

**Using the UDL framework to take account of student diversity when
developing summative assessment in a large class context:
Reflections of a higher education teacher educator**

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Abstract

Universal design for learning (UDL) is a framework for teachers to enable them to consider diversity in student cohorts and therefore, to put systems in place to include all learners from the outset when representing concepts, designing student response opportunities and considering student engagement. UDL relates to all pedagogical elements of a learning experience; this paper focuses on its use for developing inclusive summative assessment in a large class context. Students in a large, final year programme were presented with a range of choices for the summative assessment requirements for a module focusing on inclusion in schools. This paper uses Gibb's (1988) model of reflection to provide insight into the (a) nature of the assessment; (b) motivation for using UDL for structuring this element of my pedagogy; and, (c) the opportunities and challenges presented by using this approach in the large class setting.

Keywords

Universal Design for Learning, UDL, large classes, assessment

1. Introduction and Motivation

The UDL framework comprises three fundamental principles (Rose, Gravel & Gordon, 2014):

1. Multiple means of representation (the ‘what’ of learning). Here, the focus is on how the teacher communicates the key concepts and ideas of the curriculum.
2. Multiple means of action and expression (the ‘how’ of learning). This refers to the ways in which learners may demonstrate their learning and understanding.
3. Multiple means of engagement (the ‘why’ of learning). Here, the motivation to learn and persistence to stay on task is considered.

Each of these principles is underpinned by an emphasis on provision of choice for learners. UDL emerged from the principles of Universal Design which was originally developed in 1985 by Ron Mace (Rose, 2000) to ensure that buildings and products were designed for use by anyone from the outset regardless of (dis)ability, rather than altering them retrospectively to take delayed account of individuals’ access needs. Applied to learning contexts, the UDL framework examines pedagogy through consideration of the actions of teachers and learners with the intention of designing learning experiences which take account of diversity from the outset. Universally designing learning environments from the outset can be challenging; particularly so in the higher education (HE) context (arguably). The focus on the subject area/discipline content overshadows teaching aspect of the job from the outset wherein it is assumed if you are an “expert in your field you would be able, by some ill-defined means, to teach others” (Becker & Denicolo, 2013, p. 1). The challenge is augmented in the context of a large class where, by virtue of size, teaching and learning experiences can be perceived to be restricted but this perception may be more attributable to the limited pedagogical understanding of HE teachers rather than the numbers *per se* (de Matos-Ala & Hornsby, 2013; Iaria & Hubball, 2008). Ironically, it might be argued that because large class size likely ensures diversity of learners, this context is one in which UDL is most needed and learning experiences require deep consideration to

balance the effect of large numbers, particularly in an era where massification is sometimes attributable to widening participation (Allais, 2014).

I use the UDL framework to consider all three elements of my pedagogy i.e. how I present information; developing in-class and online tasks and materials to try to enhance motivation and persistence; and, how my students might demonstrate their learning and understanding (Rose, Gravel & Gordon, 2014). These three principles overlap somewhat but that notwithstanding, this paper focuses on the latter i.e. the development of assessment procedures using the UDL framework so that students are presented with a range of choices and ways of demonstrating their learning. Gibbs' (1988) six-stage model of reflection is used to structure my reflections on practice which are aligned with relevant theory. The model guides practitioners through the reflective process using the framework of description, feelings, evaluation, analysis, conclusions and development of action plan for future practice.

2. Reflections on Practice

Description

The module which is the focus of this paper is a relatively new, final year module which is now in its fifth iteration. Sometimes, I teach the whole class together; on other occasions I split them into workshop groups of between 30 and 40 students. Over these five years, I have developed a range of assessment strategies and tasks, using the UDL framework in the last three years to frame my work in this area.

Formative assessment is built into the module using a range of digital tools to enable two-way feedback. For example, in the large plenary sessions, I use Kahoot! to ask questions to establish prior knowledge or to consolidate learning. This, in turn, informs my teaching. I use Padlet and a throwable mic to allow students to ask questions during class. I stop once or twice to answer the questions and always answer all questions in writing on Padlet between classes. Teaching approaches like this allow me to reach a range of students who might not otherwise ask or answer questions in the large class context.

Summative assessment is also designed with diversity of learner profile in mind. This is a bit trickier and much more time-consuming. In considering the diverse range of learners, I try to ensure that there is a diverse range of choices and options for students to demonstrate their learning and understanding. In-class tasks represent 20% of the final grade. Those tasks require demonstration of different skills and knowledge vis-à-vis different elements of the module content. Workshop groups are enrolled on a google doc (one for each group) and use it to record their work on developing a learning plan based on a case study. I provide formative feedback in class and afterwards, on the google doc. In the plenary sessions, students are awarded marks for participation, engagement and attendance; one of the tasks they engage with is Peerwise, a digital tool which allows students to provide feedback to each other.

The independent learning task is a little more complex, with a range of choices provided. To date, those choices have included the analysis of a case study vignette; development of a lesson plan using a detailed class profile comprising 20 primary school students; creation of a handbook for student teachers on school placement or for newly qualified teachers; development of a website; and, most recently, the option to create their own assignment based on the learning outcomes and course content as outlined in the module descriptor. In addition, students can choose which peers to work with and how many up to groups of five.

Feelings

This module focuses on the contested concept of inclusion as it applies to primary schools. From the outset, I felt it was incumbent upon me to model the attitudes and beliefs I wished to develop in my students (Hallett, 2010) by modelling the enactment of inclusive practices. Initially, I used an examination format of assessment for this module which was developed using the principles of problem-based learning and supported by formative work in the classroom. However, this form of assessment did not sit well with me albeit that it required higher order thinking and application of knowledge, because I felt there were assessment possibilities for this module which would stretch students and engage them more. And so, I established different ways that students could engage with summative assessment by providing a range of compulsory in-class learning tasks, each of which was different in nature to the next.

In terms of the independent task, I felt it was important to provide choices that were real i.e. a set of tasks that were different from each other so that it was a real choice while simultaneously meeting the learning outcomes for the module. The experience of developing this range of assessments has only been positive. The obvious demands on my time and energy are more than compensated by the observed engagement of students and the work I have read and marked, some of which has been outstanding. As a HE teacher, I have grown in confidence through my work with this module, not just in terms of teaching but also in relation my scholarship of teaching and learning (SoTL) which actively contributes to the research element of my job.

Evaluation

From my perspective as a teacher, the benefits of embedding UDL in the assessment of this module far outweigh the challenges. The large class context creates a complex teaching and learning environment. I have tried to consider how teaching strategies usually used with smaller groups of students can be replicated in this environment (Cooper & Robinson, 2000; Teaching and Educational Development Institute [TEDI], 2003) in an effort to create a classroom community whereby issues can be teased out and the multiple perspectives of the student body can be harnessed (Kerr, 2011). The use of digital technologies has certainly supported my efforts to provide feedback to students, to assess their understanding and to create a motivational, engaged atmosphere amongst the student cohort. For example, using Kahoot! allows me to provide a fun approach to assess for learning which in turn, informs my teaching. Students can answer questions safely because the task is anonymous. It also reduces the isolation of the large class setting because they can talk to each other when answering, compare responses with the people beside them if they so wish and gain an insight as to where their understanding sits compared with that of the whole class. Using the workshop format by breaking the large class into small groups of 30-40 students provided me with personal contact with students, enabling me to assess their understanding and provide detailed feedback. The use of Peerwise to provide students with small tasks to increase engagement with policy and legislation seems to be an approach that most students value. While many students completed the minimum requirements for full award of marks, many chose to do much more, engaging with

their peers by providing feedback, answering each other's questions and creating much more content than was required.

In terms of the independent task, student evaluations (anonymous) seem to confirm my own evaluation of the provision of a range of choices (See Table 1).

Question	2017/18 N = 148			2018/19 N = 111			2019/20 N = 316		
	Yes	No	Not sure	Yes	No	Not Sure	Yes	No	Not Sure
I liked having a choice between different assignments for the independent task	97%	2%	1%	99%	0%	1%	95%	0%	5%
I liked having the choice of who to work with for the independent task	86%	8%	5%	91%	2%	7%	88%	0%	12%
I liked having a choice of how many to work with for the independent task	89%	4%	7%	92%	2%	7%	89%	1%	10%

Table 1: Student evaluations of provision of choice for the independent assignment

In the academic year 2017/18, students had two options for the independent task with an exact 50/50 split in choice between the two options. In the following two years, students have been presented with three options to choose from, with a further range of options within each. The three-way choice has resulted in one task being chosen by approximately 60% of the student cohort, with the remaining 40% split between the remaining two tasks. At this point in time, I do not know why that is the case. Further, in this academic year, I provided the opportunity for students to design their own assignment. Those who chose that option tended to take ownership of content and intended audience but retained the vehicles of presenting that content available to their peers i.e. website or handbook.

The time commitment and the energy required to manage choice and range of assessment on such a large scale cannot be ignored. This is compounded by minimal differentiation in the recognition of module size when considering workload. If a class is large, it will take up more of a staff member's time if using approaches

beyond the traditional ‘talk-at-them’ style – that is just a fact. I have taught on another module which had a class size of six; the time and effort invested in that module does not compare with that of the large class but it looks very similar when counting points for workload. Also, while most students rose to the challenge, some did not, barely scraping a passing grade due to lack of attendance and therefore lack of engagement with in-class tasks and/or lack of motivation to really engage with the independent task.

Analysis

One of the outcomes of massification of HE is thought to be the proliferation of large class cohorts (Allais, 2014). However, while there may be more large classes in recent years than ever before, they have always existed to some degree. They are often perceived negatively because *inter alia* they are aligned with the notion that only a talk-at-them, lecture style approach can be used (Hornsby & Osman, 2014); student engagement is reduced (Iaria & Hubball, 2008); teacher-to-student interaction is minimised (Cuseo, 2007), if not obliterated; and, there is a perceived limitation to summative assessment possibilities (Kerr, 2011) often resulting in reliance on multiple-choice style examinations. However, as a HE teacher who is teaching teachers, I have felt compelled to question some of the assumptions underpinning these assertions, particularly in relation to the module described above because of the necessity to tease out complex, challenging, contesting concepts which require discussion (Logan & Farrell, 2018). Moreover, I felt that I could not stand before a group of student teachers and talk to them about inclusive pedagogy while simultaneously ignoring the diversity of learners in my own classroom by relying on a narrow range of pedagogical approaches.

In the HE context, teaching is often viewed as being either ‘teacher-focused’ where the key consideration is on what the teacher is doing rather than on student learning *or* ‘student-focused’ wherein the HE teacher considers the learning and experience of the students (Akerlind, 2003; Prosser & Trigwell, 2014; Barnett & Guzman-Valenzuela, 2016). However, this may be creating an unhelpful and erroneous dichotomy in terms of how the role of the HE teacher is viewed. At the first and second level stages of education, creating environments which promote student learning are inextricably

linked to the role of the teacher; the focus is on the alignment of both. Hammermass et al. (2007), writing in the context of primary and post-primary teaching identify three characteristics of learning to teach: (a) thinking in ways different from what has been experienced when a student; (b) the ability to enact knowledge and information about teaching i.e. ‘knowing how and why’ as well as ‘knowing that’; and, (c) the ability to deal with complexity and make decisions that cannot be routinised because they are contingent upon student responses, needs and classroom events. While Hammermass and her colleagues are referring to first and second level educators, it is likely that these characteristics/skills of teaching are pertinent to third (HE) level. In particular, when the teacher becomes ‘student-focused’, s/he is required to focus on themselves as teachers. In fact, I would argue that good effective teaching *demand*s focus on the teacher because it is through the teacher that learners’ needs are met. This is even more important in the large class context because of the challenges presented by large numbers of students.

Using UDL provides a framework within which pedagogy can be supported and improved. It provides a way of thinking about each element of the pedagogical cycle of teaching-learning-assessment-engagement from both the perspective of teacher and student. In terms of assessment specifically, building in choice seems to enhance the learning experience and outcomes of many students. It also enhances the teaching experience by providing confirmation that students are learning and engaging. The issue of academic integrity is also addressed somewhat, depending on the nature of assignments offered. Firstly, creating assignments which provide genuine choice necessitates moving away from the essay form of assessment. It allowed me to be more creative in the development of assignments and in turn, resulted in some very creative assignments from students. Secondly, because the assessment was directly aligned with the teaching approaches and learning outcomes, it was specifically tailored to this module and so reduced the possibility (and possibly motivation) for plagiarism.

4. Conclusions and Future Work

Conclusions

For me, the large classes are my favourite classes. I love the challenge, the energy, the diversity that the large class brings. I love the potential it provides to grow my own teaching and to allow students to learn from each other. From my perspective as a teacher educator, the UDL framework does not provide new, ground-breaking pedagogical strategies and approaches. Rather, it formats existing pedagogical theories and approaches into a structured frame which is underpinned by two key principles; consideration of diversity from the outset and provision of choice. I have found the UDL framework really useful in terms of structuring my own thinking, particularly in relation to how students may demonstrate and express their learning through modular assessment. Moreover, I have built in so many choices that it is really easy to accommodate requests from individual students who may wish to pursue a particular path of enquiry not offered already; flexibility is normal.

Action Plan

An unexpected outcome of this approach was the publication of one group's assignment (Bolger et al., 2018). It was of a very high quality, synthesising and presenting information in a clear and accurate manner. The publication of this piece of work raises other possibilities for consideration going forward. The possibility of sharing the learning arising from assignments with others outside of the module needs to be considered. While I have designed assignments which could be used by fellow students, it had never occurred to me to reach a wider audience. The potential for alignment of assessment with scholarship in the field when providing original assignments at undergraduate level is relatively unexplored. Going forward, I intend to develop this element of the assessment design for this group of final year students to try to bridge the theory/practice divide as these students prepare to enter the profession as fully-fledged teachers.

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