Building Digital Teaching and Learning Capabilities with DigitalEd.ie in Response to a Global Pandemic.

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Abstract.

The COVID 19 emergency has fundamentally changed the way we all live and work, and this is having an enormous impact on the teaching and learning experience. The physical closure of our five campuses in GMIT forced everyone online in a hurry and transitioned our learning, teaching and assessment activities to a new platform. The transition has been challenging, but it has also presented opportunities for developing digital capabilities among the teaching community and alternative strategies for student engagement. Transitioning to online teaching and learning in GMIT was made possible due to a number of factors including: the advances in education technology globally in recent years and the seamless integration of Microsoft Office 365 suite and Moodle; Connacht Ulster Alliance (CUA) engagement with a HEA funded digital education development project called iNOTE, and the development of https://DigitalEd.ie; the Teaching and Learning Office's digital teaching and learning online support resources; rapid response digital education workshops and a suite of flexible online learning development courses; and the flexibility and dedication of the teaching community engaging with professional development in digital teaching, learning and assessment strategies.

This article will outline a range of programmes and initiatives established since March 12th, 2020, that are building digital teaching and learning capabilities in GMIT, IT Sligo and LYIT (the CUA, Connacht Ulster Alliance). Rapid response interventions included: the development of a digital champion team; Ask Me Anything (AMA) clinics; digital teaching and learning small group workshops; a digital education webinar series; alternative assessment strategies workshops; 'show and tell' insight sessions on digital education topics and technologies; the iNOTE digital education development pathway for the academic community in the Connacht-Ulster Alliance (CUA).

Keywords: COVID-19; Digital capacity; Online learning and teaching; Student engagement.

1.   Introduction.

The COVID 19 emergency has fundamentally changed the way we all live and work, and this is having an enormous impact on the teaching and learning experience. The physical closure of our five campuses in GMIT, forced everyone online in a hurry and transitioned our learning,

teaching and assessment activities to a new platform. The transition has been challenging, but it has also presented a number of opportunities for developing digital capabilities among the teaching community and alternative strategies for student engagement. Transitioning to online teaching and learning in GMIT was made possible due to a number of factors including: the advances in education technology globally in recent years and the seamless integration of Microsoft Office 365 suite and Moodle; Connacht Ulster Alliance (CUA) engagement with a HEA funded digital education development project called iNOTE, and the development of https://DigitalEd.ie; the Teaching and Learning Office's digital teaching and learning online support resources; rapid response digital education workshops and a suite of flexible online learning development courses; and the flexibility and dedication of the teaching community engaging with professional development in digital teaching, learning and assessment strategies.

This article will outline a range of programmes and initiatives established since March 12th, 2020, that are building digital teaching and learning capabilities in GMIT, IT Sligo and LYIT (the CUA, Connacht Ulster Alliance). Rapid response interventions included: the development of a digital champion team; Ask Me Anything (AMA) clinics; digital teaching and learning small group workshops; a digital education webinar series; alternative assessment strategies workshops; 'show and tell' insight sessions on digital education topics and technologies; the iNOTE digital education development pathway for the academic community in the Connacht-Ulster Alliance (CUA).

2. Digital Teaching and Learning Upskilling and Supports for Staff.

Under the iNOTE project for the CUA, the Teaching and Learning Office in GMIT is leading the design and coordination of a range of programmes and initiatives, that are building digital teaching and learning capabilities in GMIT, IT Sligo and LYIT. Opportunities for the teaching community range from accredited learning pathways, online courses with digital badges, teaching and learning clinics, to flexible online professional development sessions.

The initiatives that have played an important role in responding to the COVID teaching and learning emergency include items 2.1 to 2.9 outlined as follows:

2.1 DigitalEd Knowledge Platform at https://DigitalEd.ie.

A Digital Teaching and Learning education platform (see Figure 1), providing access to digital

learning pathways, a discovery tool, digital stories, a digital resources directory, a digital champions network and a digital education forum. The platform provides a gateway to help CUA staff build digital capabilities and pedagogic expertise, in order to design, deliver and support flexible and online learning programmes. It has also become a space and place for CUA colleagues to collaborate on digital teaching and learning approaches through a Microsoft Teams channel. Over 5,000 unique users from across the higher education sector have engaged with the platform resources since launching online on March 12th, 2020. Although the platform has been developed for the CUA under the iNOTE project, it is accessible to the higher education sector under a Creative Commons Attribution-NonCommercial-Share Alike 4.0 International Licence. The platform can be accessed at https://DigitalEd.ie

Figure 1: DigitalEd Knowledge Platform at https://DigitalEd.ie
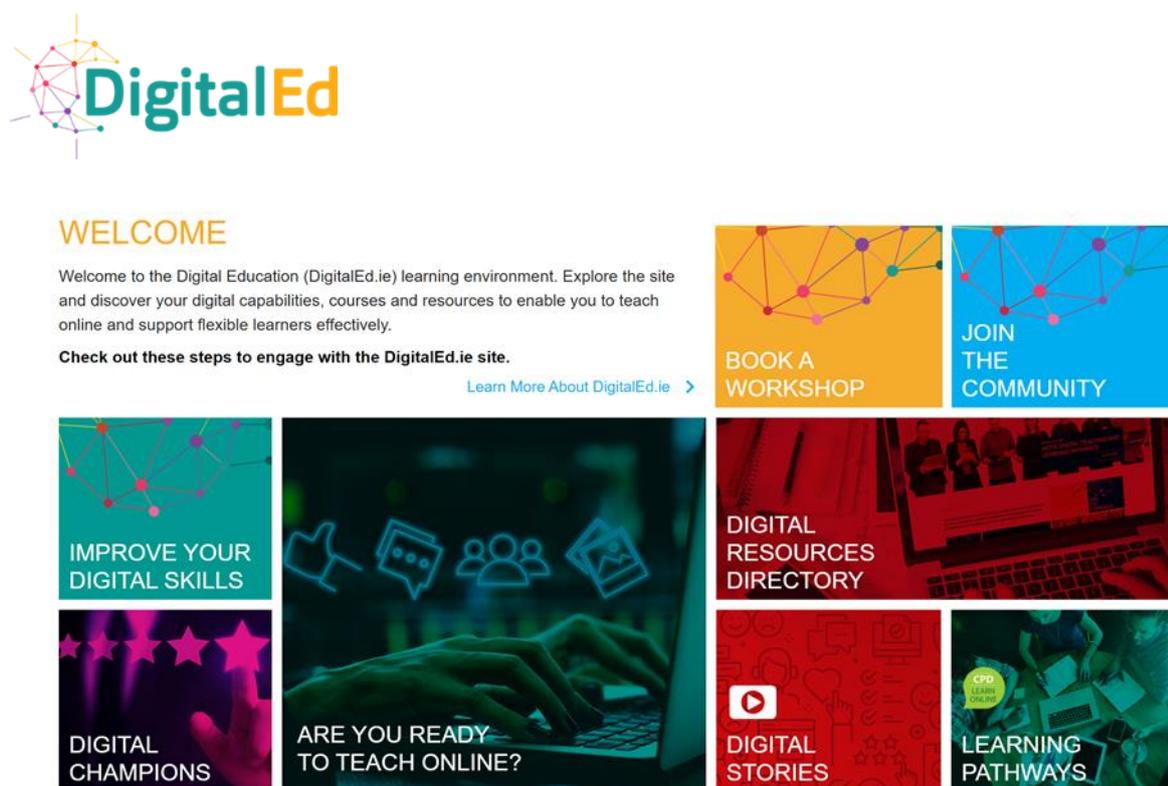
2.2 DigitalEd Development Series.

An online workshop and webinar series ran in April and May 2020, for GMIT and CUA partners LYIT and IT Sligo. This programme of specialist digital teaching and learning workshops and seminars (30+ and 1,100 registrations) provided support to the academic community and their

engagement with the DigitalEd knowledge platform and the course pathways. The series played a key role in supporting staff during the COVID teaching and learning remotely crisis. A range of topics were covered including Technology Enhanced Learning, Alternative Assessment Strategies, Microsoft 365 teaching and learning online Apps, Online Student Engagement Strategies, Recording Lectures for Online Delivery, Visual Pedagogies, Curriculum Design for Online and Blended Learning and a range of Q&A 'ask me anything' clinics in teaching online. See Section 2 for staff feedback on the series. The programme plan can be accessed here https://digitaled.ie/wp-content/uploads/2020/04/DigitalEd-Discovery-Webinar-Programme-V4-20.04.20-1.pdf

2.3 Digital Champions.

The Digital Champions team was developed as part of the CUA iNOTE project. The team is coordinated by GMIT Teaching and Learning Office and the programme includes a team to 20+ academics from a wide range of disciplines from GMIT (18), IT Sligo (2) and LYIT (4). The champion role involves mentoring teaching colleagues in academic departments on developing blended and online learning and teaching experiences. Digital Champions undertake a training programme with GMIT Teaching and Learning Office, covering the online iNOTE Academic Learning Pathway and a range of specialist workshops on digital education resources to support them in their mentoring role. Training commenced in March 2020. Many of the Champions (20) have chosen to undertake a special purpose postgraduate award in Digital Teaching and Learning, as part of their role as a Digital Champion. This award was developed in 2020 as part of the DigitalEd work package for the iNOTE project. Participants will showcase the outputs from this course at a special learning event on January 22nd, 2021. Further details on the Digital Champion programme is available at https://digitaled.ie/digital-champions/

2.4 iNOTE Academic Learning Pathway.

A digital teaching and learning professional development pathway is available to access on DigitalEd.ie under the iNOTE learning pathways. There is 10+ digital teaching and learning curated resources and online courses presented. They can be taken at any time and provides an opportunity for the teaching community to gain professional development in digital teaching and learning. Since launching the course suite in April 2020, 150+ staff have completed courses and gained digital badges. The virtual online learning platform is accessible to the higher education sector under a Creative Commons Attribution-NonCommercial-Share Alike 4.0

International Licence. The learning pathways can be accessed at this link https://digitaled.ie/learning-pathways/

2.5 Flexible Online Teaching and Learning Courses at https://cpdlearnonline.ie

A range of courses and toolkits are available to staff to access anytime on this virtual learning environment. Course topics range from programme design and assessment, digital teaching and learning and student engagement. The virtual online learning platform is accessible by creating an account at https://cpdlearnonline.ie. It is open to all educators teaching in the higher education sector. The resources are accessible under a Creative Commons Attribution-NonCommercial-Share Alike 4.0 International Licence.

2.6 CUA Digital Education Forum.

This forum is a community of educators from GMIT, IT Sligo and LYIT, sharing digital teaching practice ideas and online learning resources. It was established under the iNOTE project and set-up by the DigitalEd work package team in GMIT. The forum went live on March 12th, 2020, and it has 400+ CUA members to date. The forum is set up on a Microsoft Teams channel and members of the CUA can join the forum via the Join the Community area at https://digitaled.ie/join-the-community/

2.7 GMIT Teaching and Learning Office accredited pathways for the teaching community include:

- Certificate in Digital Leaching and Learning (L9, 10 ECTS) commenced in April 2020. This forms part of the Digital Champions education programme and 20 staff are currently participating. The team showcased their newly designed 5/10 ECTS online/blended modules in January 2021 to GMIT and CUA partners at an online Digital Champion Symposium.

- Certificate in Technology Enhanced Learning (TEL) (L 9, 15 ECTS) ran from February to June 2020. 18 staff in GMIT completed this development programme and it is having a positive impact on teaching remotely and designing for online and blended learning. An action research study and a PhD study is also underway to capture the engagement with TEL accredited pathways and the impact this is having on teaching in GMIT and across the CUA sites.

- Certificate in Teaching in Learning (L9, 30 ECTS) ran from September to May 2020. 14 staff completed this programme in June 2020 and a further 14 staff commenced the programme in September 2020. This programme is having a positive impact on designing for blended learning and student engagement. The learning experience and the impact on teaching is currently being collated as part of an action research study in GMIT.

2.8 BOLT and DigitalEd Teaching and Learning Development Sessions (June and September 2020).

In response to the COVID emergency and building on the DigitalEd webinar series that took place in April and May 2020, a steering group was established in GMIT called BOLT (Blended and Online Learning Transformation) to further develop training resources for staff to cope with remote teaching and learning plans for the Autumn-Winter 20/21. For the BOLT initiative, GMIT Teaching and Learning Office co-ordinated the delivery of 31 sessions over three weeks in June and a further 35 sessions in September, to help staff prepare for remote teaching and learning in the Autumn/Winter. Over 4,800 registrations were recorded across 66 sessions (2,500 in June and 2,300 in September) with participants from GMIT, LYIT and IT Sligo engaging in multiple sessions from Microsoft Teams, Moodle, Advanced PowerPoint and Digital Teaching and Learning Pedagogy. Key resources developed from the BOLT and DigitalEd programme of events are outlined below (see Figure 2). BOLT specific online resources were developed for GMIT staff and offer specific guidance on managing internal digital education/IT systems.

2.9 Professional development resources in digital teaching and learning.

Several DigitalEd and BOLT resources were produced in 2020 and they are available to access at https://DigitalEd.ie. Resources and courses are available to the higher education sector under a Creative Commons Attribution-NonCommercial-Share Alike 4.0 International Licence.

Professional development resources in digital teaching and learning include:

- o **An Online Lecturing Guide** https://digitaled.ie/what-does-an-online-lecture-look-like/
- o **Steps to Success in Online Learning** available at https://digitaled.ie/steps-to-success-and-some-practical-advice-for-gmit-students-learning-online-during-covid-19/ and a video https://www.gmit.ie/general/blended-learning-gmit

- o **Practical advice and resources to help you teach and assess online https://digitaled.ie/practical-advice-to-help-you-teach-and-assess-in-the-online-learning-environment-during-covid-19/**
- o **Online Assessment Guide https://digitaled.ie/library/online-assessment-support-guide/**
- o **[iNOTE Learning Pathways](https://digitaled.ie/learning-pathways/)** available at **https://digitaled.ie/learning-pathways/**
- o **Academic Integrity Guide for Students https://digitaled.ie/library/academic-integrity-guide-for-students/**
- o **DigitalEd Teaching and Learning Useful Blog/Articles** shared by GMIT Staff on teaching remotely experiences area available at https://digitaled.ie/blog/
- o **DigitalEd Teaching Resources** covering three categories including assessment, student engagement, and teaching and learning https://digitaled.ie/digitalteachingresources/
- o **The Teaching and Learning Channel** featuring recordings of online event programmes and training sessions can be accessed at https://digitaled.ie/webinars-events/
- o **Digital Tools Resources Directory** https://digitaled.ie/digital-tools/. The digital tools resources directory is a crowdsourced collection of software tools suggested and reviewed by our CUA Digital Champions.
- o **Digital Discovery Tool** https://digitaled.ie/discovery-tool/ (note: licenced to CUA staff only. Other higher education institutes can access the tool through a licensing agreement with JISC UK).
- o BOLT Teaching Remotely Toolkit available to GMIT staff on the GMIT Moodle virtual learning environment. GMIT staff and associates' access at https://learnonline.gmit.ie/
- o Digital Teaching and Learning Development Pathway

In addition, the first GMIT Digital Learning Forum Insight session took place online on June 17th, 2020, where colleagues from Galway, Mayo and Letterfrack campuses showcased 12 strategic teaching and learning digital enhancement projects in development in GMIT since 2019. Over 100 staff participated in this special event coordinated by GMIT Teaching and Learning Office. The live event ran on Microsoft Teams over 3 hours. An insight on the projects showcased is available to access at https://digitaled.ie/wp-content/uploads/2020/10/GMIT-Digital-Learning-Forum-Showcase-Insights-Jun-2020.pdf

3.   Staff Reflection on Training and Supports.

3.1 DigitalEd Development Sessions Feedback.

Over two weeks (from April 27th to May 11th), 31 development sessions ran online with 1,100 registrations. CUA Institute staff who attended the DigitalEd Discovery Series were asked to

provide feedback to inform the planning and organising of future teaching and learning events and to understand more about the experiences of staff who engage in these events by completing a participant feedback survey. Feedback obtained from participants (n=50) forms part of an action research study underway, using a mixed methods approach with the GMIT Teaching and Learning Office. This research study has been approved by the research ethics committee in GMIT. Participants of the DigitalEd Teaching and Learning impact study are provided with an opportunity to consent in taking part in a survey or a focus group planned.

DigitalEd (https://DigitalEd.ie) is a CUA Project called iNOTE and it is supported by the HEA transformation award scheme (2019-2022). Participants from various GMIT Campuses, IT Sligo, LYIT and Non-CUA Affiliations were asked questions about which digital development sessions they attended in April-May (Figure 2) and the benefits they received from attending (Figure 3).

Figure 2: Survey participants who attended DigitalEd workshops

Workshop Type Title	
Learning & Curriculum Design...	18
Digital Open Badges	23
Online Employability Toolkit	6
H5P (Moodle Plug-in)	0
Universal Design for Teaching ...	20
Microsoft Teams	19
Other Microsoft Applications	0
Teaching Enhanced Learning T...	13
Online Learning from an Indus...	14
Visual Pedagogies	18
To Gamify or Not to Gamify	13
Teaching Software Developme...	10
Digital Learning Special Projec...	0
Other	67
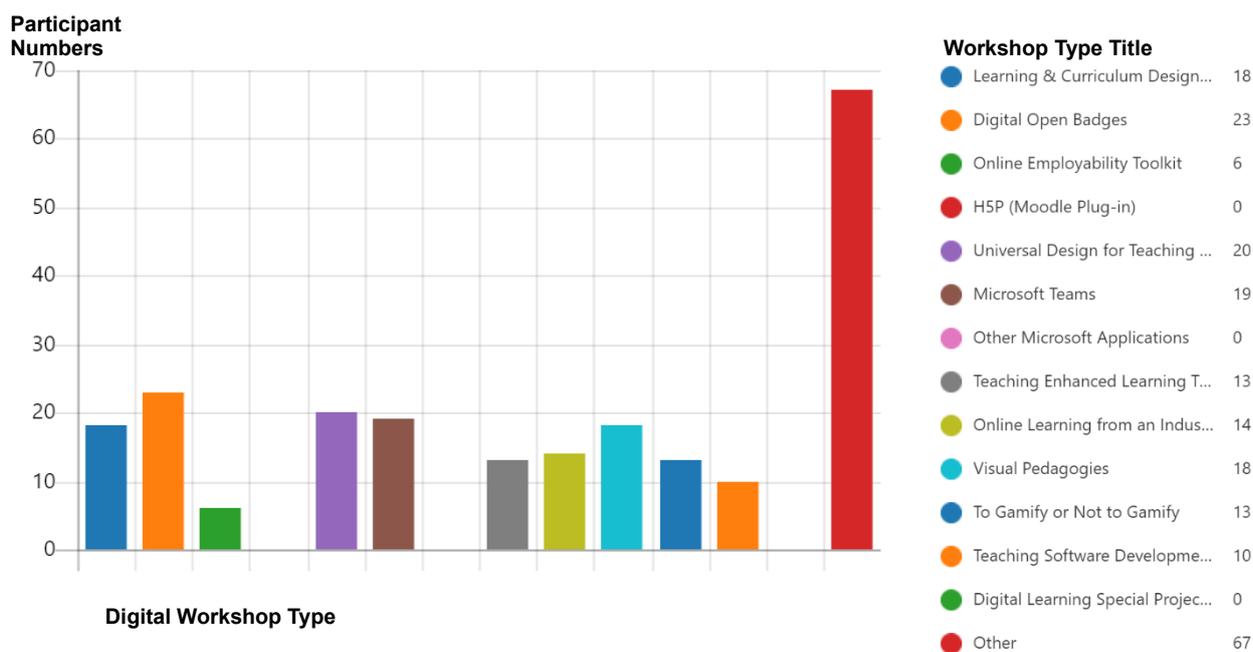
Survey participants were asked to indicate the extent to which the sessions enhanced their knowledge and skills to teach online, use technology more effectively in their job and whether the sessions increased participant confidence to do the same. Figure 3 shows most staff benefited from attending the sessions, as the majority either agreed or strongly agreed that sessions positively enhanced their knowledge and skills and increased their confidence levels

in their ability to teach online or use technology more effectively.

Figure 3: Benefits to attending the DigitalEd development sessions
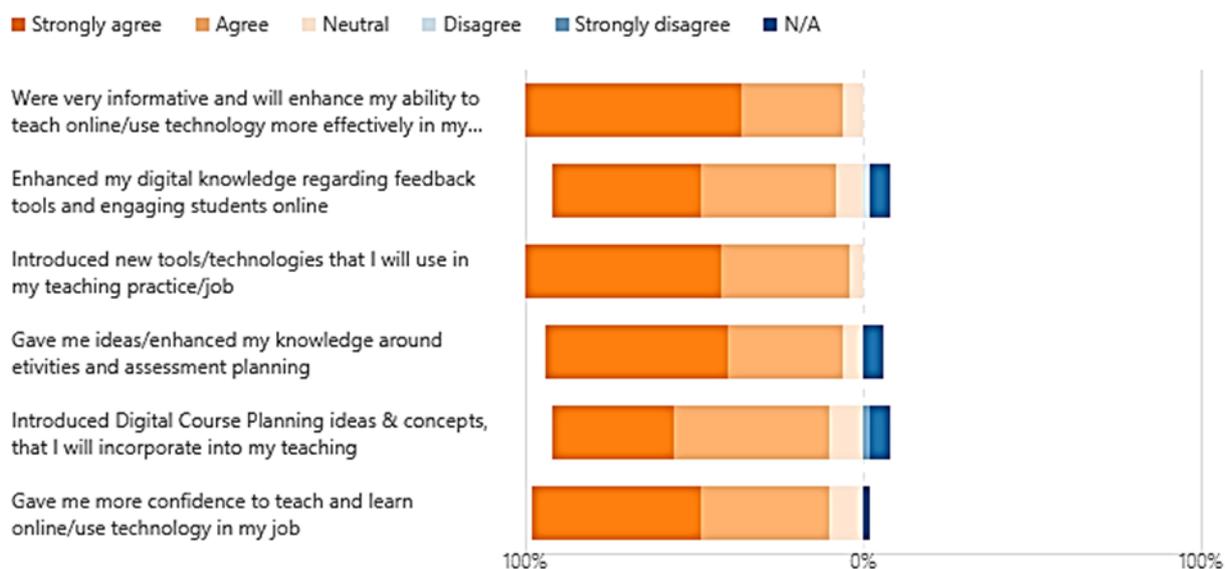
In order to plan for future training sessions, participants were asked to indicate which teaching and learning areas they would like to see repeated or made available. The top areas were: Digital Teaching specifically related to a discipline area (e.g. Software Development, Business, Culinary Arts, etc.), using H5P (a Moodle plug-in to enable interactive teaching and learning experiences), Teaching Enhanced Learning Tools to Support the Online Learner and Curriculum Design for online/blended learning modules.

Survey participants (n=50) were given the opportunity to answer an open-ended question in relation to what they liked or disliked about the webinar series. *Informative, practical, applicable, useful, and accessible were* adjectives to describe the participants' positive experiences. Technical difficulties for presenters and attendees, condensing a large amount of content into a small period of time, and sold out sessions were issues mentioned in some responses. Further comments are presented in Table 1. The commentary is categorised under the common teaching and learning themes, that emerged from the feedback obtained.

Table 1: Feedback commentary and related teaching and learning theme

Teaching and Learning Theme	Commentary
Student Engagement	*"…great variety…atmosphere was very positive and supportive. Some had breakout groups which was great to meet colleagues and discuss…".*
Active Learning Techniques	*"…very well presented and knew the content and how to apply it across disciplines. Also, the opportunity to practise the methods e.g., planning blended learning for modules and spend some time with the technology…Having advice on hand and shared experiences from staff was really useful in getting ideas of how you could apply the methods and technology"*
Peer Learning	*"…highly informative and everyone was very engaged and supportive. I like that nobody felt silly asking the simplest of questions and I hope GMIT continues to host these during 2020/2021 as they are needed"*
Online Learning	*"…remote access was very convenient and excellent. Content was engaging and input from colleagues highlighted the relevance and application of many elements of the technology to teaching. I felt empowered to engage with online learning technologies in the future"*
CPD Level Communications	*"…well-organised, informative and relevant webinars…there may be value in providing an indication of the level at which each webinar is 'pitched' e.g., level 1, beginner, etc. This might prevent those of us who are just about keeping our heads above water in the digital 'ocean', from that sinking feeling".*

3.2 Feedback summary for BOLT/DigitalEd Digital Teaching & Learning sessions (June 2020).

The June programme was informed by feedback obtained from the April-May DigitalEd sessions and capacity and frequency of the more popular sessions was increased. Participants on the June programme titled BOLT/DigitalEd Digital Teaching and Learning training, were once again asked to provide feedback by completing a participant feedback survey, to inform the planning and organising of future teaching and learning events and to understand more about the experiences of staff. Participants from various GMIT Campuses were asked questions about which online clinics they attended (Figure 4), the benefits they received from attending (Figure 5) and recommendations for future sessions. 80 participants provided feedback on the sessions. The findings feed into a wider action research underway with GMIT Teaching and Learning Office.

Figure 4: What sessions did BOLT/DigitalEd survey participants attend?
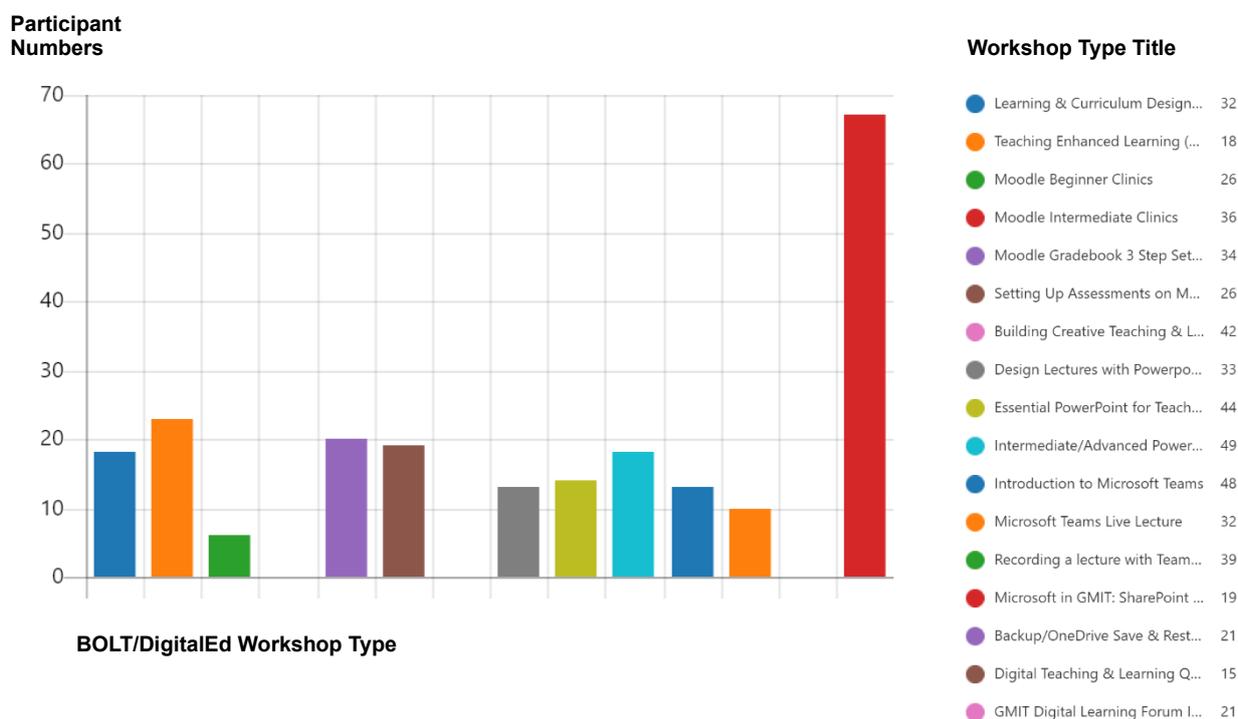
Survey participants (n=84) were asked to indicate the extent to which the BOLT/DigitalEd clinics enhanced their knowledge and skills to teach online, use technology more effectively in their role and whether the online clinics increased participant confidence to do the same. Feedback received indicates, most staff benefited from attending the clinics as the majority either agreed or strongly agreed with these statements.

In order, to plan for future clinics/webinars/workshops, participants were asked to indicate which teaching and learning areas they would like to see repeated or made available. The top areas were: Teaching Enhanced Learning Tools to Support the Online Learner, Recording and Live Streaming a Lecture using Microsoft Teams or similar application, using H5P (a Moodle plug-in to enable interactive teaching and learning experiences) and Digital Teaching & Learning Clinics (ask a panel anything in teaching and learning).

Survey participants were given the opportunity to answer an open-ended question in relation to what they liked or disliked about the online clinics. ***Informative, accessible, relevant* and *practical*** were adjectives to describe the participants' experiences. The need for on-site practicals for beginners and participant questions consuming clinic time were issues mentioned

in responses.   Conflicting feedback was received in relation to reducing the number of participants versus increasing the number participants when presented with sold out sessions. Also, some staff would prefer a full day of training, whereas other staff would prefer multiple sessions offered across a longer period of time to accommodate their schedules.   Further comments are presented in Table 2. The commentary is categorised under the common teaching and learning themes, that emerged from the feedback obtained.

Table 2: Feedback commentary and related teaching and learning theme

Teaching and Learning Theme	Commentary
Student Engagement	*"It was great to get an opportunity to meet other colleagues online and to share their resources and skills. A lot of ideas and tips were also added to the forum and links shared to extra resources was great too. Having the sessions recorded was a positive so the videos are there to go back over…"*
COVID impact on time and teaching practice	*"even though the courses were fantastic, I found it a bit overwhelming with all the information coming at me from all sides every day. I really wanted to complete all the programs as they became available, but it was an impossible task with everything else that was taking place at the same time; student needs, school meeting; Team meeting etc…"*
Peer Learning	*"Very good Teaching and Learning Q&A clinics and saved resources provided for follow-up…one-to-one advice would be most welcome heading into Sept 2020 in adapting what we've learned to our modules and individual practices."*
Supportive Online Learning Community	*"Great to be able to partake of sessions via webinar and to have sessions recorded. Very easy to sign up for sessions, presenters were really good…. created a very good sense of community and goodwill. Even by taking a course that was deemed introductory or basic I learned so much. Leads me to believe there is nothing basic. We all learn something."*
Value of CPD in Teaching and Learning	*"…fantastic to have had the opportunity to uptake so many valuable training sessions. I learned something from each one and really appreciated all the guidance on where to find your level in all this. Also, the obvious sense of community support really felt good! I truly don't know how it was pulled together so quickly…"*

4. Student Reflection on their Remote Learning Experience.

To explore the student learning remotely experience, GMIT teaching and learning team, the student's union and a student engagement platform called OpinionX (see

https://www.opinionx.co/) worked in partnership to launch a discussion platform and voting tool on the OpinionX platform on June 17th, 2020. The discussion campaign aimed to gather feedback on the remote learning approach implemented during the COVID-19 shutdown from March until June 2020. OpinionX is an 'open-survey tool' which means that participants not only submit their written opinion statements but also vote on each other's submissions and see a real-time report of all results throughout. To begin, participants were presented with a short introduction video from the GMIT President and Student Union President with the following list of prompting questions:

- Before we take a break for the summer and start a new academic year in September 2020, we would like to learn about your remote learning experience during COVID-19.

    o **What has worked well?**

    o **What hasn't been working well for you?**

    o **What could we do better? Share your ideas and potential solutions!**

Feedback presented in Figure 5 and 6, represents an extract of summary findings gained from the campaign. The OpinionX initiative will repeat in February 2021, so that GMIT can track how students are engaging with the remote teaching and learning experience.

Figure 5: Learning Remotely GMIT-OpinionX Campaign Engagement

412 Participants   204 Statements   10,948 Votes   26 Votes per User
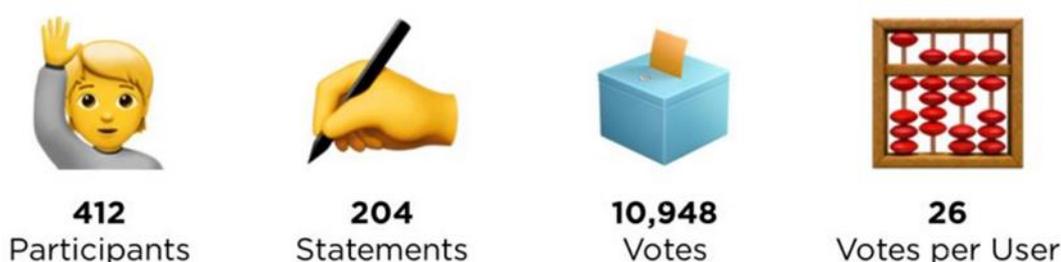
A list of the most topical themes that emerged from the OpinionX campaign is outlined as follows. They appeared as the main theme of each statement, with a number indicating the total number of this theme submitted by student comments.

33 - Online Learning 25 - Working from Home 22 - Lecturers 16 - Practical Subjects 14 - Back to Campus in Sept 2020 14 - Class Resources (e.g., Moodle) 13 - Communication 12 - The "College Experience" 10 - Campus Resources (e.g., Maths Learning Centre) 9 - Fees 8 - Exams

4 - Mental Health 4 - Wi-Fi 12 - Generic / Others

The student feedback from the GMIT-OpinionX campaign (see Table 3) is in line with national studies undertaken by the USI COVID survey report undertaken in June 2020. The USI (2020) study illustrated some of the key challenges that many learners faced during the rapid move to emergency remote teaching. What was learned from this national survey is that, despite the diverse population within third-level education, many students faced common challenges. This report outlines some of the shared experiences of students from April to June in 2020: of connectivity problems and inadequate study spaces, of lost employment and lost motivation. Many students were helped through the period by those around them including family and friends, their peers and their teaching staff, and this narrative came through clearly in the responses received (USI, 2020).

Table 3: Student Experience OpinionX Study, June 2020.

Theme	Student Experience Opinion X Study, June 2020
Working & Studying from Home	- a struggle to build consistent motivation independently. - the difficulty in creating a suitable home working environment
Teaching and Learning	Student suggestions to enhance and support remote online learning included: - online lectures are recorded and uploaded for re-watching. - breaking lectures into shorter sessions that would be more suitable for online learning with less engagement opportunities. - scheduling more discussion-based video calls with lecturers and/or class-mates. - several statements were submitted under the topic of 'practical subjects' and the student view is practical subjects are incompatible with remote learning. - a statement that received strong agreement - 'in light of the speed in which the national emergency happened, I was happy with GMIT's response and help from lecturers. Online recorded lectures and live lectures were helpful'.
College Experience	Engagement with friends, the social aspect of college and other elements of the on-campus college experience came up throughout the discussion. From the loss of interaction and exchange found in lecture halls to the soft skills development, to simply missing friends.
Fees, Finance & Accommodation	Managing finance for fees appeared as a topic several statements.

Resources, Supports & Access	The need for recorded lectures and online resource integration for remote learning to work productively is highlighted.
	- a preference for live streaming of lectures was noted.
	- requests that PowerPoints used in lectures be available for download.
	- use of Moodle, Teams and Outlook to maximise the potential of these resources.
	- group work and peer reviews are welcomed by students.
Return to Campus	Many students advocated for on-campus learning in September (beyond just practical subjects) and recommended:
	- The option to indicate preference for in-person or online lectures
	- Safety measures such as masks, handwashing, sanitizer, staggered timetables, temperature checks
	- Weekly staggering of class groups

5.   Conclusion.

Reflecting on the feedback from educators and students outlined in this article, there are many common experiences shared and this is evident in a number of reports published by the QQI (2020), the National Forum for the Enhancement of Teaching and Learning (2020) and the USI (2020). All of these reports present the challenges involved in the sudden relocation of teaching, learning and assessment away from the traditional campus environment. Overall, the initiatives outlined in this article and the national reports refer to the enormity of what was achieved in higher education, in a short space of time through dedication, collaboration, and innovation in moving teaching, learning and assessment online. Extraordinary goodwill was demonstrated by those who learn, teach, support and lead across the higher education sector and much was learned for the future (National Forum, 2020).

Several of the initiatives presented in this article form part of an action research study underway at GMIT and with CUA partners IT Sligo and LYIT. This cycle of continuous improvement in digital education at GMIT is informed by research and evidence generated from a wide range of stakeholders, and this is critical to our digital transformation journey, which is current today, but it will also be crucial in the post-COVID-19 context, in which the use of blended and online

learning is only expected to increase.

6.   References.

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