Blended Learning @ ENU

Case studies context: Constructing blended learning

Cross-disciplinary perspectives

Edinburgh Napier UNIVERSITY

Department of Learning & Teaching Enhancement

Contents

The evolving shape of Blended Learning.

DLTE's Blended Learning Taxonomy defines Blended Learning as occurring where there are both on-campus and online aspects to teaching and learning activities. As we have moved from predominantly online delivery and engagement back to physical campus learning spaces, DLTE has collated a series of new case studies to explore how ENU colleagues have adapted their practice to preserve some of the benefits of flexibility, autonomy and virtual dialogue that were so valued during the necessary move to emergency remote teaching to a blended approach.

This contextual overview is a compilation of cross-disciplinary perspectives collected in an online survey in Jan/ Feb 2023 (n =9) which highlight practitioner reflections and offer insight into types of tools and approaches they used. It considers perceived impact on the student experience with regard to engagement, academic preparedness and attendance, and summarises approaches and tools used.

The 6 case studies themselves offer a further breadth of practice insights, particular to a range of subject areas and design approaches. Descriptions and links are provided at the end of this contextual overview.

Range of tools.

Perhaps unsurprisingly, colleagues noted prevalent use of university systems and tools such as Moodle and Teams in their teaching delivery. Panopto was described as being widely used for sharing content and tools such as MS Forms, Moodle MCQs and Google quizzes (using Google Forms) to engage students interactively. For collaboration, discord, C30 (Leadership & Management toolkit) and Google Jamboard were all highlighted.

Approaches – the blend in balance.

Colleagues reflected on the design of their blend activities, often discussing the power of a flipped approach to encourage learner autonomy and self-direction, and to facilitate a more constructive and critical use of synchronous time.

The bended approaches discussed presented scope to support multiple modes of learner engagement, both synchronously and asynchronously:

"Remote lecture delivery with teleconferencing, lab support both on campus and (at the same time) online in a forum for any people joining remotely".

Colleagues also noted the advantages of delivery of resources in advance and on-demand, allowing repeated access to teaching materials through recordings:

"The lecture is pre-recorded, while the tutorial and the practical are in person. It's important for students to have the option to watch the lecture whenever they want. It contains technical information that sometimes needs repetition".

"Teaching materials posted on Moodle 3 days before the class in order to help students to familiarise themselves with the topics".

There were also felt to be practical benefits to an embedded approach that foregrounds flexibility, or being able to choose between alternative, interoperable solutions:

"Hybrid lecture on campus and simultaneously broadcast via Teams - used for the second year modules when timetabling couldn't get a lecture theatre big enough".

"... we often have international students that come very late into the trimester because of visa issues and having available some pre-recorded material helps them significantly".

"Teams for live online tutorials and for asynchronous support/discussions - used for all modules because the discussion forum in Moodle is hard to access especially on mobile device - harder to share files".

"It's easier to have recordings just in Teams rather than having to upload them somewhere manually."

Assessment methods also featured in colleagues' description of their considered use of blended approaches:

"I use Project-Based Blended Learning. Students use both f2f and virtual sessions, but instead of standard coursework, we focus all content helping them design, iterate, and publish a unique project. Some are group based while others are individual. This is to allow students to discover and capitalise on their own strengths, while not being overwhelmed with [often surprise] barriers. I use a variety of digital and online tools so students can access the content they need in ways that personally work best for each of them".

"Weekly quizzes constituting the both formative and summative assessment, allowing access to lecture notes and other materials".

A recognition that we are at yet another transitional point in adapting practice provided insight into the importance of embracing and leveraging all that has been achieved and learned throughout emergency remote teaching:

"In autumn 2022 I ran the module with alternating online and in-person lecture sessions. My main motivation for doing so was to try and find ways to bring some of the benefits of online teaching into a primarily in-person module. We had all spent two years teaching online, and all of the collective learning was seemingly being forgotten and lost by switching wholesale back to in-person classes. It just seemed such a waste to let it all go!"

Impact.

Colleagues' reflections on the impact of their blended activities ranged from positive perceptions of engagement and achievement, through mixed perceptions of effectiveness to a suggested negative effect on attendance. This was framed as partially practical and potentially as one of multiple influencing factors (such as the transitional period back to on-campus learning):

" It was difficult to communicate the arrangements to the students at times. We were timetabled to have the online and in-person lectures on different days of the week. The funeral of Queen Elizabeth disrupted the first online class, as I recall. Overall, the logistics were a barrier to being able to develop something more creative and rewarding. Attendance dropped away both online and in-person, more so for the former. (All lectures were recorded and made available to the students for later viewing.)"

"Less attendance at lectures of 2nd year students, but impossible to tell if that was because of recording or just lack of engagement".

"In terms of impact, attendance was lower, that's the only sure thing".

The advance availability of online materials has long been a discussion point in terms of learner attendance. What *has* changed throughout and onwards from the pandemic, however, are layered expectations of students as flexible[1], independent learners that have not been fully rationalised by either institutions or students themselves. This is surely a key area for discussion that will continue to inform our approach to blended learning.

More positive perceptions focussed on depth of engagement and the persistence of values that emerged during COVID:

"Some students reported enjoying the online elements of the module because of the flexibility it gave them – essentially the same arguments and perspectives that were made during the COVID period".

"Learning and marks increased compared to the previous year".

[1] Houlden, S. and Veletsianos, G. (2019). A posthumanist critique of flexible online learning and its "anytime anyplace" claims. *British Journal of Educational Technology. 50* (3), pp. 1005 – 1018. https://doi.org/10.1111/bjet.12779

"Students who worked in this way were understanding the content taught in the class (in person) much better"

"It helped the students maintain a good contact with the delivered material".

Practitioner insights.

Colleagues also remarked on a number of aspects of their adapted practice and the impact of ongoing change on expectations of both staff and students.

"Blended learning is essential for the future, and integration of remote technologies might lead to improvement of online-only (or blended) courses/programmes".

"We have to adapt and improve the way we teach the students in the current blended landscape. Any issues that we've had with online delivery should not be used as an excuse to go back (that can't happen) but as a learning experience to move forward".

"We will be keeping Teams to offer added value for on campus delivery, and for distance learning".

"The blended approach that we had at ENU in 21-22 with only tutorials being delivered live is the ideal format for me. In this way, students can access the lecture whenever they want and also have some in-person contact with the tutor and their classmates".

"The blended part should be a very important tool to make students prepare for the classes and revise in a timely and continuous manner. The question is how much in this case the required benchmark of satisfaction matters comparing with passing rate and acquired knowledge".

"Engaging with lesson content ahead of a class/lecture is to be recommended. More questions can be asked effectively by the students (in person)".

Student feedback.

A mixed picture also emerged when considering student feedback on the effectiveness of blended approaches. Whilst some felt student satisfaction improved, others, again, experienced difficulties of the uncertain transitional post-COVID landscape and the effect this had on student expectations:

"Some aspects of the module were less well received: the online/on-campus mix doesn't seem to have been widely enjoyed. For some the alternating between lecture days was also difficult to work around".

"The use of a forum in addition to Moodle annoyed some students as the information communicated was not 1:1, so students complained that more information was shared from teachers in one medium compared to another. So, this extra channel proved bad because it just divided students".

Practitioners reflected on an iterative approach to developing future practice:

"I will also take time to review the Moodle resources: they tend to build up from one delivery to the next, but a more purposeful streamlining could be beneficial for some topics".

"Assessments were highlighted here, with some wishing for more guidance on what was expected. Additional online tools were requested by one person, to complement the online lectures".

Students were cited as appreciating staff efforts to embed and retain opportunities to exercise choice, embrace flexibility and deepen opportunities for engagement:

"Module feedback improved. Students really appreciated knowing that help was available if they needed it. The distance learners have said they really enjoyed being able to join lectures live from time to time".

"The majority of students were very happy that the lectures were available online and they could watch them whenever they wanted. Then, they could bring any questions to the in-person sessions".

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Case study 1: The porous classroom

(John Morrison, Digital Imaging)

Level: 7

Class size: 35

Tools: Miro, Socrative, Panopto, Webex

Campus space: Lectures online, practical in lab

Themes: gamified formative feedback challenges, flipped learning, peer instruction, speculative design, wellbeing economy

Scenario

Explore colleagues' experiences of blended learning design and practice.

Impact

Review the impact of disparate blended learning approaches and tools on the student experience.

Key takeaways

Consider potential for application to adapting your own blended learning approaches.

Scenario.

A multimodal approach to delivering content for a Digital Imaging module led to a rich, collaborative blended learning experience for students. John Morrison, Lecturer in SCEBE, used multiple tools, including the Miro visual collaboration platform, to encourage students to take ownership of discursive online learning activities to complement in-person practical sessions. John's design meant that students in a partner Finnish institution (LAB University of Applied Sciences) were also able to participate in online sessions as part of a virtual Erasmus programme. Additionally, in delivering online lectures, live broadcasts and pre-recording instructional aspects of practical, in-person sessions, John was able to extend opportunities for participation to a range of care-experienced young people and to the Ragged University[2]; thereby encouraging exploratory learning in a porous classroom whose boundaries extended far beyond the ENU campuses and student body.

[2] The Ragged University: https://raggeduniversity.co.uk/

John's approach draws on principles of the flipped classroom: using peer instruction in class to facilitate knowledge transfer outside class. Panopto was used to deliver module materials and Socrative for students to respond to questions during class. While in Webex breakout rooms, students worked on Miro boards in small groups, discursively reflecting on aspects of learning such as differing shutter speeds or camera settings. This small group format gave students space to progress project work as well as actively participating in dialogue during online sessions.

Impact.

There were several perceived benefits for students in this example of creative use of blended learning:

- Primarily, in terms of engagement, the flipped classroom approach encouraged a level of autonomy and increased depth of engagement due to the requirement for students to actively reflect before contributing to discussions or collaborative activities.
- Positioning students as producers in this context added an aspect of creative agency to the learning experience. The blended approach offered students flexibility in terms of the need to travel to be in the same physical space. This also allowed for the extension of the learning community beyond the university.
- Students with diverse learning preferences were able to benefit from the option to participate virtually *and* in person, depending on potentially differing capacity to engage at different times.

Practitioner insights.

On being well with uncertainty in transitional spaces: *"Agency and the space of uncertainty are quite reciprocal…**if you're in a space of uncertainty then it could reduce your agency**. (But) you could argue that the other way around…**by having more agency you could be more well with the uncertainty** and the environment that is outside of your control".*

On active experimentation: *"…you find a way to appropriate a technology, you **discover different affordances** for that technology in a way that was beyond how it was intended to be used. But **through play and exploration and collaboration**, you kind of create new ways of knowing and understanding and connecting".*

On students as producers: *"(In an example) activity where (students) are creating an understanding…we used principles of student as producer where **they looked at the assessment and then they offered suggestions** and changes to it for anything that they might not have understood, so it was kind of embracing **a social constructivist philosophy** throughout the process".*

Key takeaways.

Considerations for your own practice

Distinctive aspects of the approach used in this case study relate to involving students in multiple ways of discursive, highly visual inquiry-based learning as well as the extension of the classroom–based learning community.

- Whilst Digital Imaging as a subject clearly lends itself to the use of a breadth of interactive design and visualisation software, the principles of visual collaboration and dialogue can apply to any discipline area. You could consider using demonstration of key visual concepts or practices, using infographics or giving students access to a virtual whiteboard to capture shared ideas.
- Both formal and informal learning contexts are becoming ever more complex and mutable, as is the identity of what we might typically understand as a learner. Peer learning with organisations or groups outside the classroom might offer students a differing (commercial, civic, legal, etc) perspective on their subject and extend scope for applied learning.

Further links:

Extend and Empower – the Flipped Classroom: https://prezi.com/glgr1u735rgw/extend-and-empower-the-flipped-classroom/

Johnston, B., McNeil, S and Smyth, K. (2019). *Conceptualising the Digital University: The Intersection of Policy, Pedagogy and Practice*. Palgrave Macmillan, Cham., https://doi.org/10.1007/978-3-319-99160-3

Preece, J. (2017). *The Porous University in Action. In: University Community Engagement and Lifelong Learning*. Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-319-56163-9_7

Miro: https://miro.com/blog/

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Case study 2: Offering choice, improving engagement

(Dr Peter Chapman, Software Engineering)

Level: 10

Class size: 67

Tools: Teams, Webex

Campus space: Lecture theatre, computer lab

Themes: Alternative engagement modes, virtual office hours, peer learning

Scenario

Explore colleagues' experiences of blended learning design and practice.

Impact

Review the impact of disparate blended learning approaches and tools on the student experience.

Key takeaways

Consider potential for application to adapting your own blended learning approaches.

Scenario.

In responding to student demand for continued flexible modes of learning, Dr Peter Chapman, Associate Professor in SCEBE, adapted a blended delivery model for a Software Engineering/ Computer Science module to offer an element of choice in student participation. In particular, Peter's approach took account of established peer and social groups amongst 4th year students, whose learning confidence was strong as they neared completion of their programme, but whose motivation to be on campus was limited. Having experienced conventional face-to-face teaching in earlier years, emergency remote learning and now adapting to return to on-campus teaching, the 4th year students seemed appreciative of, and accustomed to, the ability to exert agency in how and where they learn.

The model that Peter developed offered students the opportunity to attend a post-lecture tutorial either face-to-face or online. In addition to easing pressure on physical spaces on campus, the approach improved uptake of practical sessions and encouraged students to attend, having first completed the allocated task and formed specific questions. The online tutorial space became a virtual office hour, with students coming with questions related to a task they would previously have attended a lab session to complete.

An interesting outcome of the approach was the peer learning that occurred. In the chat function of Webex, students were able to see questions asked by other students and the replies that they received. An identified strength of using Teams over Webex was their persistence; that chat contributions are preserved in Teams and can be accessed retrospectively as a record of some of the discussion.

Impact.

Offering students choice over their attendance and input impacted on their participation in a number of ways:

- Continued flexibility for those students with work, caring responsibilities or logistical difficulties attending timetabled classes.
- Students could develop their academic confidence to ask questions in a public (virtual) space, and to prepare sufficiently to be able to do so.

Practitioner insights.

On student confidence: *"I think probably the **online stuff has just freed the shackles**. Whatever reservations a student has had about just wandering up and asking questions any time they saw you…"*

On having peer-learning captured on-the-fly: *"**I encouraged them to ask (questions) in the Teams channel, so that everyone else would see the same question**. If you're getting several questions that are very similar, it's much easier to answer at once and have like a discussion on that question rather than have 5 separate discussions. **One discussion with five people rather than five discussions with one person**".*

On student preparedness: *"They were treating it more like it was intended. This virtual office hour. **They were working on things and coming along**".*

Key takeaways.

Considerations for your own practice

The strengths of this case study relate to the opportunity to provide flexibility and choice for students as well as offering scope to learn from and with one another.

- There are clear timetabling, accommodation and equity of experience issues in providing face-to-face or virtual options for student participation/ attendance.
- As a core institutional system, Teams has become an essential part of our communications ecosystem. Facets such as the transcription tool or an archive of chat in a session can be useful learning resources for students as a continued part of class discussion.

Further links:

Creating a Peer Learning Culture with Microsoft Teams (MS Teams) and the Community of Inquiry (CoI) Framework

https://blog.nus.edu.sg/teachingconnections/2020/04/07/peer-learning-culture-ms-teams-coi/

Jisc (2022) Learner digital experience insights survey 2021/22: UK further education (FE) survey findings (published September 2022), https://repository.jisc.ac.uk/8848/1/2022-07%20%28iDFltdP024.11%29%20DEI%20HE%20%26%20FE%20Reports%202022%20%28FE%29%20v1-05.pdf

University of Kent, Digitally Enhanced Education Webinars, https://www.youtube.com/channel/UCDs-c_TX9GUlA3ODjlbayYQ

Wang, M., Sierra, C. & Folger, T. (2003) Building a Dynamic Online Learning Community among Adult Learners, Educational Media International, 40 (12), pp. 49-62, https://doi.org/10.1080/0952398032000092116

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Case study 3: Learning packages for distributed delivery

(Dr Matthew Bonnett, Accounting)

Level: 8

Class size: 50

Tools: Panopto, Webex, Moodle, Grademark/Turnitin

Campus space: Lecture theatres, flat classrooms

Themes: recorded delivery, online teaching, online exams, e-submission, asynchronous learning, VLE, digitisation of learning.

Scenario

Explore colleagues' experiences of blended learning design and practice.

Impact

Review the impact of disparate blended learning approaches and tools on the student experience.

Key takeaways

Consider potential for application to adapting your own blended learning approaches.

Scenario.

In 2018, Dr Matthew Bonnett, Lecturer in The Business School, was part of a team who developed a pilot module in Financial Management for blended delivery internationally (in Malaysia). The module blend featured online recorded lectures and face-to-face tutorial delivery by in-country partners, with ENU colleagues' roles being focussed on learning resource design and authorship. This alleviated travel and synchronous delivery constraints and facilitated the creation of a suite of reusable materials Matthew describes as *learning packages* for delivery through Moodle. The learning packages comprised short video content of around 20 minutes to maximise learners' ability to fully engage with the video topic, and included a breadth of instructional ways of illustrating key concepts. The learning packages used Panopto to deliver presentation and video content on the strengths of its playback controls for students, allowing them to choose pace and repetition.

Although the pilot module was not eventually delivered, the design process, materials and learning that staff engaged in provided a rich repository of resources and ideas when teaching rapidly moved

online at the start of the pandemic. The learning packages were instead used for both UK students during lockdown and initially in the place of flying faculty for overseas programmes. Webex tutorials were delivered when there was no physical access to campus for face-to-face delivery, and lectures were paused during restrictions associated with social distancing. Colleagues found unexpected confidence in creating resources for teaching in this way and were able to share practice around use of specific tools and technologies with one another.

Impact.

Despite the learning packages not being used for their originally planned purpose, the incidental professional development amongst teaching staff engendered a considered and distributed approach to developing structured resources to use in blended learning. Looking at the overall impact of Matthew's work:

- A blend of recorded lectures and tutorials emerged, partially in response to changing expectations of attendance/ delivery, and partly in extending the use of the learning packages.
- Through ensuring technical and conceptual links between materials, he encouraged a more holistic and integrated view of resource design and development.
- An emerging community of practice allowed Matthew and colleagues to share insights into the practicalities of lecture capture and structuring learning packages in Moodle, with DLTE playing an active advisory role.

Practitioner insights.

On designing the learning packages: *"...it's not about taking what would be a 2 hour lecture, recording it as if you're giving it and then chopping into 20 minute chunks. We wanted the videos to be no longer than 20 minutes, but we didn't just want to splice it up like that. So, we decided to reorder it and restructure it so that* ***each video was self-contained****. For example, you had a video that walked through worked examples, you [also] had a video that would talk through big diagrams of the schematics of what you were talking about...".*

On the strengths of Panopto and sharing practice: *"We use Panopto for lectures. We like the way that it creates your content page based on the slide headings et cetera; you know, you can immediately jump back to a particular slide. So* ***we were familiar with the tools****. I know a lot of people probably had to go and learn all these tools they'd not used before. But* ***we could then help to disseminate the knowledge of how it works****, how you get the recording up on the Moodle page (for example)".*

On replicating discipline-specific assessments online: *"... in a Business School* ***you can replicate pretty much every kind of assessment in an online version****, whether it's an examination or you're having, you know, group discussions over Teams or something like that, and presentations - sharing your screen and talking to a PowerPoint or a poster or something like that. We had* ***virtual poster presentations****".*

Key takeaways

Considerations for your own practice

The learning package concept has implications across disciplines in encouraging both practitioners and students to make explicit links between blended learning materials and sessions. Two points to consider are:

- Arguably, decisions on length and format are as vital as those regarding content in the design stage of authoring a learning package. The form and function of both individual and collated resources are crucial to consider in ensuring balance, relevance, usability and alignment to learning outcomes.
- Re-use and re-cycle (with caution)! This case study shares an interesting example of the successful adaptation of a well-designed package developed for a differing context. Though the resources and model evolved, the fit of reusing this approach was clear as domestic teaching requirements changed through the pandemic. As regards reusability, consideration should be given to resources being time critical or time agnostic – taking a modular approach to package content so core components need not need to be re-recorded but contemporary resources may (e.g. cases, examples, assessment dates).

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Further links:

Video Length: How Long Should Instructional Videos Be? https://www.techsmith.com/blog/video-length/

Witton, G. (2017) The value of capture: Taking an alternative approach to using lecture capture technologies for increased impact on student learning and engagement. *British Journal of Educational Technology*, *48* (4), pp.1010–1019, https://doi.org/10.1111/bjet.12470

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Case study 4: Good practice, best practice?

(Dr Andrew Wooff, Criminology)

Level: 9

Class size: 75

Tools: Webex, Panopto

Campus space: Lecture theatres, classrooms

Themes: hybridised delivery of lectures/ seminars, evolving good practice

Scenario

Explore colleagues' experiences of blended learning design and practice.

Impact

Review the impact of disparate blended learning approaches and tools on the student experience.

Key takeaways

Consider potential for application to adapting your own blended learning approaches.

Scenario

Dr Andrew Wooff, Associate Professor in Criminology and Head of Social Sciences in the School of Applied Sciences, designed what was in 2017 a unique and bespoke module for the Police and Criminology programme. The module's distinctiveness relied on its practical, applied and individualised approach, with possible CPD due to its experiential components, such as Police setting site visits (for example, the Police Scotland College at Tulliallan) and workshop-format tutorial sessions. These aspects of design and delivery were intended for a small cohort (initially planned for 25 – 30 students), and required adaptation and redevelopment as recruitment grew to over 60 students. Delivery broadened to include online lectures (using a workbook format) and regular face-to-face tutorials, and became fully online during the move to emergency remote learning.

As with other colleagues in these case studies, Andrew adapted online and then blended delivery to preserve flexibility, choice and depth of engagement for students. Key to this was finding ways to keep student engagement active and participatory, using tutorial or discussion sessions to gauge progress, troubleshoot and help learners develop. Andrew talks in this context about the importance

of sharing practice amongst academic colleagues as to what works, as we continue to transition through an evolving learning landscape.

Impact.

With the adaptation of the initial design to accommodate a broader intake, then flexing to move online and thereafter into a blended mode, there came implications for continuous development. Andrew noted the following results:

- Moving classes online and to a blend created uncertainties for both staff and students, so, in this module, Andrew made a concerted effort during induction processes to set expectations of attendance, participation and engagement.
- Students appreciated the flexibility of online or in-person attendance, having become accustomed to this in learning during the pandemic.
- The move to online learning halted the integration of real-world input from, for example, Police Scotland.

Practitioner insights.

On the challenges of nurturing virtual synchronous discussion: *"I think from a teaching perspective, **teaching online is difficult**...I mean, I know that that's just one sort of way of doing blended isn't it? But I did find online tutorials extremely difficult because...**engagement is really hard**. Students are tiles - you can't really see them... most of them don't speak. And you're trying to keep an eye on the chat... **I end up speaking most of it** or you'll know in an online format because people don't speak and you're trying to get information across."*

On practical sharing practice with colleagues: *"(I'd like to know)...you know what are the best approaches for lecturing to class of 120? How many slides is a good number? How many activities should you do in that? How do you manage those activities? If no one answers the question, what do people do? And, you know, how do you fill the gap without just talking again? What do other people do in those settings and through student feedback? It's great learning and reading around pedagogy, but actually **what I really want to know is who's the best person in the university for delivering tutorials by whatever benchmark?"***

On continuing to adapt practice post-pandemic: *"..it's that kind of thing where I think it's helpful sometimes to have more of a like...**let's give something a shot** perspective. And post COVID, we're still in this space where people are quite open, I think, to having some discussion about what the next steps might look like, but I'm not sure all of us are particularly comfortable in **thinking all the implications of that through**."*

Key takeaways

Considerations for your own practice

Andrew's observations in this case study are a reminder of the common thread of adapted and adaptive practice that runs throughout learning design and blended learning delivery, particularly over the past few years. Modules designed in one way can transition to something quite different as a result of the practical constraints of increased demand while conserving core principles of active, applied and experiential learning. Consider the following:

- With frequently changing circumstances and priorities, time to engage in a community of practice has never been at more of a premium. Supportive colleagues can be found in The Learning and Teaching Network and through participating with DLTE's events such as the L&T ENssentials sessions.
- Consider your own experiences of how unique became mainstream. There may be a teaching approach that you used that was once novel but is now in widespread use (as a result of the pandemic, for example). It may be interesting for you to reflect on how you preserved the underlying pedagogy and purpose.

Further links:

Galvis, A. H. (2018) Supporting decision-making processes on blended learning in higher education: literature and good practices review. *International Journal of Educational Technology in Higher Education 15* (25), pp. 2 – 38, https://doi.org/10.1186/s41239-018-0106-1

Nørgård, R. T. (2021) Theorising hybrid lifelong learning. *British Journal of Educational Technology. 52* (4) pp.1709-1723 https://doi.org/10.1111/bjet.13121

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Case study 5: Evaluating progress and understanding

(Dr Chris Cramphorn), Enterprise & Innovation)

Level: 11

Class size: 180

Tools: Sim Venture, MS Teams, narrated PowerPoint, Piktochart, MS Forms

Campus space: Computer lab, lecture theatre

Themes: Business Simulation, Applied Learning, Digital Learning

Scenario

Explore colleagues' experiences of blended learning design and practice.

Impact

Review the impact of disparate blended learning approaches and tools on the student experience.

Key takeaways

Consider potential for application to adapting your own blended learning approaches.

Scenario

Dr Chris Cramphorn, Associate Professor in The Business School, has been integrating blended learning solutions into his teaching approaches for over 20 years. During this time he has focussed on technology's role to allow a systems thinking approach[3] to learning and has made use of a breadth of online tools to monitor engagement and academic progress to complement face-to-face teaching activities. Chris has used Microsoft Forms, QR codes, online quizzes and Moodle plug-ins to encourage students to reflect on their knowledge and understanding. He has used technology to embed criticality within the modules he teaches, aligning creative blended learning approaches with developing an entrepreneurial mindset amongst learners. A variety of multimedia resources such as narrated Powerpoints, instructional videos and infographics provide opportunities for his students to engage with module content in multiple ways, with clear benefits in support of diverse learner preferences.

[3] Kowch, E. G. (2019) Introduction to Systems Thinking and Change, *Learning, Design and Technology*, https://doi.org/10.1007/978-3-319-17727-4_133-1

Interpreting data sources, such as those provided by learning analytics (meaning data collected by information systems on user activity), can provide important insight into aspects of student engagement. Apart from accessing a resource or attendance at a session, information on time spent can allude to how fully a student may have engaged with, and potentially learned from, a particular digitised resource. Whilst analytics can be a rich source of information, Chris cautions that they should be interpreted and applied in relation to the learning context, and compared with other data sources (retention, progression, achievement) to form a more full picture of a student's participation and progress.

Impact.

Learners benefited from Chris's integrated use of progress tracking and collaboration tools in multiple ways:

- Students were able to engage in reflective activities to evaluate their own and peers' contribution to class work. Taking a blended approach to self and peer evaluation (through using MS Forms to complement in-class activities) supported the development of differing levels of criticality.
- Learning in a business simulation context allowed students to view real-world application of some of the critical and collegiate skills they developed, such as team working and taking initiative.
- Learning materials in multiple formats offered a range with which students could engage, presenting choice, flexibility and inclusion of learning preferences and perspectives.

Practitioner insights

On focussing on learner impact to choose approach: *"One of one of the first things I teach in terms of entrepreneurship is you can't please everyone all the time. So you need to concentrate on where you can have the biggest impact, and that's kind of the approach that we take. I mix up the way that we do activities. I use a lot of Lego for (making) connections…and we use audio visual, we use infographics…"*

On technology's role in facilitating criticality: *"But…how are they being critical? It is really important for me and that's what fits within blended learning - what we get them to do, when they do things in a particular way, or when we design pages in a particular way. I think is important because what you're trying to do is get the most feedback loops so that you can condition good practice and reduce poor practice. And that's where the data comes in. Knowledge is moving and technology is moving so quickly that what we need to do is almost go back to the basics of how do you learn critical thinking, how do you actually have systems of activities that fit together?"*

On using data to interpret areas for focus: *"You tend to see the kind of main midpoint where people are bumping along… and what you're looking for are almost like outliers. If you've got lots who are outliers, then you've got a problem or you've got an opportunity depending on the way you're seeing it. But I think what is also important is that it helps demonstrate where you've got people who are not engaging or you've got the people who are over engaging".*

Key takeaways

Considerations for your own practice

Chris's entrepreneurial and systems thinking perspective can be extremely valuable in approaching blended learning design creatively, namely, think how:

- Developing learner criticality can inform choices of tools that allow students to input information, for data to be captured and for analysis of that data to inform future learning design.
- A systems thinking approach can help to establish a rationale for, and relationship between, inter-related blended learning components.

Further links:

Advance HE Learning Analytics https://www.advance-he.ac.uk/knowledge-hub/learning-analytics-0

Essential frameworks for enhancing student success: Enterprise and Entrepreneurship https://www.advance-he.ac.uk/knowledge-hub/essential-frameworks-enhancing-student-success-enterprise-and-entrepreneurship

Developing a Growth Strategy, https://create.piktochart.com/output/47216793-developing-a-growth-strategy

Searching for the right frame for student experience, https://wonkhe.com/blogs/searching-for-the-right-frame-for-student-experience

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Case study 6: Blending belonging

(Dr David Jarman, Planning & Policy)

Level: 9

Class size: 60

Tools: Keynote, MS Teams, Panopto, Moodle.

Campus space: Lecture theatres, classrooms

Themes: Alternate delivery, guest speakers, recorded lectures.

Scenario

Explore colleagues' experiences of blended learning design and practice.

Impact

Review the impact of disparate blended learning approaches and tools on the student experience.

Key takeaways

Consider potential for application to adapting your own blended learning approaches.

Scenario

Much has been made of the importance of student-focussed *belonging*, both throughout the pandemic and beyond. With disjointed, fragmented experiences of learning remotely and partial return to campus modes until recently, learners' sense of affiliation with or identification as a student of their attending HEI have been framed as precarious and in need of nurture. Pedagogies of belonging[4] have been described as nuanced and contextually dependent, and the role that staff play responsive. Listening to student feedback, in its many forms, on experiences of belonging (or not), presents scope to think about how we can review and adapt practices that respond to emerging and varying ways of students (and lecturers) being in transitional spaces.

Dr David Jarman, Lecturer in The Business School, took an inclusive and adaptive view of designing his *Planning and Public Policy for Festivals & Events* module by building in flexibility of delivery in response to what students told him were successful ways of allowing them to engage. David piloted

[4] Press, N., Andrew, M. B., Percy, A., & Pollard, V. A. (2022). Pedagogies of belonging in an anxious world: A collaborative autoethnography of four practitioners. *Journal of University Teaching & Learning Practice, 19* (4). https://ro.uow.edu.au/jutlp/vol19/iss4/01

an 'alternating online/on-campus structure' for lecture delivery. Seminars were delivered face-to-face. This model allowed students continual choice over mode of attendance of one aspect of delivery whilst maintaining small group opportunities for students to actively engage in social learning on campus. For David, the decision also came from reluctance to lose the scope for creativity and ways of collaborative learning that had been surfaced during COVID. Belonging, too, can be nurtured in a blended space. Belonging as a student of the discipline was augmented by the inclusion of guest speakers, allowing students to potentially bring theoretical learning to their future practice.

Impact

For many learners, belonging is about being together where they can construct identity and sense of self in relation to others. In this module:

- Students were given autonomy to make choices about their mode of attendance, based on circumstantial ability to travel to campus. This was based on student feedback that this is a valued component of their learning.
- The need for synchronous contact was supported in a truly blended way by taking forward sustainable design principles that have emerged from practice during the pandemic.
- Students were offered multiple virtual and physical spaces in which they could belong, and choice in how to do so.

Practitioner insights.

On finding ways to sustain flexibility, David said: *"And I was left thinking to myself, well, on the one hand, that seems* ***almost a bit of a missed opportunity. Let's not just go back to where we were in early 2020****... students have been telling us that there are some advantages to having online classes and we seem to just be taking a default option that doesn't really give much of that…room to develop".*

On designing for a holistic blended experience: *"I thought that one way I could try and develop this would be to have this alternating online/ on-campus structure for at least the lecture side of things - seminars*

would all be on campus. But if we go down this sort of fairly traditional, mix of lecture and then seminar, ***then let's see if we can do something with what we might otherwise call a lecture****"*

On using changing functionality of institutional systems to support dialogue: *"When you've got seminars as well, then you have* ***opportunities to have discussions with students*** *and so, I suppose I didn't necessarily feel the requirement to go too far down the route of Padlet and that sort of thing. Now that Teams has…breakout rooms, the chat function, all of that sort of thing -* ***you can do quite a lot within Teams****".*

Key takeaways

Considerations for your own practice

David's perspective on building student belonging into his blended approach was informed by an aspiration to maintain aspects of what worked well during online learning based on student feedback. This allowed him to embed options for students to attend and engage online or in-person. The key takeaways here are:

- Belonging, in this sense, is supported in terms of student identity, academic discipline and institution.
- Core tools in, for example, MS Teams can provide for an effective ecosystem for small group work. You may not find you need to look any further than readily accessible tools to build a rich blended learning experience.

Further links:

Advance HE UK Engagement survey https://www.advance-he.ac.uk/knowledge-hub/uk-engagement-survey-2022

Biggins, D. and Holley, D. (2022) "Student wellbeing and technostress: critical learning design factors", *Journal of Learning Development in Higher Education*, (25).

https://doi.org/10.47408/jldhe.vi25.985

https://journal.aldinhe.ac.uk/index.php/jldhe/article/view/985

Building Belonging in Higher Education Recommendations for developing an integrated institutional approach https://wonkhe.com/wp-content/wonkhe-uploads/2022/10/Building-Belonging-October-2022.pdf

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Case Study 7: Creating more connected cohorts with distance learners.

(Dr Petra Leimich, Digital Forensics)

Level: 11

Class size: 90

Tools: Teams

Campus space: E14, Merchiston

Themes: distance learning, Teams space

Scenario

Use of Microsoft Teams to provide synchronous distance learning.

Impact

Increased interaction, improved student experience for Distance Learning students.

Key takeaways

Have backup plans for when technology is unreliable.

The Scenario

Prior to the pandemic, on-campus lectures were recorded by Media students primarily for distance learning students on the SCQF Level 11 Host-based forensics module (CSN11125/26). The time lag between uploading the lectures and students having access meant that distance learning (DL) students were not able to learn synchronously with in-person students. The adoption of Teams as a learning platform during the pandemic meant that lectures could be delivered 'live' online so that all students could watch them in real time and communicate with each other in the chat, and the recordings were available without delay. This mode of learning has been retained due to its effectiveness and positive feedback from DL students.

The impact

Using Teams as the primary modality for lectures has allowed DL learners to feel like they were in the classroom, which they reported was beneficial to their student experience. The ability to chat synchronously during the lecture using the text chat or verbally has increased interaction between students. In addition, Teams enables asynchronous conversations to persist and students can catch up on what has been said in the chat posts, unlike WebEx. It was found that Moodle did not provide the same degree of open and organic space for conversation. Students can easily upload images to Teams to explain a concept in the module, or a screenshot if they experience technical issues which is much more cumbersome in Moodle.

Key insights and takeaways

The resulting reliance on technology for lectures means that it's better to have some back up plans should things go awry. For example, microphones in the lecture theatre were not picking up sound during one instance of hybrid teaching, so online students could not hear what was being said. Petra had her webcam with her and so was able to navigate this in the moment. For new lecturers and colleagues using technology in unfamiliar teaching rooms, it is a good idea to check the technology works as expected in advance of teaching and even asking colleagues to test it out for you can be helpful so that your teaching runs smoothly.

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Case Study 8: Interactive PowerPoints in online tutorials and open communication with students.

(Dr Martina Fiori, Nursing)

Level: 7

Class size: 50+

Tools: PowerPoint, Menti

Campus space: online

Themes: tutorials, interactive PowerPoints, quizzes

Scenario

Team provide varied resources for students to explore in different ways.

Impact

Students have information which allows them to raise questions in tutorials, and tools to test their understanding.

Key takeaways

Student input drives provision of resources which suit the student needs.

The scenario

The Understanding Body Systems module for nursing students (NUR07110) is an online, interactive module, which supports learning for 500 plus, first-year, undergraduate students. Martina and her colleagues provide recorded lectures, which students can watch in their own time, plus one-hour weekly, interactive online tutorials with the students to help revise key points from the lectures and module itself.

The tutorials are based on PowerPoint as the principal learning technology, and Martina and the team of tutors work on these materials together to support such a large cohort of students. For example, one tutor might share a more interactive diagram or a better explanatory video, whilst another tutor will add a Menti poll to check students' engagement and understanding of key concepts. These little tweaks allow for maximum participation and interaction from students in the sessions.

The impact

Front-loading the module topics in pre-recorded videos allows students to ask questions in tutorials, helping them distil what information is important to retain for their long-term learning and how this relates to their field of practice. Whilst there is a guided revision structure, students lead the tutorials by asking questions, for example, on the anatomy of the body and, in turn, answering each other's questions through speaking or typing in the chat. There is also an anonymous quiz section at the end of each tutorial, using Menti so students can check their own answers without feeling self-conscious (student feedback is that they enjoy this element the most). Allowing the students to take control of their own learning in these tutorials has helped their confidence in the module content and in preparation for summative assessments.

Key insights and takeaways

Using Webex with large numbers of students might prove challenging for the tutor. Sharing a screen and presenting makes it hard to monitor the chat at the same time, so Martina encourages her students to speak about any points they are unsure of as they go through the diagrams and the revision. After the tutorials, Martina posts videos or articles to reinforce key concepts students were unsure of during the tutorials. It's an ongoing, iterative process of mutual feedback and communication, aimed at achieving the desired learning outcomes.

Key takeaways for colleagues interested in implementing something similar are:

- to be familiar with the module content and learning technologies

- practice (practice, practice) the use of the learning technologies for a smooth run

- one hour is not a long time: having a few, clear learning outcomes and ensure that these are achieved (less is more) is a good recipe for student success

- check with the students what is working best for them and adapt the session to accommodate their needs if necessary.

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Case Study 9: App usage and student choice.

(Dr Megan Crawford, Business Management)

Level: 9

Class size: 150

Tools: Miro, Menti, Panopto, MS Forms, SPSS, JASP, NVivo, student-choice chat platforms, Twitter, LinkedIn

Campus space: Computer labs

Themes: group work, surveys, in-class quizzes, brainstorming sessions

Scenario

Use of varied platforms for teaching and student choice in assessment.

Impact

Improved satisfaction, grades, trust and more realistic experience of professional relationships.

Key takeaways

Opportunities to make mistakes allowed students to better recover and progress.

The scenario

This scenario concerns group work for 2nd year undergraduates in the module Research and Data Analysis in Business Management. In it, Megan Crawford aims to facilitate students' learning through authentic assessment using of real-world scenarios which bridge the gap between academia and the professional world. She does this by basing learning around Sustainable Development Goals (SDG), focussing on a different SDG each year, which is the topic focus for the trimester.

Megan creates flexibility in providing students with a range of options to present their work- including the use of Padlet - for the project assessment. The accessibility of Padlet enables students to create posts which are inclusive for all learners, such as using voice notes as part of submissions. She lets students choose their own means of communication for group work: a popular choice being WhatsApp and Snapchat. Although Megan cannot see the communication between students using these tools, they have been effective in creating positive learning environments and establishing a community of practice within the cohort.

Megan also uses Mentimeter throughout her teaching to check for understanding of concepts and feedback on the content from students. Additionally, students have used and applied Menti to their own submissions and presentations. Having flexibility of choice allows students with older laptops and other issues with technology can still interact and work together without the constraint of having to be on Teams, for example, as the sole platform for group work.

The impact

The autonomy Megan gives her students has led to greater student satisfaction and higher overall grades for this module since its overhaul in 2021. It paves the way for a new approach to teaching, whereby greater trust and inclusive practice for students has reduced perceived power dynamics between lecturer and student and has better prepared her students for the workplace.

Key insights and takeaways

Megan says **"One additional teaching technique that I think helped a lot of these other tools and methods become more effective was the safety net provided by the teaching team. We knew there would be failures, we just didn't know where or when, so we tried to also ensure that students were given a sort of safe space to fail. That is, to help them recover more effectively so they didn't fail the whole module".**

Final thoughts: Although group work can be polarising for students, learning from students about how they learn best and the most effective methods of communication for them has been pivotal in the quality of submissions and assessment outcomes. Being flexible in your approach and learning how to use different tools as educators can give more options and create opportunities for authentic assessment which students can apply to the workplace.

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Case study 10: Front-loading content and digital MCQ's

(Brigitte Harris, Music)

Level: 7 and 8

Class size: 60

Tools: Google quiz

Campus space: A64 Merchiston

Themes: Moodle multiple choice quiz, co-creation with students

Scenario

Providing slides ahead of teaching, class content after and quizzes as assessment.

Impact

Better prepared students, better staff workload. Varied student needs are met by different formats of assessment.

Key takeaways

Allow time to prepare resources. Seek feedback.

The scenario

First and second year undergraduate Music students studying Harmony and Aural Perception are provided with PowerPoint slides five days in advance of teaching sessions and asked to work through them prior to attending so that they have an initial understanding of the lesson content. Some tasks are included within the slides, which a good proportion of the class complete in advance. In the Aural Perception course (part of MUS07135, Western Art Music 2), links to online performances are added after the sessions so students who cannot attend at that time can still work through the content. Collaboration with Rebekah Donn, a PhD student, has been invaluable with helping with the online content, including creating a multiple-choice quiz (MCQ) on Moodle as a form of assessment.

The impact

Feedback from students has been positive and it has given them a head- start in their learning, particularly when they are unable to attend sessions in person due to other commitments such as work or family. For the lecturer this has reduced the workload and marking significantly. There are two formatives and a summative assessment in the MUS07145 module (Introduction to Musicology

1). There is a written aspect, as well as the digital MCQ, so it gives students a variety of assessment types, which helps cater to different student needs.

Key insights and takeaways

Preparing online content takes time, and practice, so give yourself plenty of leeway with this. With Music, you are using sound and so the audio quality is important. Working with a PhD student has been fantastic as it has helped them with their own learning and teaching practice in addition to contributing to the module running smoothly. Listening to student feedback on the quizzes and the flagging up of any glitches has also been invaluable for improving the online tasks.