Appendix 3: Inclusive learning design

In recent years, higher education has witnessed an increase in student diversity (Carlsen et al., 2016) and it is therefore increasingly important that learning is designed so that students with different backgrounds, cultures, abilities, and learning preferences can achieve their full potential. Inclusivity refers to the actions taken to ensure a diverse population feel valued and are able to achieve their potentials equitably. There are multiple definitions of inclusive learning design, but these broadly agree that inclusive education is an approach that "supports teachers to respond to individual differences between learners but avoids the marginalisation that can occur when some students are treated differently" (Florian, 2014, p286). Inclusive educational policies therefore require HEIs to be aware of the differences and privileges within their student body and to acknowledge that students have different starting points, and that specific barriers may be faced by some students, which need to be addressed for those students to meaningfully engage (MacKay, 2020).

3.1 Inclusive Learning Design Principle

All learning opportunities will be designed to be inclusive, accessible, and representative of a diverse student body.

Objective	Evidence
ID1 Modules will be designed to meet the principles of Universal Design for Learning, focusing on engaging learners and providing alternative materials and activities to meet learning outcomes where possible.	3.2.1, 3.2.2, 3.3.1, 3.4.1
ID2 Learning should be explicitly scaffolded with materials provided in advance of taught classes and learning supported through guided tasks outside of taught sessions as appropriate to the topic and level of study.	3.2.5, 3.3.2, 3.3.6, 3.4.2, 3.4.5
ID3 Learning materials and activities should be designed to ensure that they are accessible to students with disabilities and additional needs, or reasonable adjustments made to provide alternatives.	3.2.3, 3.3.4, 3.4.3
ID4 Learning materials and activities will be designed to ensure that they are inclusive and representative of a diverse student body.	3.2.3, 3.2.4, 3.3.5, 3.4.4

3.2 Evidence from literature

3.2.1 Frameworks to support diversity

Two pedagogical frameworks designed to address student diversity are universal design for learning (UDL) and culturally responsive teaching (CRT). Both UDL and CRT consider ways in which traditional instructional approaches can result in barriers to learning for 'non-traditional' students. These obstacles are embedded within the 'class climate' (i.e. the class atmosphere or social environment); the modes of instruction and assessment; instructional materials; or the types of learning tasks and expected outcomes for the learners. UDL has three principles: 1. Provide multiple means of representation 2. Provide multiple means of action and expression 3. Provide multiple means of engagement (Rose & Meyer, 2002). Means of representation can include offering content in multiple formats, simple navigation of course materials and highlighting critical information. Means of expression may include flexible opportunities for demonstrating skills, use of discussion boards and

providing opportunities to practise. Means of engagement might include easily accessible tutors, cooperative learning, scaffolding and alternative sources of content (Boothe et al., 2018). Culturally responsive teaching approaches use "the cultural knowledge, prior experiences, frames of reference, and performance styles of ethnically diverse students" (Gay, 2010, p.31). They prompt educators to design instruction from the perspective of students' diversity as strengths, rather than deficits (Kieran & Anderson, 2019).

3.2.2 Curriculum flexibility

Educational institutions often attempt to address diverse needs by designing a flexible curriculum (OECD, 1999). Curriculum flexibility can be thought of in terms of adaptability and accessibility of the curriculum to meet students' needs and capabilities. With a flexible curriculum, learners are provided with more opportunities to regulate their own learning process and learning environment (Hill, 2006). It has been argued that a curriculum that offers students the opportunity to decide where and when they learn can seem attractive to non-traditional students (Carlsen et al., 2016) as research has demonstrated that difficulty in scheduling due to course offerings and times, and an inability to participate fully because of time constraints related to obligations off campus can present significant barriers to non-traditional students (Goncalves & Trunk, 2014; Wyatt, 2011).

3.2.3 Accessibility

Despite progress towards inclusive education through reasonable adjustments for all, the design of learning environments remains largely driven by adjustments to meet specific needs of individual students (Collins et al., 2019). Thus, most HEIs still broadly adopt the medical model, which views disability as an 'individualised problem' (Armstrong & Barton, 1999) and focuses on what is 'wrong' with the individual. Research suggests several limitations to this approach, including the false assumption that students with the same impairment have the same learning needs (Nes & Stromstad 2003; Roy 2003). In contrast, the social model of disability emphasises both the need to restructure educational environments to enable all students to flourish (rather than focusing on individual impairments) and to develop teaching practices to facilitate all students' learning (Doyle & Robson, 2002).

Inclusive curriculum design therefore promotes student-centred learning catering for a range of diverse students. This not only benefits disabled students, but also benefits the diverse student community (Izzo et al., 2008). In many cases, a curriculum designed inclusively saves time and reduces the need to make adjustments at a later stage (Bunbury, 2020).

In practice, inclusive education can take place in numerous ways to provide all students with an equal chance of success. These might include measures such as making learning resources more readily accessible through recorded lectures and handouts uploaded online; online tutorials that leverage technology; making information available in a range of formats; and addressing physical barriers with wheelchair-friendly buildings and lecture theatre access (Collins et al., 2019). Lecture recording is often spoken of as 'mainstreaming accessibility' (Chinnery et al., 2018), in that, if it is provided as 'default', it stops students from having to request additional help or pauses from lecturers.

3.2.4 Representation and inclusion

Growing internationalisation of the university body and the widening participation agenda have influenced calls for an inclusive curriculum in UK universities. Within this context, an inclusive curriculum is considered central to delivering equality for, and representation of, a diverse and international student body (Hockings 2010). Within this, decolonising of the curriculum is an area which has received particular attention in recent years. Decolonising is essentially about "rethinking,"

reframing and reconstructing the current curriculum in order to make it better, and more inclusive" (Keele Student Union et al., 2018). Universities may label a range of activities as 'decolonising', from diversifying reading lists to introducing special modules about decolonisation and employing more staff from ethnic minority backgrounds. However, it is argued that these 'soft reforms' often take place without more radical engagement with pedagogy (Abu Moghli & Kadiwal, 2021). For example, as the Keele Manifesto points out, "Decolonising is not just about bringing in minority ethnic writers and texts, but also how we read 'traditional mainstream' texts" (Keele Student Union et al., 2018). However, while debates on decolonisation have proliferated at abstract and rhetorical levels, work on operationalising them is only just beginning (Morriera et al., 2020). There are ongoing student-and academic-led initiatives to review university syllabuses; identify alternative literature; and highlight the importance of knowledge(s) produced by academics of colour, and feminists from the Global South for example. These efforts include acknowledging the importance of alternative forms of knowledge, such as artistic expressions (Moghli & Kadiwal, 2021).

Co-creation has the potential to bring new voices and perspectives into discussions about curricula and to challenge existing ways of thinking about knowledge and the curriculum (Bovill & Woolmer, 2019). Moves towards decolonisation of the curriculum have highlighted the importance of academics and students working collegiately on curriculum design (Delgado Bernal & Villalpando, 2016; Tate & Bagguley, 2017).

3.2.5 Scaffolding

Wood and colleagues (1976: 90) defined scaffolding as a "process that enables a child or novice to solve a problem, carry out a task or achieve a goal which would be beyond his unassisted efforts". Three key features of scaffolding are (a) contingency, (b) intersubjectivity, and (c) transfer of responsibility (Belland, 2017; Pea, 2004). Contingency refers to the need for an ongoing assessment of students' abilities with specific tasks so the teacher can provide scaffolding activities. It also requires instructors to provide scaffolding activities at appropriate times. Intersubjectivity refers to a temporary shared collective understanding or common framework amongst those involved in the process. Transfer of responsibility means that scaffolding must encourage learners to take responsibility for, or ownership of, learning from those who provide scaffolding, allowing them, eventually, to perform tasks independently. Hannafin and colleagues (1999) divided scaffolding into four categories: (a) conceptual scaffolding helps learner identify essential themes and related knowledge; (b) meta-cognitive scaffolding helps learners monitor and reflect on the learning process; (c) strategic scaffolding provides alternative ways to work on a task; and (d) procedural scaffolding helps learners use resources and tools for learning.

3.3 Evidence from student consultation

3.3.1 Multiple means of representation, action, expression and engagement

Students were generally happy with the amount of flexibility on offer within their course.

There's a lot of flexibility, essentially....you can pick modules from all sorts of things...that's a lot of flexibility...I wouldn't personally ask for any more flexibility than that currently is. And I've not particularly heard people asking for it. (FG5)

However, they felt that there was notable variation between individual tutors in terms of options for engagement. An example discussed was the organisation of material on Learn Ultra, which could be inconsistent and confusing.

...if everything was put in the same place for all the modules, that'd be really helpful just in terms of actually finding the information (FG1)

There wasn't much consistency in reading lists...some lecturers and put them on Talis, [some on] Learn Ultra...But then others will put in a Word document and upload that somewhere. (FG8)

Some students felt the same was true for study skills/academic support resources, which might be available, but were not always easy to find.

There are a lot of resources there, but they're not structured well. So when I asked, "Is there any modules to help me to improve my reading skills?"...I need to email the person who is taking charge of this. I cannot find it by myself, because it's not structured...it's accessible after all, but you could not find it easily. That's the problem. (FG8)

Access to one-to-one academic support provision could also be inconsistent.

[Academic advisors] assign 10 minutes, and they're very strict about the 10 minutes...And it depends how great your academy advisor is. But some of them, like mine, weren't that great...when I told them about like my issues and stuff like that, they didn't know how to advise me. (FG3)

I have a DSN and it doesn't get read, unless I get like in that I ask for it to be...it'd be good to have like a check in...like, "How are you doing? Like, how's it going?" Like, "How's the work? Are you keeping up?" (FG4)

3.3.2 Provision of learning materials

Students said they would like materials to be available a set time before taught classes, but this did not happen consistently.

...it was quite inconsistent. So sometimes, the handouts were posted online, sometimes the lecture PowerPoints were posted before the lecture, [sometimes] they were posted afterwards. And sometimes it didn't match up, like the content that she was teaching us. (FG2)

The issue of insufficient textbooks in the library was also raised, leading to the expectation that students buy their own copy

3.3.4 Accessibility of learning

Regarding accessibility of learning, the main concern raised by students was around the need for clarity in how to access support, such as requesting an extension.

The whole process was really opaque because I wasn't able to get in contact with the right people to help me with that. [I had] to sort of do it myself. But again, it's sort of very stressful to manage that on a case-by-case basis, and not be sure if it'll be approved or not. So that that aspect of it is quite messy and a lot of additional stress and workload in that sense. (FG10)

3.3.5 Inclusion and representation in learning

Students reported that they may not be able to relate aspects of modules if the content is not at the right level for the class and sometimes because prior knowledge, of either specific content or the university learning environment more generally, is assumed.

...literally in the first lectures...everyone seemed to understand the content. And I was like, "What?" and I was literally searching, I was Googling every single thing...I was just very confused as to what the content was...there was just this assumption that we would understand things straight away...a lot of the content, a lot of middle class students would

have understood...a lot of the content was just like, "Oh, yeah, you should understand this; you're middle class." (FG2)

...whether it's from a disability...if you're not sure what the correct social cues are, or if you're coming from a different style of learning background, and you're not sure what the norm is, I think there's a real assumption that you know how you're supposed to behave sometimes. And making that clear for everybody in advance might make put people at ease a bit more. (FG10)

As a result, they felt that more learning support provision would help students to feel included whatever their previous educational experiences.

I think maybe the guidance on sort of essay writing in first year was quite limited and in terms of like, how you should structure it and what to include in each bit...I never used to do that school. And that's not something I was told to do... I think in first year...setting up expectations a bit more because we've all had different [experiences] (FG7)

Students highlighted a few examples when sensitive issues had not been dealt with as well as they might be in teaching sessions.

...the way that queer relationships were approached wasn't too great... it wasn't addressed very well, in terms of being inclusive to like, the people in the room they were teaching... When those sorts of issues were addressed by other lecturers, they were addressed, like properly and with dignity (FG1).

3.3.6 Scaffolding

A further issue discussed by students was the lack of structure or scaffolding to tasks outside taught sessions. Groupwork was a particular area where students would like more guidance on how to conduct the tasks outside of taught sessions.

Other than setting us reading, they don't structure anything for us to do and we're kind of left on our own, and especially the first year, I feel like they could help us a bit more of what they expect us to be doing. (FG4)

I had a group assignment...that I ended up having to sort of mostly write myself the morning it was due because no one else had bothered, which wasn't particularly fun. (FG8)

3.4 Evidence from staff consultation

3.4.1 Multiple means of representation, action, expression and engagement

Some staff were experimenting with alternative ways of structuring learning which would allow students more flexibility.

...differentiated ways of learning and scaffolded learning...it allows you to have learning sections, if you like in smaller chunks, and then guiding the students to a reading and then coming back to an activity...it allows a different way of teaching and a different way of learning. (Group M)

Whilst staff appreciated the importance of offering multiple means of representation, action, expression and engagement, they also felt it was important to offer support which would allow students to engage in activities or aspects of learning they found challenging, rather than simply allowing them to 'opt out'.

...the kind of philosophy of the current design, you know, 'You've got a barrier; we'll try and remove the barrier' is not as strong as saying, 'Yes, there is a barrier there; let's find

strategies for how you can cope with this, because you're going to encounter this barrier recurringly'...We should be looking at developing the student and helping them to come to strategies rather than giving them excuses... (Group L)

3.4.2 Provision of learning materials

Staff described how they might provide resources in a variety of formats for students to engage with in advance of a taught session.

The direction I'm definitely moving in is going not towards full flipped lectures, but to providing students with some information beforehand that they need to interact with to be able to engage with the lecture, and it might be a five-minute video, or it might be reading a short paper that I've written or something like that. (Group C)

3.4.3 Accessibility of learning

Whilst most discussions focused on the need to make adjustments for individual students, some staff are keen to ensure that teaching materials are universally accessible, for example, measures such as video captions and image tags were "built into the baseline of what we design" (Group I). However, it was acknowledged that there could be inconsistency, for example, in terms of checking the accessibility of resources uploaded to Learn Ultra.

Staff felt they needed more practical support, training and guidance in making teaching more inclusive and would like improvements in systems around inclusion, particularly DSNs, to identify the most effective and feasible types of support that should be provided.

[There needs to be] high quality training for staff...it depends on the colleague. And that isn't how it should be...It's so uneven, and it's dependent on individual people's sort of approaches...if there's such of a disparity, one thing, there really should be a baseline, the university has an expectation... (Group K)

...we're very committed to wanting to our teaching to be accessible. But the flows of...information receiving....there's a lot about that system that doesn't quite work and requires students to jump through quite a lot of hoops to actually get acknowledgement of their particular disability as well. Rather than working on the assumption that it's better to get that information in a timely way. (Group A)

3.4.4 Inclusion and representation in learning

Staff are aware of changes in the student body, including a more diverse range of educational and ethnic minority backgrounds and greater numbers declaring disabilities. It was felt that more study skills provision and other measures are needed to better support students from diverse educational backgrounds.

...something like a pre-sessional, something that is maybe more at faculty level that that prepares students for their journey...to offer those extra skills, the extra scaffolding that's needed for some students. (Group A)

There was limited discussion about inclusion and representation in learning design, but there were a few examples demonstrating how staff tried to ensure the learning environment was inclusive.

...I don't speak English as my first language. And I am very open about it...I always make sure that I am giving my own example to students...I give scenarios, I'll start with my own experiences, thereby giving them permission. (Group H)

3.4.5 Scaffolding

Staff were aware of the importance of scaffolding within their teaching generally, although scaffolding of tasks outside of taught sessions was not explicitly discussed. Several described their approach as providing a basic foundation or structure for students studying within their subject area.

I also see myself as...offering a structure to enter a field to approach knowledge creation in the field... (Group A)

However, current module structures were not felt to be designed to promote scaffolded learning.

...on the module outline, [it's] fairly restricted; it's workshops, seminars, lectures...they're not well suited to promoting scaffolded learning. (Group M)

3.5 Inclusive learning design at Durham University

This section details existing principles and polices at Durham University and discusses gaps that have been identified in the analysis of the current state of play regarding inclusive learning design.

3.5.1 Current DU Principles and Policies relating to Inclusive Learning

- Principles for inclusive learning, teaching and assessment¹ cover what should be considered prior to teaching sessions, during the session and in assessment design.
- Lecture Capture Policy²
- Guidelines for the use of the learning environment³ and Minimum standards on the virtual learning environment⁴

3.5.2 Gap Analysis

Components of UDL appear in University policies and are further extended in the practices of some members of staff; these could helpfully be brought together to provide end-to-end guidance and frameworks for implementation. Some policies require updating to recognise changes in the learning environment, which has increased capacity in areas of inclusion, and the development of templates for Learn Ultra.

Students see inclusion in terms of accessibility and affordability, as well as a respectful environment in which to learn. These two areas require further investigation and consideration.

¹ Learning and Teaching Handbook: 7.4: Inclusive Learning, Teaching & Assessment - Durham University

² Encore: Encore Lecture Capture Policy - Durham University

³ Learning and Teaching Handbook: 3.9.2: Guidelines on the use of the Learning Environment, duo (Durham University Online) - Durham University

⁴ Learning and Teaching Handbook: 3.9.3: Minimum Module Standards for Duo - Durham University