

Appendix 4: Resilient Curriculum

Resilience in a university context has been defined as: “the institutional capability to effectively absorb, respond to and recover from an internally or externally induced set of extraordinary demands” (Pritchard & Karlsen, 2013, p.2). ‘Extraordinary demands’ might encompass a range of eventualities, including major changes in the numbers of staff or students; study conditions (e.g. campus closure); student demographics; relevance of skills and content taught; preparation of students for university study; and the mental and/or physical health of students. Examples of ways in which a less resilient curriculum might impact on staff and students include unnecessary assessment resulting in high student workloads and low engagement with non-assessed activities; high marking and feedback load for staff; poor interconnection between units and lack of interdisciplinarity; and many staff teaching units by themselves (Berthoud et al., 2021).

There is an overlap between notions of resilience at institutional level and resilience at a classroom level, where Chow and colleagues (2020) suggest that adaptability, creativity, connectivity (sharing resources), diversity and endurance are all attributes which teachers, students and administrators can apply to increase the resilience of their teaching methods.

4.1 Resilient curriculum principle

All programmes and modules will be designed to be robust and responsive to changes in the external and internal environments.

Objective	Evidence
RC1 Modules will be designed with explicit constructive alignment of learning outcomes, curriculum, and assessment.	4.2.1, 4.3.2, 4.4.2
RC2 Where possible, modules will be designed and delivered using blended learning approaches with provision of online asynchronous learning materials and activities alongside synchronous teaching.	4.2.2, 4.2.3, 4.3.1, 4.4.1
RC3 The level of curriculum detail included in module documentation should be sufficient to allow students to make informed choices while providing staff flexibility to respond to changing circumstances.	4.2.2, feedback from consultation
RC4 Modules within programmes should be designed with consistent approaches, with explicit consideration given to the learning experience for joint and combined honours students.	4.2.1, feedback from consultation
RC5 Responsibility for core modules should not lie with a single individual to allow both for resilience in delivery and collaborative design of learning opportunities. Similar considerations should be given to all modules, wherever possible.	4.2.4, 4.2.5, 4.4.3

4.2 Evidence from literature

4.2.1 Constructive alignment

Constructive alignment is a learning design approach (Biggs, 1996) that ensures that module learning outcomes match the taught curriculum and what is assessed. Berthoud and colleagues (2021) describe a constructive alignment approach to curriculum development, which they claim made it particularly resilient for the pandemic; they concentrated on the overall learning outcomes, rather

than trying to fit the education into set forms and modes of delivery. This involved paring down the content and assessment of the programmes to focus on learning outcomes, resulting in a simplification of the programme structure. Delivery methods were greatly diversified and blended, allowing teaching to very large cohorts in a variety of situations. Team teaching saw staff members developing content together rather than delivering sequentially. Mixing of cohorts enabled students to make connections outside their specific discipline, strengthening their networks and peer support. The clearer, more consistent structure reduced the burden on students of navigating many different academic expectations over a large range of units and enabled more consistent support for students.

4.2.2 Flexibility

“Flexibility to adjust without crossing thresholds of identity” (Walker & Salt, 2012, p.18) is a key aspect of resilience. Flexible learning “offers students a choice in how, what, where, and when they learn: the pace, place and mode of delivery” (HEA, 2015). The overall ideals of flexible education are to increase the student-centred and empowering aspects of education, thereby improving access, equity, diversity, inclusion, retention, completion and satisfaction (Houlden and Veletsianos 2019). However, as Berthoud and colleagues (2021) note this can be challenging in a practical sense and that “adaptability and flexibility do not generally go well with the rigidity of curriculum structures and timetabling”.

Flexibility can be easier to achieve in some areas than others. In Orr and colleague’s (2019) global survey of HE provision, nearly 60% of providers characterised organisational access to their course materials as very flexible to highly flexible, meaning there are few constraints to access in terms of time and place for students. The proportion is similar for access to course support. In contrast, assessment and recognition tend to be neither technically flexible (e.g. anytime and anywhere) nor open in terms of who determines the conditions for assessment and recognition.

4.2.3 Blended learning

Blended learning has been a feature of higher education since the late 1990s. There are numerous definitions, but one of the most used describes blended learning as “the thoughtful integration of classroom face-to-face learning experiences with online learning experiences” (Garrison & Kanuka, 2004: 96). While some authors use blended learning and hybrid learning synonymously, there are important differences. Blended learning differs from hybrid (dual mode) learning because it does not require the same content to be provided in both face-to-face *and* online formats, but it allows for specific elements of a course to be offered either face-to-face *or* online. Blended learning has grown in popularity and more than a decade ago, it was described as ‘new normal’ (Norberg et al., 2011). If done well, the approach combines the benefits afforded by both face-to-face and online learning modes of instruction (Broadbent, 2017). Arguments for the benefits of blended learning include increased flexibility for staff and students; personalisation; enhanced student outcomes; the development of autonomy and self-directed learning; opportunities for professional learning; cost efficiencies; staff and student satisfaction; and increased interaction between staff and students, and between students (e.g. Kim et al., 2016; Mirriahi et al., 2015; Lai et al., 2016; Vaughan, 2007). However, the challenges of developing blended learning are also well reported. These include a lack of staff capacity (Mirriahi et al., 2015); resistance to innovation and change (Salmon, 2005); and a lack of research-informed models to support institutional adoption (Porter & Graham, 2016). These factors mean that blended learning is often an individual, rather than institutional, endeavour (Smith & Hill, 2018).

4.2.4 Team teaching

In a hierarchy of co-teaching activities, team teaching is the most collaborative and intensive type of co-teaching (Bacharach et al. 2008; Cook and Friend, 1995), in which the co-teachers share

instruction time, student interaction, and overall authority in the classroom. From the students' perspective, there is no clearly defined 'leader' teacher. Other forms of co-teaching include 'parallel teaching' where instructors divide the class into smaller sections and deliver the course in tandem to smaller subsets of students; 'one-teach, one-drift' where one teacher has primary responsibility for the class whilst the other assists students; and 'supplemental teaching' where one teacher works with students at their expected grade level whilst the other assists those requiring additional support.

Team teaching allows teachers to receive real-time feedback on teaching from a peer who has a similar investment in the experience; clarify and articulate their thinking; negotiate pedagogical actions and theories; and build meaningful relationships with students and peers in new ways (Bacharach et al., 2008; Ferguson & Wilson, 2011; Plank, 2013). Often, team-taught courses seek to promote students' development of higher-order thinking skills by enabling them to interact with instructors who have different sets of expertise and perspectives (Bacharach et al. 2008). Looft and Myers (2019) found that being exposed to team teaching allows students to better recognise how teaching is not inherently neutral or objective, thus allowing for a more complex and nuanced understanding of a topic. However, Pope-Ruark and colleagues (2019, p.122) argue, "team teaching complicates all of the planning, teaching, and assessment activities faculty are accustomed to doing themselves. Adding multiple voices, perspectives, values, and perhaps disciplinary perspectives to this process can require intensive discussion, negotiation, and adaptation" (p.122).

4.2.5 Graduate teaching assistants

A resilient curriculum is closely linked to issues around workload and the role of different categories of staff in teaching activities. Teaching is seen to offer a wide range of benefits to Graduate Teaching Assistants (GTAs), including benefits to the GTA's own research, transferable skills development, career development and teaching skills. On the other hand, problems include insufficient pay or excessive time demands from teaching (Jordan & Howe, 2018). Rao and colleagues (2021: 465) note that GTAs in their study who were "within an institution that provided structured support, felt less isolated and had an increased sense of belonging [...] because of meeting other GTAs in similar positions". They also recognised the struggles they faced with respect to teaching were similar to those faced by other academics. While acknowledging the introduction of GTA development programmes in some institutions, Rao and colleagues (2021) argue that there appears to be no shared understanding of how doctoral students should be supported in their teaching roles, and "the sector appears to be falling short in its responsibility towards the professional growth of doctoral students often due to the short-term nature of their teaching engagement" (465-6).

4.3 Evidence from student consultation

4.3.1 Blended learning

The Covid pandemic meant that students have not experienced blended learning in an ideal way; learning was moved online (or back to campus) in response to government restrictions rather than for pedagogically valid reasons. However, there were some reflections relevant to blended learning provision in the longer term. Whilst they appreciated the benefits of aspects of their course being available online (e.g. being able to rewatch lecture recordings), students also felt that there were certain activities that worked better face-to-face, in particular those which required more in-depth group discussion and interaction.

Online seminars were quite a struggle because people don't like to interact as much. And it's easier to hide behind a camera turned off...the whole time. And a lot of people really just don't interact, and it makes it feel like you've done all this preparation got not much out of it, if you can't discuss it...Obviously, you use like a lot of body language and different ways of

expressing and...everyone being scared to speak in case they interrupt each other. So I think yeah, seminars definitely work a lot better in person. If they were kept online, I would definitely struggle with that. (FG10)

4.3.2 Constructive alignment and programme structure

Discussions in student focus groups identified that there is sometime overlap between modules, lack of advice on module choices, and other design issues that make it difficult to understand how their learning fits into the broader context or prepares them for future employment.

...they were organised in such a way that...we had a topic, but we didn't see the connection between each topic, and the module itself. So it was all kind of isolated. (FG5)

Some of the best modules I've had are ones where I can quite clearly...work out, like I'm studying this, and that makes to this broader concept, whereas some of the less engaging...they've gone on sort of half hour tangents about things even slightly related to the course. And then you just end up really lost as to what you're supposed to be learning... (FG8)

The structure of the academic year, with little teaching in Term 3, was also identified as concern as it concentrated teaching into a short space of time.

4.4 Evidence from staff consultation

4.4.1 Blended learning

Like students, staff have not experienced an ideal form of blended learning during the pandemic, but their experiences did help to identify those aspects of teaching that might be delivered effectively online.

...online office hours. I mean, if I have my traditional in person office hours, I could safely assume I'm going to be alone for an hour. Online office hours or online revision, office hours for exams, have a much higher attendance...for these kinds of events, small ones, there is a lower barrier for students to come into attend. (Group L)

I can really see the benefits of having had those large lectures online. And the amount of interaction and kind of feedback we were getting from students like in the moment, which we just wouldn't have got from memory back when things were face to face in the lecture theatre. (Group M)

Echoing views expressed by students, staff also felt that online delivery was less suited to more discursive forms of learning.

...some of that informality gets lost...you've got to mute yourself unmute yourself. It loses that opportunity for just free discussion (Group G)

Some staff felt there was pressure within the University to implement a dual-mode learning model with the same content provided both face-to-face and online. Understandably, this was felt to present challenges in terms of workload and managing both groups of students simultaneously.

4.4.2 Constructive alignment and programme structure

Staff identified the short length of the academic year as a constraint on teaching; they also perceive that rigid structures and timing for making changes to the curriculum (and rigid module outlines) inhibit innovation.

...two terms 10 weeks each is not long enough...I don't know why we only start in October to finish...I mean, some of my colleague, they finished in April... (Group E)

...there are things that from teaching this year that I would want to implement for next year's module. We've got the feedback, we can support that, but it's too late. We're six months too late to put it through the curriculum development cycle...we'll have to have another year of students saying the same thing. So they don't see it as being responsive. (Group A)

...on the module outline, you know, a fairly restricted it's workshops, seminars, lectures, there isn't an opportunity to put [anything else] in there (Group M)

4.4.3 Team teaching

Staff recognise the need to develop subject-specific pedagogical skills but identify the challenge that these were less highly valued than research skills. Team teaching may be a way to share skills between staff with teaching and research expertise.

Staff also proposed a greater use of non-permanent members of staff to increase resilience but were uncertain how these staff can be used, trained and supported.

4.5 Resilient curriculum at Durham University

This section details existing principles and policies at Durham University and discusses gaps that have been identified in the analysis of the current state of play regarding resilient curriculum.

4.5.1 Current DU Principles and Policies relating to Curriculum

The Learning and Teaching Handbook, Section 3 relates to Curriculum Development¹, including the Principles for development of the taught curriculum², guidance notes for designing modules³ and guidelines for the use of the Learning Environment⁴. However, these were not developed with a focus on resilience and so do not address the issues identified in the literature.

4.5.2 Gap Analysis

Evidence from focus groups indicates that students and staff see the benefits of blended learning approaches. Both groups are clear that some activities work well online whereas others are best suited to in-person delivery. Students appreciate digital resources that complement their in-person sessions and like the ability to review lecture material through the lecture capture system. Staff prefer face to face teaching for most activities, particularly discussion classes but identified that some activities, e.g. office hours are better attended online.

The main concern raised by staff was the perception they would be asked to deliver the same content online and in-person (i.e. dual mode), as experience has shown that this makes for a poorer experience for students and more difficult for staff to deliver good quality sessions.

Further discussion on how resilience can be embedded into the design and delivery of modules and programmes should be part of the second phase of consultations, particularly in relation to the appropriate balance of activities for blended learning and how resilience in delivery of modules can be achieved.

¹ [Learning and Teaching Handbook : SECTION 3: Curriculum Development - Durham University](#)

² [Learning and Teaching Handbook : Principles for the development of the taught curriculum - Durham University](#)

³ [Learning and Teaching Handbook : 3.4.5: Guidance notes for designing modules - Durham University](#)

⁴ [Learning and Teaching Handbook : 3.9.2: Guidelines on the use of the Learning Environment, duo \(Durham University Online\) - Durham University](#)