al, 2014; Carless and Boud, 2018). But feedback is time consuming for the lecturer! This facility assists lecturer to student feedback, and integrates self and peer review, enhancing active learning. Auto AnalysisTM is very useful for larger groups enabling automated feedback and peer review is easily facilitated. This technology is readily available, easily mastered and universally applicable anywhere oral presentation is used for assessment. And Auto AnalysisTM is fun! Overall, this is a very useful tool to enhance student presenting techniques and self-review, and, along with use by individual lecturers, could easily, and valuably, be integrated at a programme level during orientation week for first years, and at the start of each year for later years.

References

Ashford-Rowe, K., Herrington, J., & Brown, C. (2014). Establishing the critical elements that determine authentic assessment. *Assessment & Evaluation in Higher Education*, *39*(2), 205-222.

Carless, D., & Boud, D. (2018). The development of student feedback literacy: enabling uptake of feedback. *Assessment & Evaluation in Higher Education*, *43*(8), 1315-1325.

National Forum for the Enhancement of Teaching and Learning in Higher Education. (2016). *Students as Partners*. Available at: https://www.teachingandlearning.ie/publication/students-as-partners/

Ní Bheoláin, R., Lowney, R., & O'Riordan, F. (2020). *Students as Partners in Assessment: A Literature Scoping Review*. Dublin: Dublin City University. Available at: https://hub.teachingandlearning.ie/wp-content/uploads/2021/06/7.-Students-as-Partners-in-Assessment-A-Literature-Scoping-Review-v1.0-15.12.20-1.pdf

Technological University Dublin (nd). *Infinite Possibilities: Strategic Intent 2030*. Available at: https://www.tudublin.ie/media/TU-Dublin-2030.pdf

3 Online Gamification of Research Methods

Staff Innovator and Discipline/Programme/Level
Dr David Gaul, Lecturer on BA Sports Management and Coaching

Context

Gamification is defined as the process of applying game elements to non-game contexts (Zimmerling, Höllig, Sandner, & Welpe, 2019; Schöbel et al., 2020). This strategy utilises features associated with games such as points, badges, levels, leader boards and avatars to promoted and reward engagement (Barata, Gama, Jorge, & Gonçalves, 2017). As part of a 4th Year Research Methods module a gamification approach was used to help promote engagement in a traditionally highly theoretical subject. This approached utilised both in class (virtual) and independent learning time activities to enrich the content delivery and support students enjoyment. Specifically, the e-Learning component utilised the Digital Badges and Activity tracking features of the Moodle© VLE, while the in class activities utilised team challenges, quizzes (Kahoot©, MentiMeter© etc) and peer assessment approaches to help students earn points for their teams. Progress during the module was represented in league tables and the access to extra content.

Impact on Student Experience

There is growing evidence to suggest that gamification is increasingly being accepted as an effective learning strategy used to create highly engaging learning experiences (Zainuddin et al., 2020). Student engagement both in both online lectures as measured by attendance and in class participation was increased significantly. Student engagement with resources on Moodle© was also increased significantly as measured by activity tracking reports. This engagement also filtered into the online lecture with greater richness of discussion as students were familiar with material in advance of online classes. The competition aspect of the approach injected an element of fun and also increased students' use of the camera within classes, moving closer toward creating an atmosphere like a F2F class.

Supporting the achievement of the University strategy

In the New Normal It is increasingly likely that more blended approaches to learning will be implemented while maintaining high levels of student engagement and support. Utilization of the numerous features of VLEs to provide students with a more interactive and immersive experience when not on campus will help bring TU Dublin graduates experience a high quality educational journey while maintaining flexibility. This approach will therefore also contribute to "A dynamic new model of education producing the most sought-after digitally-literate graduates, will be embedded in the University, transforming the learning opportunities and experience for all". This approach also contributes to the Partnership Pillar of the Strategic plan by helping TU Dublin to be "an agile, technology-enabled, modern university that facilitates learners in an advanced digital world".

Key success factors

A key factor for ensuring the success of this approach was to ensure a clear communication strategy with students to outline how this module would operate. A well-structured and visually engaging VLE module page. A well laid out and easy to navigate structure to your Moodle page was essential as students' progress through each level needs to be clear and sequential and not be overloading them with content and resources. Specifically a clear, naming contention and visual representation of students' progress (Map) help students understand what the end goal is.

Staff reflections

The majority of student activities tended to take longer than planned to complete. In early weeks the full benefits may have not been garnered by students as insufficient time was available in online lectures. When more class time was devoted to activities and greater asynchronous delivery of content, there was deeper engagement in activities and reflection permitted. Students' interaction with content was also cyclical and changed on the basis of personal, work and other modules demands. As such, students' progress was not as uniform and low levels of engagement might not be down to content quality but external factors. Finally, students who fell behind early found it difficult to "catch up". In future, students with low levels of engagement in early weeks should be contacted to proactively get them back on track or identify any factors affecting engagement.

Future

Moving forward it is aimed to implement a games based approach to F2F classes and not revert to traditional content delivery via presentation of slides often referred to as "chalk and talk". This will open the door to more innovative games/ideas which are more collaborative and build upon students existing knowledge of games such as board games, chasing etc. It is also hoped to create a more time effective manner of collating points and scores in live activities. This more automated approach will be less labour intensive and increase sustainability as well as replicability. At present the games/activities are very specific to Research Methods content but could be adapted to other modules. The scalability of this approach requires a small investment in time to design games/resources however if done once, can be utilised repeatedly in the future.

References

Pereira Gama, S. (2020). Gamification Mechanisms for Online Learning. *Kriativ-tech*, 9, DOI: 10.31112/kriativ-tech-2020-06-32.

Schöbel, S.M., Janson, A., & Söllner, M. (2020). Capturing the complexity of gamification elements: a holistic approach for analysing existing and deriving novel gamification designs. *European Journal of Information Systems*, *29*(6), 641-668. DOI: 10.1080/0960085X.2020.1796531.

Zainuddin, Z., Chu, S., Shujahat, M., & Perera, C. (2020). The impact of gamification on learning and instruction: A systematic review of empirical evidence. *Educational Research Review*, *30*. 100326. DOI: 10.1016/j.edurev.2020.100326.

Zimmerling, E., Höllig, C.E., Sandner, P.G., & Welpe, I.M. (2019). Exploring the influence of common game elements on ideation output and motivation. *Journal of Business Research*, *94*(C), 302-312. DOI: 10.1016/j.jbusres.2018.02.030.

4 Video Based Pre-Produced Learning Materials
[Digital Training and Assessment & Digital Module Delivery and Assessment]

Staff Innovator and Discipline/Programme/Level
David Murphy, Ann Murphy - All Business Programmes provided by the Blanchardstown Campus, Years 1, 2 and 4

Context

1. Pre-produced video and SCORM based lecture materials have been developed using a range of software, but most notably Techsmith Camtasia and Articulate Storyline. These materials have been distributed to 1st, 2nd and 4th year students via our Learning Management System (Moodle) and have been used to supplement traditional teaching methods.

2. Gmetrix training and assessment software has been used in conjunction with CertiPort testing services for all Business School 1st and 2nd year students to prepare for Microsoft Office Specialist (MOS) exams in Word and Excel. These are the only qualifications officially recognised by Microsoft as independent proof of proficiency. Programmatic reviews have repeatedly indicated that employers view these skills as a key graduate attribute.

Impact on Student Experience

We introduced these approaches prior to the current pandemic, having developed materials in **Camtasia** for video based material, and **Articulate Storyline** for SCORM based learning packages. During the last 2 years, the materials have allowed us to provide the same high quality of student support and learning, without face to face interaction on campus. The pre-produced materials have allowed for the use of a 'Flipped Classroom' approach. Lecture and study materials are developed and distributed on a weekly basis via Moodle prior to asynchronous online interactions to expand on particularly difficult topics and to answer student questions. Student access to the materials is available at any time and in any location, maximising learning flexibility.

The online training materials provided by Gmetrix allows each student access to specific training materials in Microsoft products and also allows the students to self-assess their understanding of the software. As with the pre-produced video materials, the Gmetrix materials are developed and distributed on a weekly basis in line with the module syllabus. As part of the overall assessment strategy, students are provided with the opportunity to take the official Microsoft Office Specialist certification exams. One student won the UK & Ireland Microsoft Office Specialist competition in Excel in a contest with over 30,000 students, and represented TU Dublin at the World Championship on November 10th this year.

Supporting the achievement of the University strategy

The approach we are pursuing directly supports the universities objective to support technological and innovative advances in teaching and learning. The implementation of these advances has allowed us to cultivate a network of discovers, students who are being given the opportunity to self-develop, while accessing appropriate individual support.

Key success factors

The purpose of the approach is to provide as much flexibility as possible to students in their learning journey. The experience of using these approaches and materials during the pandemic has proven that the approach works and that students are capable of using the materials to develop their capacity for self-development and self-learning. Because the materials are distributed on a weekly basis, it ensures that students are very aware of the development of their skills in line with the published syllabus, and can adjust their efforts in line with individual circumstances and ability.

From a staff perspective, the approach results in a delivery of material in a consistent manner and to a well-defined standard. In the context of the large number of 1st and 2nd year students in our programmes, and consequently, the involvement of up to five lecturers in the delivery of a module, this is a particularly important issue. Besides some very minor software issues, the staff delivering these programmes are very satisfied with the software and the teaching approach.

Future

The development of professional level pre-produced materials is something that any lecturer can do if they have the enthusiasm, appropriate resources (time and software), training and guidance. If the university values such developments there needs to be a recognition that such activity takes time and requires appropriate arrangements to recognise the effort involved.

The use of training and testing software is available to all lecturers who teach IT. The only restriction is the number of licenses purchased. Its use can be expanded to many other subject areas, for example, database management modules, and has already been adopted at year 3 for the newly accredited Accounting & Finance. The training and testing software could also be used by university staff to significantly improve their own skills and certifications.

Were the funding for additional licenses to be available there would be no technical reason why the approach could not be expanded to cater for both students and staff. IT services would be required to install and support the software across the university. It is currently only installed on the Blanchardstown campus.

Associated URLs

Gmetrix Training and Testing Software: https://www.gmetrix.net/

Microsoft Office Specialist Programme:
https://certiport.pearsonvue.com/Certifications/Microsoft/MOS/Overview.aspx

Certiport Testing Services: https://certiport.pearsonvue.com/

Techsmith Camtasia: https://www.techsmith.com/

Articulate Storyline: https://articulate.com/360

Microsoft Office Specialist World Championship: https://www.moschampionship.com/

5 Diversifying the curriculum at TU Dublin – *Building MultiStories*

Staff Innovator and Discipline/Programme/Level
Fionnuala Darby, Business/General Business BN_L7/L8
Lindsay Dowling, Assistant Librarian, Blanchardstown Campus

Context

Diversifying the Curriculum is a collaborative project with students that aims to address and engage with under-represented voices in our approach to institutional change through innovative practice in curriculum design and implementation. This is a joint collaborative process by staff and students to identify changes to their curricula, to resources and to assessments that consider alternative epistemologies and diverse knowledge sources by embedding information literacy teaching from the library services into a module. The result is the construction of an intellectually expansive and more pedagogically sound curriculum.

Impact on Student Experience

Key learnings for students were an appreciation of difference, an acknowledgment of whiteness on reading lists and the benefits of working in a diverse team, which were evident in the reflective component of the assignment. The students we teach come from diverse backgrounds. This has implications for a pedagogical approach that reflects that diversity and promotes inclusive content. Students benefited from engaging with a diverse team for the assignment and by reflecting on the rich and diverse heritage of learning from countries and continents in the Global South. When we interact on campus with others who have different backgrounds and life experiences to us, this can open multiple perspectives and points of view, and help us to understand difference.

"...it allows students from a less diverse background like myself, a chance to experience what it actually is like to work as part of such a team. It will benefit students when they go into the workplace as many are now becoming more diverse. Another reason why I would recommend it as it allows students to research different cultures. It also benefits as it makes students use correct and credible sources." [Student]

"I am proud of being part of diverse projects like this one, and I will present my learnings to an employer as being open-minded and belonging to a generation that accepts everyone, from everywhere." [Student]

Supporting the achievement of the University strategy

TU Dublin's strategic plan embraces diversity as a strength and selling point of studying at our university. Diversifying the curriculum can challenge the hierarchy of knowledge in higher education by developing critical awareness in students of the need for diversity in the curriculum and supports the Sustainable Development Goal No. 4, Quality Education. Change is enabled by inclusivity in curriculum content that represents a diverse student population and aligns to the University's strategic intent of having the 'largest number of diverse learners' (Strategic Priority No.2/People Pillar, PE2).

Key success factors

1. The development of critical awareness in students of the need and benefit of diverse sources. Students were placed in ethnically diverse teams and required to identify three resources that they would recommend adding to their course resources (reading) list. Limiting sources to peer reviewed or scholarly materials subjugates perspectives from outside the academy and is contrary to our approach to engaging with diverse sources as used in this paper. Teams were tasked with writing up their team findings in a report: critically evaluating the materials that they selected and assessing how they could be used for teaching and learning purposes, how they have developed their diversity competence, how they would present their learning to an employer.

2. We have begun the process of diversifying the library collections. The Discover Diversity Collection, which is considered a living output of the project, will continue to grow through a Patron Driven Acquisition Model and includes students' recommendations.

3. Increasing the research skills and information literacy of students to find, consider and utilise diverse resources. Inclusive referencing was a core part of this training.

4. The development a framework for colleagues in higher education to diversify the curriculum, that will support teaching staff in adapting and developing their approach to teaching, learning and assessment, and to develop the requisite skills in themselves and their students.

Staff reflections

Due to the global pandemic the students must be commended for their engagement and commitment to this initiative that took place entirely online. Our approach focussed on a single module response, when action at a strategic, sector-wide level is required at our University to effect substantial and sustained change in diversifying the curriculum.

Future

A framework has been developed that supports colleagues at TU Dublin to diversify the curriculum in any discipline achieved by following the 4 steps of:

1. Planning ahead for inclusive content
2. Developing research skills and information literacy
3. Ensuring an inclusive classroom environment enabled by pedagogy and assessment
4. Sustaining diversity in the curriculum by committing to changes and sharing learnings.

The approach adopted uses a 'plus one' design mentality, whereby adding, changing or adapting just one thing each year, a module can be gradually transformed to include greater awareness and new knowledge. Colleagues on another campus are currently implementing this initiative in their context for 2021/22, thereby sustaining and progressing this project.

Images/URL

1. Note: Hyperlinks embedded in text above.
2. Diversifying the Curriculum - *Building MultiStories*
   A graphic recording designed by Eimear McNally – a visual summary of our process.

> " *I am proud of being part of diverse projects like this one, and I will present my learnings to an employer as being open-minded and belonging to a generation that accepts everyone, from everywhere.*"

6 Facilitating maths practice, learning and assessment using a custom app

Staff Innovator and Discipline/Programme/Level
Colm McGuinness, Lecturer in Mathematics and Statistics, Blanchardstown Campus, Multiple business programmes, at level 6 (years 1 or 2, depending on the programme).

Context

I have a long background (40+ years) in computer programming and automation. Back in 2000 I could see that student numbers were increasing but they were each year increasingly struggling with our business mathematics modules. Around 2002 I embarked on the development of a series of web delivered, automated, question and answer web pages. Over twenty years later, I'm still working on it! It is now locally known as the (maths) OLCA: The online CA. It works as a portable, non-installed, Windows or MacOS app. And is at this point a complete environment of student support and assessment across most of the module content for two semesters of business mathematics. Recently I have been extending the content for use by other lecturers for additional modules, and across additional campuses. The app took a very significant jump forward as a consequence of remote teaching and assessment since March 2020.

Anyone in TU Dublin can access the app via the documentation (currently, Dec 2021) at: https://tinyurl.com/5ee57ktv, or equivalently by scanning this QR code:

Those interested or just curious should feel free to download and freely investigate the app and contact me with any questions/suggestions/comments.

A quick overview:

~ Practice:
  ~ Students have practice (non-marked) access to all questions. Sample in Figure 1 below.
  ~ Questions are dynamically created, and are thus individualized. Sample GPA based question in Figure 2 below.
  ~ Most questions have a "Show Detailed Answers" button, which will show a set of detailed answers for the given dynamic question.
  ~ Some questions provide interim answer checking, so that students can check intermediate workings to see if they are on the right track.

~ Assessed:
  ~ The app provides a management page that allows the lecturer to release and lock individual questions for completion, with specified start and end times for submissions. Questions, start and end times can be individualized to accommodate students who have missed blocks of content due to absence.
  ~ Students login via a secure link, personal password and two factor authentication to access their marked questions, which are again individualized.
  ~ For the most part only final answers are assessed. The rationale being that students are "encouraged" to practice until they can successfully complete a question from start to finish. Which is all facilitated by the practice questions.
  ~ Assessed questions have a timer counting down, although the times allocated are typically very generous.
  ~ Marking is automatic and immediate.
  ~ Students who get a question part wrong are offered the option to see the detailed answers. This also facilitates students querying mistakes in the app.
  ~ Multiple attempts can be had for questions, with a penalty applied for each fully or partially failed attempt. This is currently set to 3 attempts, with attempt 1 for 100% of the question marks, attempt 2 for 67% and attempt 3 for 33%.
  ~ No penalty is applied for a lesser second/third attempt. The rationale again being to encourage practice/attempts.

Figure 1: Students freely access practice questions as they wish. Above are the questions associated with a Semester 1 module

Figure 2: A sample of a GPA question

Impact on Student Experience

The true impact is difficult/impossible to assess. There are simply too many variables that likely impact on each years' students. Having said that, pass rates over years in the associated modules are relatively stable. Mathematics is no longer standing out at exam boards, although continues to be a bellwether. In 2020-21, where there were no terminal examinations in Business maths on the Blanchardstown campus and the OLCA app constituted 80% of overall module marks. We had the highest pass rate for years in business maths! It also gives the students an increased element of autonomy since they have practice questions and detailed answers available at the click of a button. Figure 3 summarizes a recent survey of 2021-22 year 1 students (n=61).
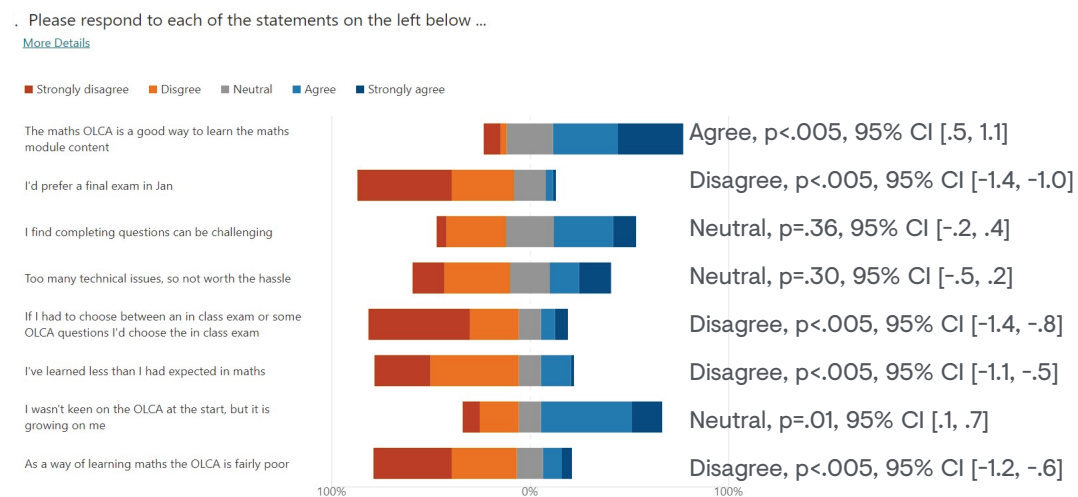
Figure 3: Student opinions from 2021-22 year 1 cohort

Mean response, p-values (T test against proportion = .5/Neutral) and confidence intervals are under their corresponding response bar. The two highlighted in yellow are likely to be substantially related to technical issues associated with the introduction of new content and two factor authentication this year, and issues with newer "M1" Mac computers, and MacOS in general. All issues have been resolved since the survey took place.

Supporting the achievement of the University strategy

As a society we need to be better prepared for evidence based thinking and evidence based debating. Anything that can facilitate students developing maths skills will support this.

Key success factors

I happen to have a range of skills from software development, mathematics and statistics that have all contributed to where the app is now.

Many past students have tolerated my early attempts at new questions and new features, which were not, by version 1.0, always the success that I had expected!

Special thanks and acknowledgement to lecturer Ann Marie McKeon. Unlike the students who escape me after one year, she has worked with me for years now, conducting testing, solving student tech and app problems and taking the flake from students when I messed up a new release!

Staff reflections

Some student's struggle with even simple computer tasks on their own personal computers, particularly Apple Mac computers in my experience. Getting the app working can become a hurdle on top of the "maths hurdle" for such students. This can be very off-putting, frustrating and anxiety creating for students. While students on the Blanchardstown campus have the option to use an on-campus local shared drive version of the app on campus computers, they almost invariably want home access, even in instances where this is problematic for them. There can consequently be a large amount of support time at the start of each year to get as many students as possible up and running on their own equipment. This is further exacerbated as OS venders make changes that cause the app to fail.

While the 2020-21 cohort of Y1 Business maths students substantially just got on with the task of maximizing their marks and worked with me to facilitate this as I rapidly developed the app. Evidence to date from the 2021-22 cohort is not so encouraging in some respects, although the outcomes have yet to be seen. Instances of app issues are not being so easily

accepted by some of the current cohort, despite my relatively rapid fixing of most issues within minutes. Instances of blaming the app for lost marks had increased significantly, despite only two such verified instances this year to date, out of 6559 completed assessed answers! Some of this is likely due to the issues early in the semester and general confidence in the app.

While such an app will not suit many subjects, the basic ideas are likely extendable across a range of content types and indeed sub-areas within subjects. Complex custom app development is a very specialized and highly time consuming activity. The current OLCA app represents thousands of hours of work to date; involves a number of programming and formatting languages (eg Adobe Actionscript, HTML, Javascript, PHP, MySQL, TeX); involves the management of multiple web sites; and is now a "MASSIVE" app!

Part of my motivation was to increase the amount of student practice, which is key in maths and many subjects, but also reduce the amount of time I spent correcting question attempts. While I have certainly achieved both of these via the app, considerably more time is now involved to maintain and develop the project. Despite this, on balance, it is very rewarding to see it in action.

Future

Within business maths, and probably maths in general, this could have wider application. The app is currently (2021-22) being used by over 200 students, for three Blanchardstown lecturers across 3 full time and 1 part-time class groups. There is scope to include more question types, lecturers, modules and campuses. Some additional development is needed to allow additional lecturers more autonomy, and less reliance on me. Further expansion is likely to also require a proportion of my time that isn't sustainable. Anyone interested is welcome try the app out, and/or contact me with any questions.

7 Authentic Group Assessment using Bongo Video Assessment Tool

Staff Innovator and Discipline/Programme/Level
Farrah Higgins, Technology/Business Information Systems
Programme: B.Sc. in Business Computing
Level: Level 8

Context

The use of video assessment and an online collaboration workspace for student group projects as an authentic assessment strategy that reflects the target work environment, increases student employability and enhances student learning.

Impact on Student Experience

Third-year students on a B.Sc. in Business Computing were required to design, develop and demo a piece of working software as part of a remote group project assessment. Students used the Bongo Video Assessment tool as their main communication and collaboration workspace to manage and submit their project artefacts. In response to the industry demands of remote working, students now need to be proficient and professional on video conferencing technologies, remote collaboration tools and have skills in flexible timetabling, remote networking and strategies for self-management tasks. This assessment tool allowed the students to develop their transversal skills as well as their discipline-specific skills, while also preparing them for their remote internships the following semester.

Supporting the achievement of the University strategy

This project aligns with the university's strategic 'people' pillar to help produce graduates who can address the current challenges of the workplace. Students need to be equipped with skills that will enable them to become global citizens who can adapt to a changing and disruptive world. This teaching practice focuses on an authentic assessment strategy that is more aligned with the target work environment. This better prepares our students for the changing working world, while enhancing their student learning.

Key success factors

Improvement in students' communication and collaboration skills in a remote setting to help better prepare them for the target new world of remote working. Enhancement of student learning as it is a 'real' business problem that students are working on, facilitated by an authentic assessment environment.

Staff reflections

The Bongo Video Assessment Tool allowed student teams to communicate, collaborate, plan and record demos in one area. The availability of the integrated, anonymous peer assessment functionality encouraged student reflection. However, students still struggled with trying to connect remotely with group members with whom they are unfamiliar and have not worked with before. A mock group assessment is recommended to be run before the actual assessment to close the gap between the assessment goal and the reality of their performance as a team. I would recommend getting students to work in their predefined teams on a low-stakes task using the tool before the actual assignment. Students should be allowed to practice with the form of assessment before it is used as a formative assessment.

Future

Bongo Video Assessment tool creates an environment that has high fidelity and accuracy to a real, remote work environment. Supports video-based assessments with feedback via a rubric facility integrated into the tool. Peer and team evaluations are also available via the tool to facilitate student metacognition. Staff can monitor group project workspaces to see student engagement (i.e. check that meetings/document submissions are happening). The Bongo video assessment and collaboration tool is available to all staff and students across the faculty and can be configured to facilitate any group project that involves collaboration and communication in a remote environment with integrated feedback.

Figure 1: Bongo Video Assessment Tool – Workspace View
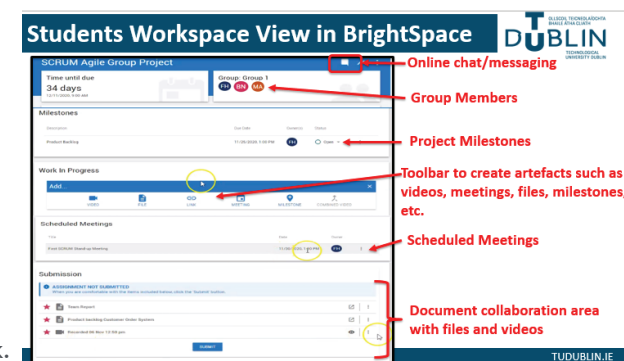
8

Delivering Unique Quiz Assessments as End of Module Exams

Staff Innovator and Discipline/Programme/Level
Alice Luby, Lecturer in Accounting, School of MarketingGrainne Murphy, Lecturer in Quantitative Methods, School of Marketing

Context

Recent times have seen an unprecedented shift to online learning in our university. This necessitated the consideration of a vast range of online assessment techniques. However, alternative assessment approaches enhanced the student learning experience. Traditionally, the accounting profession examine students in a supervised exam that necessitates learning off templates and rules and applying them to figures in the exam. The lockdown eliminated that option. The exam approach moved from requiring students to learn templates and key definitions, to be recited in a supervised exam, to testing the application of knowledge in quiz style questions.

This new approach is consistent with the working environment that students face when they graduate. They will have access to all the information on the internet, there is no need to learn layouts and rules off by heart as this information is at your fingertips in the real world. It is more important that they learn to access the information and apply it appropriately.

When a quiz tool is first mentioned people often jump to the conclusion of MCQs. In addition, there can be a perception that only basic knowledge can be assessed in quiz format and it is not appropriate for more complex applied knowledge. However, Brightspace provides a vast range of question types and options to create a unique exam for each student. Features such as question libraries and question pools to deliver random questions, provide the ability to automatically deliver a different exam to each student. The fact that no two students will take the same assessment reduces collaboration. In addition, for numeric subjects such as Quantitative Methods and Accounting, the arithmetic question type allows the lecture to program the use of different figures for each student. Therefore, each student may be working on slightly different figures and getting a different correct answer.

Impact on Student Experience

Students had the opportunity to sit creditable assessments remotely. Remote assessments are essentially open book therefore, the student didn't have the pressure to memorize templates and definitions. This allowed them to focus on applying knowledge and understanding to work out the correct answers, such an approach is more consistent with their future working environment. Just because we have the ability to assess in person invigilated exams again, does not mean we should eliminate the remote assessment approaches.

Supporting the achievement of the University strategy

Credible and robust assessments are fundamental requirements for the University.

Key success factors

The fact that no two students were attempting the same question at the same time meant they could not collaborate. For numeric questions each student would be working on different figures.

It was possible to examine traditional exam style questions through a series of electronic questions that was unique to each student.

More accurate representation of the real world with a less pressured environment that didn't necessitate learning reams of information that is readily available on the internet.

Staff reflections

It was very time consuming to develop question libraries and it needed extremely creative thinking to develop questions and incorporate all learning outcomes in a satisfactory manner. The random nature of the question pools was extremely useful in presenting the questions. However, for the arithmetic question type, it is not currently possible to use the randomly generated figure in a subsequent question. This means that some questions may be used that are not unique. If there are enough 'unique' questions in the exam the credibility will be maintained, and the risk of collaboration significantly reduced.

The development of question libraries is time consuming on the first year but can be migrated in subsequent years. There is a limited availability of mathematical operations in the arithmetic question but Brightspace are hoping to improve on this.

Future

The potential of creating question libraries and question pools delivering unique exam papers is an option that can be considered for many modules. It has proved to be a very effective assessment method and should not be cast aside in favour of the traditional supervised exam. I hope that the Community of Practice that we have set up, will encourage and support staff to evaluate the power behind the 'quiz' option in Brightspace. The sharing of approaches will be a catalyst for further creative assessment approaches.

9 5R Model: Online/Blended Teaching, Learning, Assessment Innovation

Staff Innovator and Discipline/Programme/Level
Dr. Sue Mulhall, Human Resource Management, TU114, Year two of a level 8 BSc programme for part-time (evening) students

Context

The part-time BSc in Human Resource Management (HRM) is aimed at learners seeking to initiate or develop their careers as human resource professionals, line managers with people management, or devolved HR responsibilities as part of their role. The typical student profile comprises learners at the early stages of their career, working at an operational or team lead level, aspiring to gain an entry-level role, or promotion, in human resource management.

In the second year of the programme, students take the Designing and Delivery of Training module (15 ECTS) one evening per week, over two semesters. The module's objective is to provide learners with a broad understanding of the factors to be considered when assessing learning needs, and subsequently designing, delivering and evaluating inclusive learning and development interventions to bridge the identified gap within varying contemporary organisational contexts. Traditionally, the module is taught in-person on the city campus, but due to the prevailing circumstances of Covid-19, the lectures were delivered in a virtual learning environment for the 2020/21 academic year.

Impact on Student Experience

A key theme of the module is that organisations adopt a strategic approach to learning and development (L&D) by drawing on an integrated, four-stage cycle (learning needs analysis, design and development, delivery, evaluation) taking account of business strategy and context. The module, *inter alia*, studies each stage of the cycle over three classes. The first session explores theory, session two examines application of theory, and the third stage fosters the requisite skills to translate theoretical knowledge and applied understanding into practice. Each class is structured around a key theme with two or three related sub-topics.

The pivot to online learning in 2020/21 facilitated the implementation of an innovative approach to the students' experience of the teaching of the four-stage L&D cycle. The 5R model embodies a dual purpose. First, to embed employability into the teaching, learning and assessment for HRM graduates' career development. Second, to assist in the co-creation of knowledge for learners engaging in a virtual environment for the first time. A two-hour lecture following the principles of the 5R model involved:

- READING – learners read lecture slides to gain knowledge and understanding of the sub-topic under investigation.
- REITERATING – lecturer explained the sub-topic to further assist the students' knowledge and understanding.
- REINFORCING – learners engaged in an activity to apply and analyse their newly acquired knowledge and understanding.
- REVIEWING – learners participated in a class Q&A forum to evaluate their newly acquired knowledge and understanding.
- REFLECTING – learners and lecturer wrapped-up the sub-topics to integrate the students' newly acquired knowledge and understanding.

Supporting achievement of University strategy

To achieve TU Dublin's strategic objective of a dynamic new model of education promoting academic excellence and producing sought-after digitally literate graduates, the 5R model embeds employability into the teaching, learning and assessment for HRM graduates' current and future career development. It is set against the backdrop of supporting the University' strategic intent of realising infinite possibilities, its mission of creating a better world together, the strategic pillar of people by fostering individual talent in an ever-changing world, and the priorities of nurturing bright minds, creativity and ambition, creating pathways for all, and championing passion to excel.

The 5R model for students taking the Designing and Delivery of Training module in the second year of their part-time studies on the BSc in HRM aligns with the following aspects of the University's strategy:

- Strategic objective (2030) – a dynamic new model of education producing

most sought-after digitally-literate graduates, will be embedded in
University, transforming learning opportunities and experience for all.

  ～ Milestone (2023) – a new education model promoting academic excellence will be
    in place and TU Dublin will be in top 3 Irish universities for graduate employability.
  ～ Deliverable - embed employability into the teaching,
    learning and assessment in the School of Management (City
    Campus) for HRM graduates' career development.

Key success factors

The key success factors for the 5R model builds on TU Dublin's principles for the new
education model that will characterise the student educational experience (Academic
Council, February 2021). The ten principles are student centred and student engaged,
connected curriculum, range of provision, excellent, flexible, agile teaching and learning,
professional educators, transition, enquiry, engaged, global and multi-cultural, and access
and equal opportunity.

Take connected curriculum as the exemplar. It involves, *inter alia*, "application of knowledge,
research and scholarship; inculcating TU Dublin Graduate Attributes through integration
of research-led teaching; enquiry-based learning and development of research skills .....
full range of formal and informal learning experiences in formation of graduates." For
instance, this principle was embedded into the teaching of the second stage of the L&D
cycle as part of a skills class to translate theoretical knowledge and applied understanding
into practice. A fictional case study was devised tasking learners to design and develop
a learning intervention for warehouse fork-lift drivers on the correct loading/unloading
procedures to ensure minimum breakages of glass-based products. The day after the class
(25.11.20), one of the learners, unprompted and on their own initiative, posted on LinkedIn
(see Images section). They referred to the practicality of the session, recognising how their
knowledge and understanding of the topic was positively transferred from the classroom to
the workplace.

Staff reflections

Over a year on from the pivot to total online delivery, we are at an interim juncture in the
move to a blended learning approach to learning and teaching. Reflecting on the transition,
and building on formal feedback received from the learners, I have adopted and adapted the
5R model for in-person delivery in the academic year 2021/22. For example:

  ～ READING – omitting the activity of learners reading lecture slides
    to gain knowledge and understanding of the sub-topic under
    investigation, but with the caveat it is anticipated that students
    download and peruse the material prior to class time.
  ～ REITERATING – retaining the activity of the lecturer explaining the sub-
    topic to further assist the students' knowledge and understanding.
  ～ REINFORCING – retaining the activity of learners engaging in an activity to
    apply and analyse their newly acquired knowledge and understanding.
  ～ REVIEWING – retaining the activity of learners participating in a class Q&A
    forum to evaluate their newly acquired knowledge and understanding.
  ～ REFLECTING – retaining the activity of learners and lecturer wrapping-up the sub-
    topics to integrate the students' newly acquired knowledge and understanding.

Future

For the future roll-out of the 5R model, it is anticipated that the initiative would be
appropriate to replicate on other modules on the part-time BSc in HRM. Following monitoring
and review, it could then be rolled out, as applicable, to the part-time MSc in HRM. A roll-
out to full-time cohorts would probably require a group to investigate the suitability and
generalisability of the model for learners not working in contemporary organisational contexts.

Caroline Lee · 1st
Site Administrator at PJ Hegarty & Sons
4d · 🌐

Always delighted to put learning into practice at work - this week I implemented
lessons learned from Sue Mulhall of Technological University Dublin while
designing training slides for our new hoist operators at PJ Hegarty & Sons Spencer
North project. These training outcomes will allow us to objectively measure the
success of our Hoist Operator Awareness Training and make sure we're setting our
workers up to succeed in a safe and controlled workplace.

#training #learning #safety #university #skills

10 Languagespathways - A multimedia platform for Language learning awareness and promotion
(Languages Open resources for all levels)

Staff Innovator and Discipline/Programme/Level
Nathalie Cazaux, The LanguagesPathways website and Mozilla hub are aimed at Business students with a Language (International Business/Global Business but also General Business with a language elective)

Context

With a team of Language Lecturers from TUDublin (two lecturers from City, one lecturer from Tallaght and myself) - we developed a multimedia platform to promote language at 3ʳᵈ Level. The website targets second level students and displays information about our courses with languages in a fun and attractive manner.

Impact on Student Experience

The website is available to all as it is open resources. In order to launch it, we organised a competition and ran our first award ceremony in a bespoke Mozilla Hub virtual world. We were helped by web developers and used funding from the Post Primary Language Initiative under the umbrella of the Languages Connect organisation.

Supporting the achievement of the University strategy

This multimedia platform aims at exchanging ideas, creating bridges between second and third level and showing students where they can go with languages at third level. We are firm believers of using technology in bringing people together.

Key success factors

Working in teams over the 3 campus was a key success factor. As mentioned above, we had funding and got technical help as well, which meant we were able to concentrate on content and pedagogy.

Staff reflections

Creating opportunities to work online is a necessary part of our educator role in XXIst century however we must not forget the power of and need for face to face education.

Future

Bespoke interface are important when sharing content online. Creating videos / podcasts / games which are targeted and professional is a great asset for class content. In principle, it would be easy to replicate once you have a budget to make sure that the technical side is covered.

URL

www.languagespathways.ie   https://hubs.mozilla.com/pMqixT5/languages-pathways

11 Online Quiz Feedback

Staff Innovator and Discipline/Programme/Level
Nigel Donnelly, Finance and Economics/Bachelor of Business/Level 7 & 8

Context

Gerard Phelan and I, created banks of Moodle Quiz questions which allowed students to test their knowledge of the subjects we lectured such as Economics and Personal Finance. This allowed us to examine students in both assessments and final examinations in an online environment. Questions were chosen at random for each student taking the test from selected topic areas. The order in which questions from topic areas were presented was also randomly sorted. This highly reduced the likelihood and ease of plagiarism (e.g., students sharing answers with each other via social media).

Impact on Student Experience

In Personal Finance and Economics students were provided with randomly generated mathematical questions that they could practice as often as required and automatic feedback was given where students were making errors. For the online assessment, students received results within minutes of completing the assessments and feedbacks session on teams were provided overall and for the individual randomly generated assessments at student request.

Supporting the achievement of the University strategy

We were committed to creating transformational educational opportunities that inspire, support and develop the individual in reaching their full potential. Being able to practice questions where immediate feedback was given telling the student not only whether the answer was correct or incorrect but also why it was incorrect supports and encourage self-directed learning.

Key success factors

It is good pedagogical practice to give students relevant feedback as quickly as possible. In a live in person classroom situation, you can give instantaneous feedback to individual students, however in an online environment doing to is more challenging. It was therefore extremely useful to be able to instant relevant feedback in the online quizzes.

Staff reflections

Initially, for calculation based financial questions, multiple choice mathematical based questions were used, which we felt did not work as well and also prevented the use of more complex multi-part questions. The move towards the more complex cloze test type questions allowed the replication on exam length multipart questions in an online setting. Feedback from students on their online exam was largely positive. Creating randomly generated short mathematical questions also gave the students plenty of practice questions with instant feedback to improve their performance in assessments and exams.

Future

We have decided to continue the use of online randomly generated quizzes for our assessments. Results in the online quizzes for assessments and exams were online with previous in-class tests with the added benefit of instant feedback to students. Initially, creating enough quiz questions of varied question types for a robust question bank is a challenging time consuming task, However, once completed, updating and adding to question bank enables creation of new online assessments or exams, which have the added benefit of being self-correcting.

It takes an enormous time commitment to acquire the skills to write question (i.e. not just simple true/false or multiple choice questions. Even after you acquired the ability to write the questions, a huge time commitment is required to create sufficient new questions for a large enough question bank. During the emergency remote teaching period, the creation of large enough question bank with a variety of types of question, was necessary to ensure academic integrity in an online environment. The time commitment required ended up taking two months of intense work by two lecturers with good IT skills.

12 Enhancing Sustainability Literacy through Authentic Assessment

Staff Innovators and Discipline/Programme/Level
Collaborators: Dr. Lucia Walsh, Dr. Olivia Freeman (project co-lead), Alacoque McAlpine, Dr. Deirdre Duffy, Dr. Ciara Nolan and Dr. Cormac MacMahon (project co-lead)

Faculty of Business/School of Marketing, Graduate Business School, School of Retail and School of Management, Level 8 (undergraduate BSc programmes) and Level 9 (MSc in Strategic Management, MBA, MSc in Fashion Buying & Management)

Context

This innovation emerged as a result of the TU Dublin Strategic Synergies IMPACT call. The pedagogical initiative described herein was designed with the broad aim of promoting the student enhancement of sustainability literacy among business students using innovative digital tools linked to authentic assessment strategy. Sustainability literacy can be defined as 'the knowledge, skills, and mindsets that help compel an individual to become deeply committed to building a sustainable future" (Decamps *et al*., 2017). This included completion of:

- A sustainability literacy test completed via the UN supported Sustainability Literacy Test platform (Sulitest.org), providing students with a locally benchmarked score evaluating their knowledge about the UN Sustainable Development Goals (SDGs) along with a range of follow-up resources.
- A written reflection on learning utilising the DIEP (describe, interpret, evaluate, plan) reflective model (Boud et al., 1985)
- Creation of a digital artefact (e.g. E-portfolio, digital poster, short video, activism piece) connecting a chosen SDG to a specific discipline issue (e.g. international management, strategic marketing, retail management, fashion buying, supply chain management, HR). For example, short videos aimed at practitioners were shared through LinkedIn to create impact by students in several modules. Students in Supply Chain Management were tasked with using their voice to

bring attention to a particular environmental or social problem by engaging a TD, policymaker, or a brand in relation to their position on SDG issues and actions leading to improving supply chains sustainability. Fashion Buying MSc students recorded their learning in an e-portfolio which they could use to evidence their knowledge to wider audiences such as prospective employers.
- In some modules students further engaged in peer-to-peer learning as they reviewed each other's work and reflected on it.

Impact on Student Experience

Impact included:

- 974 Sulitest quizzes completed across 16 modules, resulting in 748 digital artefacts and 50 student activism actions in 20-21 academic year in the Faculty of Business Completion of the quiz created a foundation on which to build authentic assessment opportunities.
- Enhanced sustainability literacy was evidenced in the completion of student reflections which prompted students to consider the relevance of the UN's Sustainable Development Goals in their personal and future professional lives.
- Peer-to-peer learning among students was demonstrated through the completion of cross-module active assessments designed to:
- Enable students to reach large audiences of professional networks - e.g. some LinkedIn posts reached 2,000 views and included comments from senior sustainability professionals/brands)
- Enhance global citizenship skills (reflection, critical thinking, use of digital tools, confidence in professional abilities)
- Support students in the creation of e-portfolios which served as excellent engagement tools in subsequent interviews for discipline-specific employment
- Through activism students realised the potential to use their voice to bring about positive change.

Supporting the achievement of the University strategy

SDG 4.7.1 mandates universities to develop sustainability literate graduates through global citizenship education and education for sustainable development. TU Dublin's Strategic Intent to 2030 aligns its key performance indicators to the "People, Planet and Partnership" narrative enshrined in the UN SDGs.

Figure 1: TU Dublin's strategic key performance indicators on "People, Planet and Partnership"

The Strategic Intent requires all of TU Dublin's programmes to embed sustainability by 2023. By extension, there is an inherent of staff and students to develop their sustainability literacy. This initiative aimed to create the opportunity and mechanism by which to promote and develop sustainability literacy among business students, employing the UN supported Sulitest platform as an engagement tool.

This approach is consistent with some of the key transnational bodies driving standards in business education, including membership of the Principles for Responsible Management Education (PRME). This approach is also consistent with the institutional accreditation requirements of the Association for the Advancement of Sustainability in Higher Education's (AASHE) sustainability tracking, assessment, and rating system (STARS), which requires the

benchmarking of student sustainability literacy at least twice over the duration of their studies. Our sustainability literacy data also contributes to our impact ranking for sustainable universities including the Irish Times Higher Education rankings.

Key success factors

Emblen-Perry (2018) maintains that the practice of education for sustainability is being reshaped by the need to develop sustainability literacy skills to prepare students for the future workplace. Business educators therefore play a major part in enhancing graduate sustainability competencies, which are needed as part of global citizenship and professional practice (Sandri et al., 2018). Authentic assessment plays a particularly vital role in ensuring that graduates can easily bridge the transition from the University learning environment to the workplace.

In this project, the adoption of an innovative pedagogical approach utilising authentic assessment principles helped to foster key employability skills, including students' abilities to think critically and demonstrate responsible and ethical decision making in a range of circumstances. For example, we found that enhancing sustainability literacy levels among business students can lead to developing growth mindsets in relation to breath of sustainability, spanning environmental, social and governance concerns. Through inherent alignment between the transformative nature of education for sustainability, the exploratory nature of the Sulitest and the reflective nature of the assignment, our pedagogical approach lends itself towards stimulating engagement with and deeper learning about sustainability. Moreover, we found that the Sulitest, itself, can exude a shock factor, evoking emotional engagement and stimulating critical thinking about wicked problems. The use of professional, social media and digital technologies supported the development of additional core employability skills in digital fluency, facilitating engagement with potentially large audiences, including employers, professional bodies and government representatives.

A further element of the assessment design was the incorporation of a student activism piece. Student activism is important in the development of critical understanding of political and social forces (Lin, 2015). Higher education institutions have vital role in advancing sustainable development through well-articulated student voices as a lever for social and economic change. Not only does student activism represent a meaningful contribution to

society, research (Winston, 2013) suggests that it helps a student to look at life globally and not myopically. Our findings in this project are strongly supportive of this. Furthermore, the activism element underpinned the development of key skills such as emotional intelligence, enhanced interpersonal effectiveness, the ability to collaborate with others across diverse perspectives, and a greater sense of self-efficacy with respect to having a positive impact on individuals, organisations and communities (Bernacki & Jaeger, 2008).

Staff reflections

It is our collective opinion that the 3-step format (Sulitest, reflection and authentic assessment) worked well, and we found the students' feedback was overwhelmingly positive. The students felt that they engaged in a meaningful way resulting in shifting mindsets. After the first pilot, we learnt that it is important to provide detailed guidelines for the students including assignment brief, rubrics, supports in relation to learning digital skills (such as video making tools) and creating an open and encouraging learning environment.

Being part of a group of academic peers enabled us to collectively reflect on our experiences and learn from each other. A keen sense of collaboration and collegiality emerged among the small team who having not formally collaborated in the past, collaborated on a range of dissemination opportunities including symposia, conferences, guest lectures and journal submissions. We hope by sharing our experience of Sulitest, it will encourage educators in TU Dublin and beyond to embed Sulitest in their modules as a foundational element of the broader Sustainability for Education remit. So far, we have presented at 5 national & international conferences and have 4 upcoming peer reviewed journal publications. In addition, we have highlighted our work at 7 TU Dublin workshops and symposiums. We also recorded a podcast which included our reflections on our engagement in sustainability literacy assessment. Our list of publications can be seen at   https://sdgliteracy.ie/publications/

Future

The approach of using Sulitest, reflection and authentic assessment can be easily adapted to different modules and disciplines across TU Dublin. Collaborators from this project regularly speak with other colleagues and support academic peers in incorporating sustainability

literacy in their individual modules. We anticipate that sustainability literacy awareness will be embedded in every programme in the Faculty of Business and other faculties within TU Dublin as a foundational element of the broader sustainability for education strategic remit. We also anticipate that all students in the Faculty of Business will take the Sulitest at least once during their time in TU Dublin and that this exercise will heighten their awareness of the centrality of the SDGs to their personal and future professional lives.

This initiative has now crossed boundaries to other Faculties. Since beginning this initiative, there have been over 3,156 unique user completions of the Sulitest since 2020, with 470+ since September 2021. A strong community of practice has emerged with over 50 staff from across the university. Given that our success in adopting the reflective approach to the deployment of the Sulitest was reported to the UN High Level Political Forum for Sustainability, a cross-sectoral working group, coordinated by TU Dublin, is being convened to develop a country specific Sulitest question-bank for Ireland.

We would also encourage other colleagues to participate in the CPD in Education for Sustainability which provides useful tools for others who want to incorporate sustainability literacy in their teaching, learning and assessment strategy and join our SDG Literacy CoP.

Website: www.sdgliteracy.ie   Twitter: @sdgliteracy   Instagram: @sdgliteracy

Figure 2: Digital poster - key issues, practice and actionable recommendations for managers (Principles of Management module)
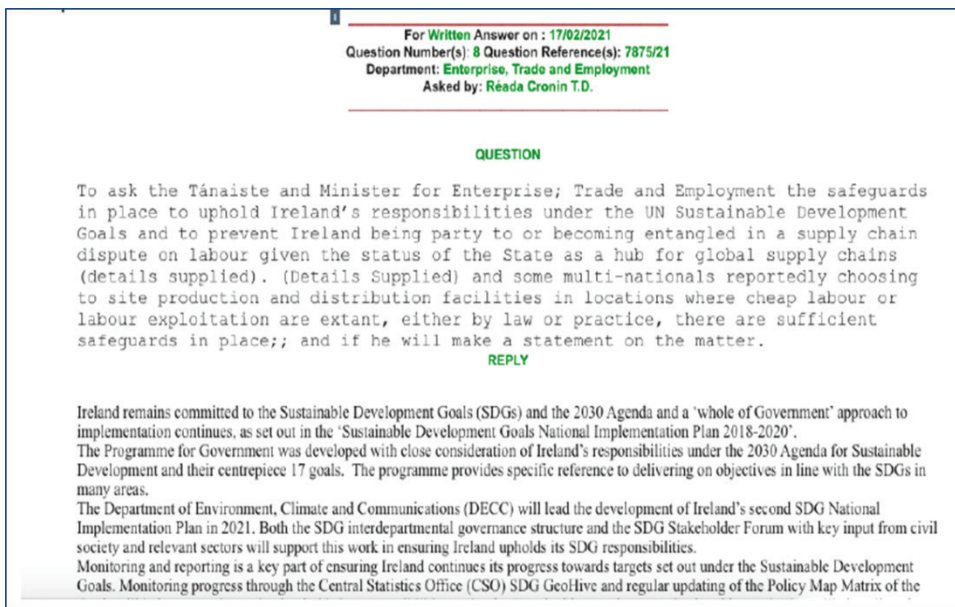

Figure 3: Student Activism action – engagement with a TD (Supply Chain Management module)

Hi Everyone,

As you may be aware, I am currently studying a part-time Masters in Strategic Management. One of the modules I am taking this semester is Strategic Marketing. As part of this module, I recently completed a Sustainability Literacy Test (Sulitest) which aims to improve awareness about Sustainability and the 17 Sustainable Development Goals adopted by the United Nations in 2015, set to be achieved by 2030.

Our lecturer has tasked us with creating a video directed at marketing managers to raise awareness about a particular goal and to provide recommendations for progressing the universal call to action to effect positive change. Given the phenomenal digital shift in how we have come to work and learn as a direct result of the pandemic, I have chosen to focus my video on Goal 4: Quality Education, and, more specifically, the technology industry as an enabler for the digital workforce of the future.

Thank you Lucia Walsh for affording me the opportunity to participate and engage in this important initiative, and to the fabulous girls and their teacher from my home county of Tipperary for making this video really special. Feedback is welcome!

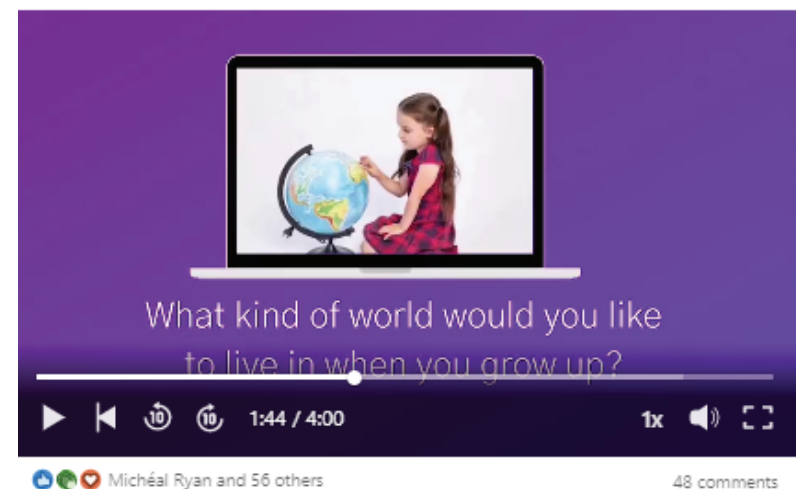#sustainability #sulitest #qualityeducation #technology #digital

Figure 4: LinkedIn post – video aimed at marketing managers (Strategic Marketing module)
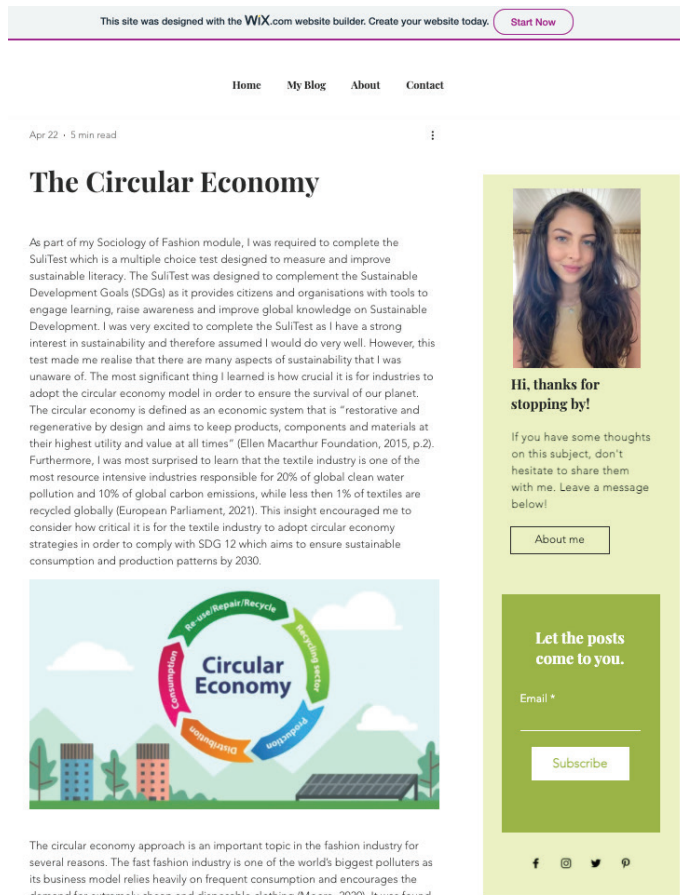
Figure 5: E-portfolio created by student using a Wix website to allow for wider evidence and distribution of learning (Sociology of Fashion module). Full website can be viewed here: https://ceilinatkins.wixsite.com/mysite
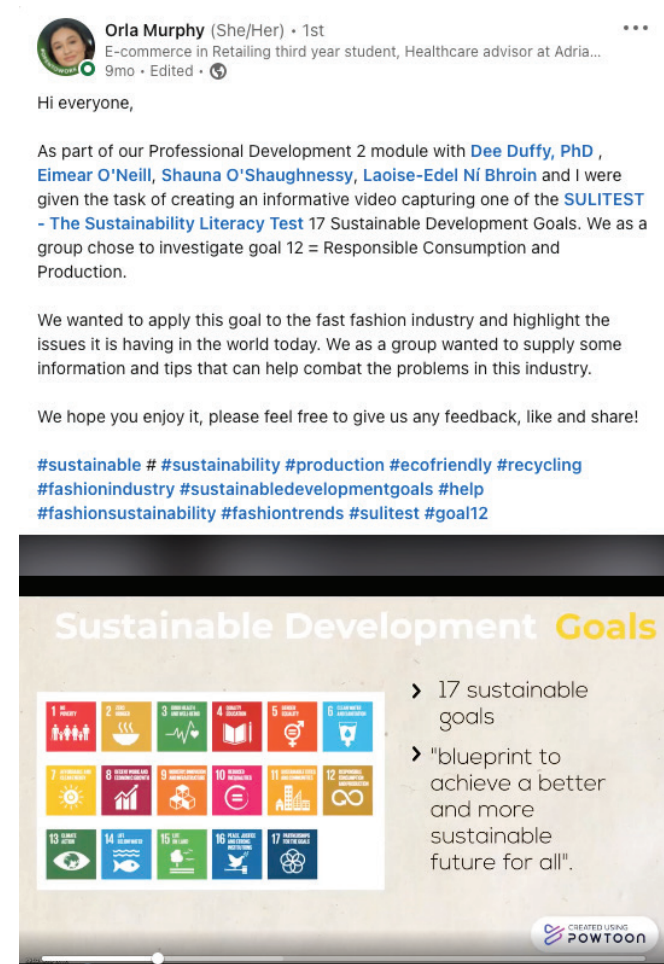

Figure 6: LinkedIn post – E-commerce BSc students (Professional Development 2 module) raising awareness of SDG12: Responsible Consumption and Production

13 Use of complex quiz questions to better assess learning outcomes

Staff Innovator and Discipline/Programme/Level
Lindsay Murray, Accounting and Finance, Tallaght Campus

Context

I use Embedded Cloze Questions in an essay type question with a mix of numeric or text answers embedded as opposed to numerous short questions. This replicates the typical paper based exam and is created using simple coding instructing on the question type, correct answer(s), marks and tolerable error. The exam self-grades immediately. For finance modules this allowed me to fully assess the learning outcomes, not possible with MCQ or short questions. Multiple versions of questions are created and copied from excel into the quiz. The questions were pulled at random meaning not all students received the same version of the question. Plagiarism is identified immediately.

Impact on Student Experience

Students felt this mode of assessment was fairer on finance modules where often the majority of calculations are correct but perhaps, not the final answer. In MCQ questions or similar, students are graded only on the final answer putting students at a significant disadvantage. This type of question also eliminates the need to upload supporting rough work which is often uploaded in the incorrect file format or illegible. The requirement to upload rough work in addition to an online test is unnecessary pressure on students in an exam scenario.

Supporting the achievement of the University strategy

Honouring our commitment to reducing our carbon footprint- eliminates the need for printing in final exams where submissions are uploaded. Honouring our commitment to developing a new model of education- 'a technology-enabled, modern university, that facilitates learners in an advanced digital world' Honouring our commitment to ensuring flexibility in structure and mode.

Key success factors

More than one version of a question if an assessment is delivered remotely: Embedded cloze questions are developed first in Word or Excel. Changes to small details such as rates, values etc in finance questions are quick and easy to make, creating multiple versions in very little time and simply copied into the quiz. While slightly more time consuming than creating just one paper, if configured correctly there are no corrections; it self-grades.

Calculative questions should be broken down into a number of smaller pieces to capture workings at various stages, ensuring maximum marks are awarded for work completed. Answers should be configured to include any obvious potentially incorrect answers with a reduced mark awarded, for example the answer that may have been entered if all but one part was answered correctly. Answers should be constructed to allow for a margin of error in particular for rounding differences.

Staff reflections

Although these questions are a great improvement from MCQ or similar type questions, a template must still be provided to students meaning they are guided through answers when , under a 'normal' examination setting marks are awarded for layout e.g. the layout of the Profit and Loss Statement.

Future

Staff could use this to remotely assess or to assess on campus. Assessing on campus using students pcs or a computer lab, would mean only 1 version of questions would need to be created making this even less time consuming with immediate results and feedback, no printing and no corrections. The data provided on students actions during the quiz; what questions were attempted, edited and when, for how long, aid investigations of plagiarism but also strengthen cases for marginal regrades and allows for lecturer self-evaluation and improvement. More lecturers are familiar now with Moodle quizzes from use in final assessments/exams due to remote examinations. A training session may be required around more advanced Moodle quiz configuration and settings. Questions can be exported from one LMS and imported into different LMSs easily and from one Moodle page to another.

a) Prepare the Statement of Profit or Loss for the year ended 30 June 2020

Ms Daisy Chain
Statement of Profit or Loss for the year ended 31 October 2020

Sales		
Less Sales Returns	-	
Less Cost of Sales		
Opening Inventory		
Plus Purchases		
Less Purchases returns	-	
Plus carriage inwards		
Less Closing inventory	-	-
Gross Profit		

Figure 1: How a simple embedded cloze question appears to students

a) Prepare the Statement of Profit or Loss for the year ended 30 June 2020

Ms. Daisy Chain		
Statement of Profit or Loss for the year ended 31 October 2020		
Sales	{1:NM:=2200000}	
Less Sales Returns	- {1:NM:=12050}	{1:NM:=2187950}
Less Cost of Sales		
Opening Inventory	{1:NM:=93000}	
Plus Purchases	{1:NM:=1540550}	
Less Purchases returns	- {1:NM:=11800}	
Plus carriage inwards	{1:NM:=16150}	
Less Closing inventory	- {2:NM:=87000}	-{1:NM:=1550900}
Gross Profit		{1:NM:=637050}

Figure 2: How a simple numeric answer referred to as 'NM', Embedded Cloze Question is configured; created in excel and copied into the Embedded Cloze Question answer template on Moodle

To: The Senior managers of Eurtonn Group
From: The Junior Finance Manager
Date: January 2020
Re: Analysis of the Eurtonn Group's Financial Statements

The following report analyses the performance of the Group in comparison to 2019 under various headings.

Introduction:

At a glance Eurtonn's [____] has increased which should have a positive effect on the [____] although this performance indicator will not rise to the same extent as profit because new [____] during the year meaning that the earnings are now [____].

Eurtonn's property has [____] which might mean that the group has [____] and this may have been funded through [____].

According to [____] Eurtonn would should have first looked to their own reserves to finance these acquisitions as [____] is considered the last resort for financing , according to this theory.

Other than that, long term borrowings have [____] this year and this, grouped with the increase in [____] should mean that [____] will reduce for Eurtonn this year. This will reduce [____] and will be viewed positively.

Again , just looking at the financial statements it would appear Eurtonn has gained efficiencies around its management of [____] although one balance that may require further investigation is the [____] in closing inventories which will have [____] the [____] but may effect the [____] ratios.

Figure 3: How an Embedded Cloze Question can be used in non-calculative questions, essay type questions

Again , just looking at the financial statements it would appear Eurtonn has gained efficiencies around its management of {1:MC:%0% inventories~%0% taxation~%100%overheads} although one balance that may require further investigation is the {1:MC:%100%increase~%0%decrease} in closing inventories which will have {1:MC:%100% reduced~%0% increased} the{1:MC:%0% debt of the group~%0%overhead expenditure~%100%cost of sales} but may effect the {1:MC:%0%efficiency ratios~%0% liquidity ratios~%100% both of these} ratios.

Figure 4: How this type of Embedded Cloze Question is configured; numerous embedded multiple choice questions referred to as 'MC', created in excel or word and copied into the Embedded Cloze Question answer template on Moodle

14 Programme-wide Hyflex

Staff Innovator and Discipline/Programme/Level
Niall Minto, Programme Chair for M.Sc. in Digital Marketing

Context

The Covid-19 pandemic and, in particular, the lockdowns brought a new focus to the number of days employees spend in their company offices. Employees are demanding more flexible working arrangements that will see them work from anywhere between 1 and 5 days a week from their home office. As this practice is set to become the norm, our students requested similar flexibility.

21st century teaching does not need to be in the classroom only. In response to the requests and in line with our industry partners, the programme committee for the Masters in Digital Marketing introduced a Hyflex teaching model across all modules on the programme. Our motivation was that our teaching should reflect industry practice as this is the environment that students will be heading into after they graduate.

Impact on Student Experience

This model provides students with the choice to join online, in person or both. For example, if a student was running late, they could start their class on their phone while travelling on the bus and then join the class in person when they arrived on campus. This model has opened up educational opportunities to students from anywhere in Ireland and beyond. For example, a number of international students joined the class online for the first month while they awaited their Irish study visa. Equally, students that lived a distance from the campus had a choice to commute some days and join online other days. If a student had to isolate, they did not have to miss class that week.

Feedback from students would suggest that face-to-face is best but it is important to have options for joining if you can't attend in-person. From feedback, students enjoyed having a choice and seeing the classes from a different perspective. The technology allowed students in the classroom to collaborate with the online students and even allowed for a few jokes to be shared across the physical/virtual divide. "The interactivity was great, and the lecturers

ensured both streams' voices and opinions were heard". Another student who was working and had a young family stated that he could not have taken on the Masters if he did not have this choice.

In addition to the flexibility, the Hyflex model provided students with the opportunity to develop skills to manage their time, motivate themselves and manage in an environment where they were not being supervised. As a result, they became more responsible for their own learning.

Supporting the achievement of the University strategy

This initiative supports the university strategy by preparing our students for the new Hybrid working environment. It also supports the strategy by making third level education more accessible to more of the population. Ultimately, it enables the university to support students get a home-work-study balance.

Key success factors

A critical success factor was having the support from the Head of School and the programme teaching team. While there were technical challenges that needed to be ironed out, the team worked tirelessly to ensure the initiative was rolled out and that the students reaped the benefits.

The use of technology was also a key success factor. Technologies such as the Swivl Robot, HD cameras, hanging mics, and video conference technologies such as Zoom and Teams enabled us to blur the line between face-to-face and virtual classes whereby online students seamlessly engaged with students in the class and vice versa.

A third and critical success factor was the contributions and support that was received from the HyFlex Community of Practice (CoP) which is chaired by Dr. Frances Boylan and runs across the university.

Staff reflections

The initiative enabled lecturers more flexibility too. A key benefit of the Hyflex model is that external lecturers from all over the world could be brought in live to the class. This provided a larger pool of guest speakers for lecturers. Attendance rates were up as the Hyflex option enabled students to virtually attend class when physical attendance was not possible. Lecturers also benefitted from the option to work from home when isolating.

Future

The future is hybrid working and therefore, I imagine the future is HyFlex teaching. New processes will need to be put in place to support lecturers that are using the HyFlex model and some of the existing challenges of engaging an online and offline audience at the same time will need to be resolved but the experience to date would suggest that a HyFlex model will continue to grow and evolve as hopefully, we emerge from the pandemic.

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