**Reflections on channelling innovation through Learning Development Support in business education in a pandemic landscape**

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**Abstract**

The pandemic has undoubtedly challenged higher education (HE) in a multitude of ways but bringing lessons forward from that time can enable HE institutions and their staff to not lose sight of what innovative practices emerged that had a positive influence on student learning. Discussed from the perspective of a Head of Learning Development in a Business College which is now located in what is a new Technological University in Ireland, this reflective narrative discusses supporting staff across the diversity of Business disciplines during the impact of, and response to, the pandemic. The focus of the piece is on supporting staff development through the pandemic with reflections presented from two outlooks: academic staff connections sustained and grown, and the transformational potential of innovative pedagogic practice across business disciplines. The latter is based on academics’ experiences and perceptions of the innovative teaching and alternative assessment practices they applied during a time of what was called ‘emergency remote teaching’. It is important to acknowledge that this work was undertaken during a period when there was no national clarity available on how long the current circumstances would continue, and staff continued to work diligently to keep on top of the fluid situation. Currently this practice-based work is positioned as a reflection rather than a research study and is not presenting data on the process experienced. Instead, extrapolations are based on anecdotal reflections. An interesting future lens that can be applied to this context is autoethnography, where personal experiences can be connected to wider social meanings and understandings in the business education context.

**Keywords:** business education, blended delivery, emergency remote teaching, innovative practice, instructional design, reflection, technologies

**Introduction**

This paper reflects on work that was undertaken from the perspective of a Head of Learning Development (HoLD) support role in a College of Business in Ireland, drawing initial conclusions from the time of pandemic emergency remote teaching. This reflective account of what happened is looking back at the experiences and lessons learnt from supporting staff development through this unprecedented period in 2020. As Grajek highlighted, there was no singular “pandemic playbook” for staff (2020), arguably requiring what was a decade's worth of effort and change being distilled into in an academic year.

The experiences shared were common to many academics during this period and the strategies and methods used to address the challenging situation were adapted from academics doing what they can do best – openly sharing among each other at local, national, and international levels. A study by Shankar et al. (2021) in the Irish HE context explored the experiences and concerns of academic staff (*n*= 167) working in universities in Ireland and their perceptions of their institutions’ early response to the pandemic. Respondents wrote of potential positive changes, particularly in the delivery of teaching, and findings suggest potential avenues for building on successes in coping with the pandemic with some recommendations for mitigating some of the harms. A more recent study by Ekanayake (2023) in an English business school context provides practical advice for enhancing active student learning and tutor engagement in the digital environment given the rapid transition that Higher Education Institutions (HEis) faced in recent years due to the pandemic. Like these studies, this current reflective paper gives some consideration to broader and longer-term lessons that can be applied in the post-pandemic period.

**Context**

Universities and business schools have been facing unprecedented challenges across the world (Financial Times, 2020), and this continues to be the case several years on from the pandemic outbreak. This work describes and explains how a College of Business has been focusing on what was learned from what was called emergency remote teaching and learning, and what needs to be in place in the future to address ongoing challenges of student disengagement, disconnectedness and dissatisfaction.

This is not a local challenge, as a consequence of the pandemic has resulted in student attendance and in-class participation remaining at a far lower level compared with pre-2020, according to a global survey of academics (Williams, 2022). Like many HEIs. the College of Business used the post-pandemic time to plan for consolidating and embedding into practice a range of innovative teaching, learning and assessment (TLA) strategies which emerged from staff trying relevant and new/innovative (for them) practices during the pandemic.

Whilst the educational landscape for many across the globe shifted to a digital setting in 2020-21, since then, academic staff (and their students) have been finding innovative and creative ways of working in a blended approach to teaching and learning, fluctuating ‘between’ what has been suggested by Li et al. (2021) as the porous ‘ecologies’ of physical and digital environments, where universities have had to explore and adopt all potential digital learning opportunities that are able to keep students and teachers engaged in a short period.

From a positive perspective, the pandemic has caused us to reflect on and rethink our work both as teachers and scholars. Thus to record some of the challenges, recognitions, and innovations occasioned by the crisis, this series of exemplars capture the approaches to TLA in the College of Business in that extraordinary time. Similar to other HEIs, the University ensured continuity of student learning through continued remote delivery and the implementation of revised assessment strategies that were supported by ongoing student engagement with the programme team through tutorials, meetings, discussions, sharing of learning resources, formative assessments and continued delivery of practical classes in new formats. This reflective paper also discusses the connections that the HoLD built upon during the contingency times: with Quality Assurance, Deans of College, Heads and Assistant of School, Programme Chairs, College Managers, and all Professional Services. It is important to note that what is presented here needs caveating to the circumstances of the time and place and may not be applicable to all business education contexts.

**Reflecting on pandemic learning development support**

Locating the TLA processes in the College of Business seeks to describe and systematically analyse the Head of Learning Development’s personal experience in order to understand the cultural experience of academics through the pandemic teaching period. These experiences are assembled from a reflective diary kept by the HoLD through the pandemic and also using hindsight. The process required comparing and contrasting personal experience against existing research. Throughout these reflections, an evidence-base is presented based on crystallisation of what the pertinent research has been sharing about innovative practice involving moving rapidly to teaching online.

From the outset of lockdown, regular liaison took place between the HoLD, the College’s senior management team and the university’s Learning Teaching and Technology Centre to identify and plan professional development and training of academic staff to deploy learning technologies rapidly but as productively as possible for delivery of alternative assessments and online teaching. In the first weeks of the move to remote delivery, there was a wide range of advice, information and support for staff new to the technologies and pedagogies involved. Vega (2023) explains that each innovation presents a new challenge, and keeping pace with change can be stressful and overwhelming, particularly for those less familiar with new tech.

Within the College, all programmes now have a baseline of online provision of resource materials/instructional content/activities in varying contexts, with a focus on delivery via the VLE, supplemented with support to students via phone, email and conferencing software. In terms of technological platforms/supports, the following were used to good effect during this period: for supporting student continuity of learning (the virtual learning environment); for dedicated student support sessions (MS Teams, Skype or Zoom); for staff meetings at all levels (MS Teams); and for operating external examination boards (MS Teams). Key learnings for staff were to identify the most useful technology, look for specific business resources, practice what they learn, collaborate with other professionals and keep up to date with the latest trends. All this takes time, so carving out some space in their timetable to hold regular Programme Chair’s Forum where discussion and sharing of new knowledge and insights with Programme Chairs and their teams took place alongside resource provision through a central online TLA repository.

So much was written on support needs that should be put in place to ensure continuity for students who may not have had access to technology or were experiencing connectivity issues. However, student support needed to be extended. Yang (2021) in an Irish HE pandemic teaching context reported lack of live classes, feeling isolated, hard to remain focused, difficulties in virtual teamwork, communication and technical issues as the main ‘pain points’ or inhibitors that students, and this mirrors experiences in our College. We made use of national collation of websites and other online resources for students which pulled together advice so they would feel included and in receipt of university support at this difficult time e.g. Disability Liaison Office, the National Forum of Teaching and Learning (2020) and the Students Union of Ireland. Some of these resources were repurposed advice on online learning or study skills developed under more normal circumstances and repackaged for ease of reference in the crisis. Students were given advice on how to organise online learning into their day, preparing their working area, factoring in time. Students studying under these challenging circumstances will continue to need advice on managing their time and learning rather more independently than they had anticipated, as well as on completing assignments which have had to be adapted to suit the constraints of the situation.

From the first week of campus shutdown, a key area where students needed strong support and prioritized communication, and one where it is known that anxiety can prevail is with student examinations. The findings of a study by Rahiman et al. (2023) with 431 students indicated substantial variations in exam anxiety and coping strategies across various demographic characteristics of the respondents. In Ireland, a national report highlighted that the emergency transition to remote TLA was not a conclusive test of what can be achieved by online approaches, but it may have opened eyes to new possibilities and challenged the necessity of some ingrained practices that may have been considered sacrosanct until COVID-19 struck (Quality and Qualifications Ireland (QQI), 2020).

During the pandemic, a college guide was introduced for online exams, and when in-person teaching and exams were reinstated, a student examinations guide was developed by the HoLD for first-year students who had little/any experience of returning to in-person exams in recent years. Any advice given to students to help them cope with the impacts of the pandemic on their learning and the assessment process has considered both the individual and the situatedness of their learning and is cognizant of the variable socio-cultural contexts in which they have found themselves in lockdown as well as encouragement of resilience (Sarmiento et al., 2021). All communications began and ended with acknowledgement that individual students are learning under unprecedented stress and that we are facing the unique challenges together – emails, video conference and phone calls are empathetic, accommodating and reassuring in tone and content. Staff in the College continued to keep up a dialogue and treat students as partners, with the purpose of making students still feel part of the university community, even though they were geographically distant at that time. Key learnings for running online examinations and assessment included:

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| **Liaise with Professional Services*** Staff from the Examinations Offices needed to be fully technically enabled to support Schools (with appropriate hardware, software and VPN access).
* There was a need for protocol for marks being entered into the Electronic Grade Book System, enabling student online viewing of scripts, rechecks, remarks, appeals (where buildings remain closed to students and staff).
* I.T. support needed for software licensing extensions and ensuring all students had access to laptops.
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| **Student Supports - Exams*** Additional student time was needed and granted for downloading and printed case studies and questions and also to upload finished documents.
* A Declaration of Academic Integrity/code of conduct and ‘contract’ with students was vital to preserve the collective sense of fair play and equity.
* Detailed guidelines for all exams were critical (typically max of two pages).
* FAQs & advice and wide-ranging suggestions in advance for sitting exams at home proved useful.
* Full testing of students’ ability to download/upload a test document & stress-test system was a pre-requisite.
* Consideration of students registered with the Disability Service was important. While extra time was facilitated, it would not be possible to facilitate a scribe or reader if they had been required.
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| **QA** Fast tracked QA procedures to change the structure of the programmes – essentially most modules with a practical component would need to be either moved to a subsequent semester or changed to long ‘skinny’ modules – restructuring of programmes carried out on a programme-by-programme basis. Support for appropriate student input into this process. |
| **Staff Implications**Availability of staff throughout the exam and in particular, at the upload time was necessary (two staff members were on standby for the duration of every exam). |

Finally, just to note that staff welfare is important here too as they found themselves in a position where they were coping with disruption to their planned teaching modes. A study by Dougall et al., (2021) with 1,182 staff employed across 92 UK universities, reported that one in two university staff reported experiencing chronic emotional exhaustion (55%), worry (53%), and stress (51%) during the academic year 2020/21. They highlighted that action is needed to prevent a further deterioration in staff mental health and wellbeing. In our College, the online Staff Professional Development (PD) and ‘well-being’ webinars and supports will remain a key resource going forward.

**Reflections on future capacity to deliver blended teaching and assessments**

Staff have been reflecting on what has worked well during this time, and identified areas that need further support. As a result, the following (highlighted in Figure 1) need to be considered as we move out of the pandemic, and from fully online to blended delivery.

**Figure 1. Priority areas for blended delivery**

An alternative approach to timetabling is required for blended delivery. This requires a staff workload model and recognition of the challenge in developing online materials. There should be a significant emphasis on the first-year experience as it may continue to be impacted. Students without access to appropriate learning spaces and/or equipment for learning can be excluded from engagement in their programme, and success factors for online student engagement as reported in a study in the Irish HE context (Farrell and Brunton, 2020) include psychosocial factors such as peer community, an engaging online teacher, and confidence and by structural factors such as lifeload and course design.

Pedagogy professional development (PD) and technology training for staff and students remains a priority. Professional development activities that focus on pedagogical and curriculum knowledge and that involve collaborating with other educators seem particularly well suited to enhancing their practices. While effort has been made to include a range of approaches to delivering online materials to students [discussion-based and presentation activities, instructional content and resources including self-directed activities], going forward, the differences between emergency distance learning, fully online and blended learning needs to be a focal point of training and PD for staff. All do not currently have the skills or confidence to effectively design and deliver content to deliver their programmes online or maximise a blended approach. It is known to be stressful to begin teaching online when a staff member has limited experience (Lederman, 2020). Without adequate and timely PD for all staff, it has been identified that there will be issues in terms of:

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| **Business Tools and Technologies*** getting used to digital learning technologies for the business disciplines, including Cengage for Accounting & Finance programmes and simulations for Strategy & Leadership.
* awareness of how to engage with different types of tools to support meeting learning outcomes (e.g. Marketing and Management programmes using video presentations with students); embracing opportunities to take this further, by using visualisation and storytelling techniques to maximise inclusivity, engagement and student success when teaching complex business topics.
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| **Technologies enhancing Student Engagement*** loss of face-to-face contact (need for online socialisation and connectedness; awareness of the online social dynamics of getting learners to connect with one another and think in networks rather than uncritically consume provided content (Siemens, 2020)).
* video Q&As cover material quickly and may aid retention.
* advanced analytics can help students spot weaknesses in their skillset more quickly and steering them straight to the material in the VLE they need most.
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In all of this development, there is not a need to focus on recreating resources - rather staff need to be directed to the large number of OERs that they can access, which are freely available online, and in the Irish HE context, the Enhancing Digital Teaching and Learning (EDTL) approach (2020) provided very helpful resources for the sector. The College was proactive in setting up two comprehensive and bespoke TLA resource repositories - one for staff and one for students - with best practice being shared institutionally, nationally and internationally in designing engaging learning experiences for students in an online/blended environment, and practical strategies for students for getting the most from their programmes.

## Keeping up a dialogue and collaborating with students as partners (not passive recipients) is important, both for developing high quality targeted guidance but also for making students still feel that they belong to the university community. Bryson’s (2016) recommendation here is helpful for codetermination – deliver the student agenda through empowerment and strong student voice. As such, it continues to be important to ask students for feedback on the online teaching they are experiencing, as we know it is vital for staff to get feedback from students often to be in a stronger position to continue to adapt and iterate.

**Future ‘Bigger’ Design Considerations**

As we move out of the pandemic, bigger design areas need consideration by the College, shown in Figure 2.

**Figure 2. Business Disciplines Design Considerations Post-Pandemic**

Holistic collaborative support with Professional Services and pedagogic inputs/resources on instructional design/redesign is key - IT, Learning and Administrative Supports need to be re-thought and substantially invested in for continued online/blended delivery of programmes. Turnbull et al. (2021) asked the important question - how have HEIs responded to the challenge of transitioning to eLearning during the pandemic? Their findings emphasised the importance of providing eLearning training support for faculty and students, fostering online learning communities, and expanding traditional face-to-face course delivery to incorporate more elements of blended learning.

Instructional Design expertise needs to be available to staff, along with funding for the purchase of high-quality online Business materials where required. Staff PD/training also needs to involve the appropriate underpinning learning theory for designing online courses and the interactions on business content that staff are hoping to foster with students. This is key for staff to be able to fasten their innovative ideas and their practices. There is also a need for the design of short, concise topics presented with an intent, as well as flexible opportunities for students to learn on-demand.

A suitable conceptual approach is the Community of Inquiry model where instructor, cognitive and social presence is emphasized(**Flock, 2020).**  An extension of the Community of Inquiry theoretical framework (El-Sayad, 2023) can be utilized in blended learning contexts like ours to engage in purposeful critical discourse and reflection to construct personal meaning and confirm mutual understanding.

Additionally, in the Business Education context, industry partnerships are a priority. All our Schools have partnerships with industry who are involved in the delivery of programmes. The College has continued to work with its wide range of partners in programme delivery - student work placements or internships, guest lecturers, postgraduate seminar series, live company projects, careers seminars, and sponsorship of student prizes. In addition, within the business disciplines, students continued participating in professional team case competitions online locally and abroad, offering a forum to build skills, persistence and networks, with leadership, organisational and language skills among the benefits to team members.

Deepwell and O’Sullivan (2021) report key aims over the past year has been to change the perception of learning technology from what a crisis response required to a more positive and nuanced experience. It is important to understand how our students are responding to all the challenges and changes in teaching and assessment to better inform decision-making going forward. Therefore understanding the short-run impacts on mental and physical health is a key priority, as is appreciating how the impacts of the restrictions are being experienced across different cohorts of students. There is also a need for care and self-compassion involved in making this transition for senior management, academic staff and support staff themselves. In exploring the impact of the pandemic on faculty self-care, burnout and satisfaction with compassion, Velez‐Cruz and Holstun (2022) report that staff who practice self‐care allows them to provide positive experiences for their students, and it also helps staff find gratitude and meaning in their work.

For continuity of student learning in post-pandemic times, staff need more focused training on thoughtful blended learning and teaching which represents best practice rather than doing the best they can. This is the beginning of a process of evolution and revision of programmes and modules for blended delivery and the focus for staff is creating not information or resources, but community and connection with student cohorts. This will be important on all programmes, but especially important to the delivery of those where cross-disciplinary engagement is central. Writing from the Business Management discipline, Dann (2022) argues that now is the chance to also question the face-to-face delivery mode and embrace the modal shift back to on-campus teaching with intentionality. Ultimately, where digital learning has replaced face-to-face, this is part of a blended approach that takes the best of face-to-face and combines it with new digital advances - often learning from the pandemic experience but based on good pedagogy, staff expertise and student feedback. In our own student evaluations as part of the QA process, although it is true that many students reported valuing face-to-face teaching, it is not the case that they necessarily see digital learning as inferior. The feedback is much richer and more nuanced than this, depending on which context it is from (UG, PG, or Executive Education), with growing numbers of working students valuing the convenience of digital learning. According to Jarvis (2022), digital delivery will also help develop the digital skills that business employers value but say that they struggle to recruit.

Recommendations for blending programme provision for the future involvesupporting all students achieving success in these continuing challenging times. Staff need support to create and provide a culture of online care and support students in planning for the process of beginning to return to the face-to-face classroom, which is already underway. Staff will continue to consider the benefits of face-to-face and of online learning, and work to maximise both. Learning in-person can help build a sense of community and students have increased access to the instructor and each other. There is a need to capitalise on all the learning from the rapid move to digital to ensure that innovative blended learning methods in the wider context of digital transformation are considered with what is best in face-to-face delivery for module, programme, and institution levels.

**Conclusion**

Reflecting on the learning support implications of the pivot to online delivery, staff had to make speedy yet informed decisions on alternative assessments and the provision of delivery based on remaining learning outcomes by reproducing what happens on campus. This took place mainly through synchronous conferencing, virtual classrooms and using existing resources. Taken together, the literature and the staff experience highlight the need for continued collegiate support, and crucially that the supply chain of resourcing and communications need to be in place in a timely manner in order that alternative assessments and the varied, quality digital delivery of instruction is suitably supported.

A full evaluation of the teaching, learning and assessment continuity and its impact on the quality of provision for student learning is planned. The use of this data can inform how delivery will continue into the uncertain years ahead. The question now is how blended TLA can built on the lessons learnt during the pandemic. Guidance for navigating “this new normal” will continue to be important for resilient educational institutions.

We need to create opportunities for educators to undertake and review low-stakes change, and need to provide multiple entry points to innovation so that we are not always relying on those staff who are already well practised. In terms of supporting innovation as we continue to navigate through post-pandemic times, key questions that can be investigated – how to ensure ‘ways in’ for novice innovators and how to support all staff to reflect on recent change and current ways of innovating their teaching and assessment practices.

Future work in the learning development space can explore how such business education innovation is both a pedagogic and organisational challenge. We need to be more fully aware that here has been a substantial cultural shift among students since the pandemic that we need to be aware of and respond to. While the tradition of attending lectures may have changed, a way forward can be to build on the staff lessons from pandemic teaching and remain flexible and experimental in their delivery. This can increase students’ sense of belonging on their programme and in their School. While flexibility is important, it needs to be balanced against designing experiences of being in class, which should be made superior to watching a lecture recording, with more of a focus on engagement and participation. An interesting approach would be to conduct an autoethnographical study building on these professional learning support reflections to describe and critique cultural beliefs, practices, and experiences of staff.

**Disclosure Statement**

The author declares there is no conflict of interest exists in this paper. All materials included in this study represent the authors own work and anything cited or paraphrased within the text is included in the reference list. This work has not been previously published nor is it is being considered for publication elsewhere.

# References

Bryson, C. (2016) ‘Engagement through partnership: students as partners in learning and teaching in higher education’. *International Journal for Academic Development*, 21(1), pp.84-86.

Dann, S. (2022) *In-person teaching now needs to be justified.* Available at: https://www.timeshighereducation.com/campus/inperson-teaching-now-needs-be-justified?utm\_source=newsletter&utm\_medium=email&utm\_campaign=editorial-daily&mc\_cid=a51e4e0b9a&mc\_eid=378667dfa9 (Accessed: 01 June 2022).

# Deepwell, M., and O’Sullivan, H. (2021) *What were learning technologists’ experiences of 2020?* Available at: https://wonkhe.com/blogs/what-were-learning-technologists-experiences-of-2020/ (Accessed: 10 June 2022).

Dougall, I., Weick, M., and Vasiljevic, M. (2021) *Inside UK Universities: Staff mental health and wellbeing during the coronavirus pandemic*. Project Report. Durham University.

EDTL Approach (2020) *Enhancing Digital Teaching and Learning in Irish Universities*. Available at: <https://edtl.blog/the-edtl-approach-2020/> (Accessed: 10 June 2022).

Ekanayake, N. (2023) ‘Effective approaches to teaching and learning in business distance education’.*Innovative Practice in Higher Education*, 5(1).

El-Sayad, G. (2023) ‘Can learning presence be the fourth community of inquiry presence? Examining the extended community of inquiry framework in blended learning using confirmatory factor analysis’. *Education Information Technology*, 28, pp.7291-7316. doi: <https://doi.org/10.1007/s10639-022-11480-z>

Farrell, O., and Brunton, J. (2020) ‘A balancing act: a window into online student engagement experiences’. *International Journal Educational Technology Higher Education,* 17, 25. doi: <https://doi.org/10.1186/s41239-020-00199-x>

# Financial Times (2020) *Remote teaching becomes vital during coronavirus outbreak*. Available at: https://www.ft.com/content/bae2a4b2-5fa1-11ea-b0ab-339c2307bcd4 (Accessed: 14 June 2022).

**Flock, H. (2020) ‘Designing a Community of Inquiry in online courses’.**The International Review of Research in Open and Distributed Learning, 21**(1), pp. 134-152.**

# Grajek, S. (2020) *Top IT Issues, 2021: Emerging from the Pandemic. Educause*. Available at: https://er.educause.edu/articles/2020/11/top-it-issues-2021-emerging-from-the-pandemic (Accessed: 01 June 2022).

# **Jarvis, A. (2022)** *Universities must make a savvy political case for online learning.* Available at: https://www.timeshighereducation.com/blog/universities-must-make-savvy-political-case-online-learning?utm\_source=newsletter&utm\_medium=email&utm\_campaign=editorial-daily&mc\_cid=f09ba28e4b&mc\_eid=378667dfa9 (Accessed: 20 June 2022).

# **Lederman, D. (2020)** *Will Shift to Remote Teaching Be Boon or Bane for Online Learning?* Available at: https://www.insidehighered.com/digital-learning/article/2020/03/18/most-teaching-going-remote-will-help-or-hurt-online-learning (Accessed: 02 July 2022).

National Forum. (2020) *10 points to consider in choosing Alternate Assessment Methods for the Online Environment.* Available at: https://www.teachingandlearning.ie/publication/10-points-to-consider-in-choosing-alternative-assessment-methods-for-the-online-environment/ (Accessed: 09 July 2022).

Quality and Qualifications Ireland (2020) *The Impact of COVID-19 Modifications to Teaching, Learning and Assessment in Irish Further Education and Training and Higher Education.* Available at: <https://www.qqi.ie/sites/default/files/2022-04/the-impact-of-covid-19-modifications-to-teaching-learning-and-assessment-in-irish-further-education-and-training-and-higher-education.pdf> (Accessed: 10 July 2022).

Rahiman, H.U., Panakaje, N., Kulal, A., and Parvin, S.M.R. (2023) ‘Perceived academic stress during a pandemic: Mediating role of coping strategies’. *Heliyon*, 9(6).

Sarmiento, Á.S., Sanz Ponce, R., and Bertolín, A.G. (2021) ‘Resilience and COVID-19. An Analysis in University Students during Confinement’. *Educational Science,* 11, 533.

Shankar, K., Phelan, D., Suri, V.R., Watermeyer, R., Knight, C., and Crick, T. (2021) ‘The COVID-19 crisis is not the core problem: experiences, challenges, and concerns of Irish academia during the pandemic’. *Irish Educational Studies,*40(2), pp.169-175, doi: [10.1080/03323315.2021.1932550](https://doi.org/10.1080/03323315.2021.1932550)

# Siemens, G. (2020) *When to Teach Online Classes Live and When to Let Students Learn on Demand.* Available at: https://www.edsurge.com/news/2020-04-08-when-to-teach-online-classes-live-and-when-to-let-students-learn-on-demand (Accessed: 09 July 2022).

Turnbull, D., Chugh, R., and Luck, J. (2021) ‘Transitioning to E-Learning during the COVID-19 pandemic: How have Higher Education Institutions responded to the challenge?’. *Educational Information Technology*, 26, pp. 6401-6419. doi: <https://doi.org/10.1007/s10639-021-10633-w>

# Vega, A. (2023) *A beginner’s guide to implementing new technologies in your classes.* Available at: <https://www.timeshighereducation.com/campus/beginners-guide-implementing-new-technologies-your-classes?utm_source=newsletter&utm_medium=email&utm_campaign=editorial-daily&spMailingID=26051079&spUserID=MTAxNzcwNzE2NjAwMgS2&spJobID=2250367808&spReportId=MjI1MDM> (Accessed: 05 June 2022).

# Velez‐Cruz, R.J., and Holstun, V.P. (2022) ‘Pandemic impact on higher education faculty self‐care, burnout, and compassion satisfaction’. *The Journal of Humanistic Counselling*, 61(2), pp. 118-127.

Yang, L.H. (2021) ‘Online Learning Experiences of Irish University Students during the Covid-19 Pandemic’. *AISHE-J,* 13(1), pp. 1-22.