THE POWER OF PEER LEARNING: GROUP REFLECTION AS A MODEL FOR UNIVERSAL DESIGN FOR LEARNING (UDL)

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Abstract

The challenges of developing a fully inclusive learning environment were brought to the fore through the shift to emergency remote teaching during the Covid-19 pandemic and served to highlight many of the inequalities and deficiencies of meeting learners' needs in traditional teaching practice. Fortunately, a framework exists to support the enhancement of this teaching space; Universal Design for Learning (UDL). UDL consists of a set of principles for curriculum development that aims to afford diverse learners equal opportunities to learn by providing more flexible and thus inclusive methods of teaching, learning and assessment. The three core principles of UDL include multiple means of engagement in learning, multiple means of representing information, and multiple means of expressing knowledge. This paper is focused on the present authors' collective learnings as a peer learning group of university educators participating in the Digital Badge for Universal Design in Teaching and Learning, accredited by Ireland's National Forum for the Enhancement of Teaching and Learning. We place particular emphasis upon the group's experiences implementing a UDL re-design of their teaching as part of the Digital Badge. Our analysis of this experience explores in detail each lecturer's reflective examination of their own teaching, learning and assessment practices; and the practical approaches taken to embedding UDL within these practices. It also considers the impact on the learners involved based on both quantitative and qualitative feedback from practitioners and student cohorts while highlighting the importance of engaging in peer groups. Finally, it concludes with a consideration on how engagement with UDL will impact future teaching practice.

Keywords: Universal design for learning (UDL), peer learning, lifelong learning, group reflection, case studies.

1. Introduction

Providing an inclusive learning environment is complex; and creating a culture of engagement and inclusion that works for all learners without accidentally marginalizing some in the process requires a systematic shift in thinking and a change of behaviour. Universal Design for Learning (UDL) is a learner-centred framework that emphasises accessibility, collaboration, and community. This framework acknowledges diversity of motivations and learning preferences in the learning environment and provides a set of principles for curriculum development and delivery. UDL seeks to reduce learning barriers and seamlessly provide appropriate supports, thus enabling educators to develop courses where all students have an equal opportunity to learn, while maintaining expectations of quality (Rogers-Shaw et al., 2018). The three core principles of UDL include multiple means of engagement in learning, multiple means of representing information, and multiple means of acting upon or expressing knowledge.

- **multiple means of engagement** in learning concerns the affective domain and suggests that there are a variety of methods to engage and motivate learners.
- **multiple means of representation** in learning concerns with how information is presented to learners, recognising that there is not one optimal means of representation.
- **multiple means of action and expression** in learning concerns how learners can demonstrate that they have learned and recognising that are multiple means to achieve this.

(CAST, 2018)

In the increasingly diverse and evolving Further and Higher Education landscape, UDL provides an effective framework to improve the learning experience of all learners. As an approach to inform Irish educators about UDL, a training programme called the Digital Badge for Universal Design in Teaching and Learning was developed by AHEAD and University College Dublin's department of Access & Lifelong

Learning, with accreditation provided by Ireland's National Forum for the Enhancement of Teaching and Learning (opencourses.ie, 2021). The stated goal of the Digital Badge is to provide participants with a solid introduction to the Universal Design for Learning Framework and offer an opportunity to implement UDL principles within the participants' current teaching activities (AHEAD, 2021). The programme requires approximately 25 hours' work over 10 weeks, primarily structured around educator peer learning groups and the redesign of an activity in line with UDL principles.

Figure 1. The Universal Design for Learning Guidelines (CAST, 2018).
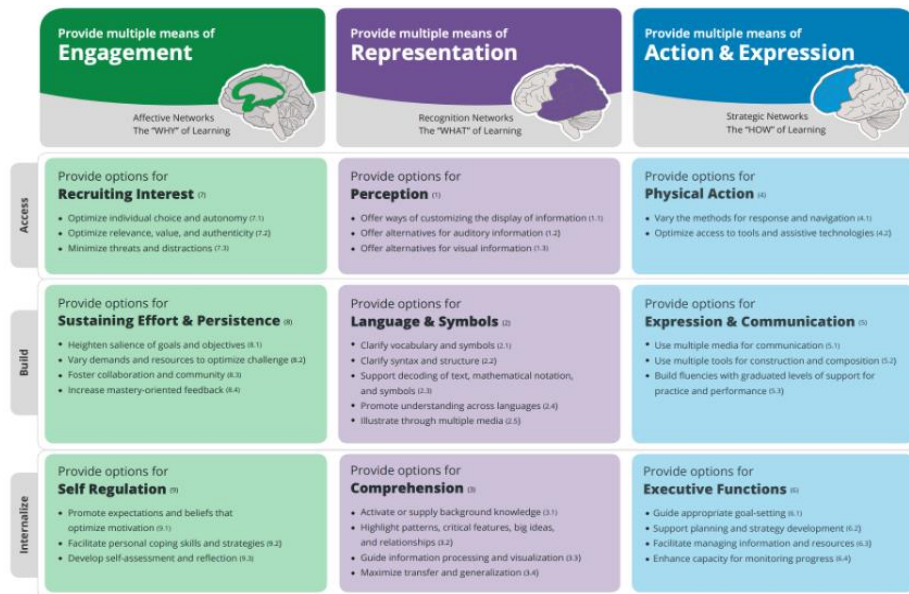
2. Case studies

This paper focuses on the redesign experiences of one such educator peer learning group, who participated in the UDL Digital Badge rollout in Sept-Dec 2021. The group consisted of five teaching practitioners from Technological University Dublin (TU Dublin); four of the cohort are involved in the delivery of a Creative Digital Media programme, while the fifth involved in teaching Psychology on undergraduate degrees in Social Care Work, Community Development and Youth Work, and Early Childhood Education and Care. The five have individually been involved in higher education from between five to twenty years and have experience across a number of disciplines.

If the goal of UDL is to develop an enhanced learner experience it is essential that staff engage with additional CPD in this domain. The present authors are a self-selecting cohort that has consistently taken the opportunity to further develop their teaching practice through regular CPD. Nonetheless, in committing to completing the UDL Digital Badge all shared a similar rationale, each expressed a view that they already incorporated UDL processes in their existing practice, albeit on an unsystematic basis. Solano (2020) has noted that when dealing with transformative change many respondents typically answer with "We do that!" even though in reality that may not entirely be the case.

A key strength of formally engaging with UDL educator peer learning is that it exposes its participants to a complete and systematic understanding of UDL practice by incorporating its members' complementary perspectives with reflexivity. Brookfield argues for critical reflection of teaching practices as a method for interrogating assumptions held, checking their validity and accuracy, and reframe these where necessary (Brookfield, 2017). Given this, all participants felt that the Digital Badge provided an important opportunity to enhance their practice. The following case studies present the key reflections of peer group members about the processes and outcomes of the learning re-design activity.

2.1. Case study 1: Providing multiple means of engagement

Creating high quality instructional materials and authentic assessments is important for learner success; though it is only meaningful if the learner is engaging with those materials. There are significant differences in how learners can be motivated to learn, and there is not one means of engagement that will be optimal for all learners in all contexts (CAST, 2018). Thus, the first goal of a UDL approach is to design multiple options for learners to engage: for example, with the content, with the mode of access/delivery, with the teacher, and with their peers.

This case study outlines the redesign of an assessment for "Professional Practice", a third-year module in the Creative Digital Media programme. The learning outcomes for this module include requirements to describe and analyse working patterns, career opportunities and trends within the digital media industry, and identify and reflect on their own skills and career aspirations within the sector.

The original assignment brief required students to research and write a report on one of four sectors in the digital media industry. While this brief allowed students a certain limited degree of choice, it was felt that there was considerable potential for improvement regarding scope, personalisation, and metacognitive reflection, with the goal of enhancing students' interest in and personal critical analysis of potential career opportunities. The assignment was therefore reviewed through a UDL lens, with particular attention paid to providing multiple means of engagement (CAST, 2018). As shown in Figure 1, the UDL guidelines for engagement consist of three principles – providing options for recruiting interest, for sustaining effort and persistence, and for self-regulation. Within these guidelines, four checkpoints were identified as being of specific relevance: 7.1, Optimise individual choice and autonomy; 7.2, Optimise relevance and authenticity; 8.1, Heighten salience of goals and objectives; and 9.3, Develop self-assessment and reflection.

To optimise individual choice and autonomy (CP 7.1), the first step was to ask the students what interested them. A class survey revealed a wide diversity of professional interests, with 21 different career preferences represented. The assignment was then redesigned to encourage students to research any sector in the digital media industry that interested them (e.g., animation, sound design, branding, game design, AR/VR, or any other sector of their choice). The redesigned brief also allowed students to submit their report in any appropriate format (e.g., written report, video, website, infographic, podcast, etc.). Offering such multiple means not only provided autonomy, it also enhanced the relevance and authenticity of the task (CP 7.2) as the topic could be aligned to individual interests. Similarly, students could determine their individual goals and objectives (CP 8.1) by researching a sector relevant to their own career potential. Finally, students were required to evaluate and reflect (CP 9.3) on how their own skills, experience and attributes matched the requirements for a career in their selected industry sector.

The outcomes of this UDL initiative were very positive. A post-submission feedback survey indicated that 100% of students welcomed the opportunity to choose their topic and their format. Typical comments included, "This helps me express myself the way I want to, the way that makes it actually fun to do! It's a joy to cover both topics and formats that I enjoy," and "I personally think the freedom to choose the format and topic gives me more of a drive to deliver my best possible work for this assignment." In terms of the options chosen, there was a wide variety of industry sectors represented in the reports. However, one surprising result was that despite welcoming choice in assignment format, a majority of students opted for a written essay. Qualitative responses to the survey indicated that students felt time-poor at the end of the semester, and many opted for a familiar format, even though it was not their first preference. This observation highlights the importance of providing support, guidance, exemplars, and time to practice when offering multiple means of engagement and expression, to allow learners to fully embrace wider opportunities.

2.2. Case study 2: Providing multiple means of representation

Sensory disabilities, cultural differences, and learning differences among learners all contribute to the need to present information in a number of different formats. This second case study details a redesign process aimed at increasing means of representation within a first-year module, particularly in relation to guideline 1 of the UDL guidelines; 'Provide options for perception' (see Figure 1).

Prior to the redesign activity multiple options for perception were already in place. Class notes and materials were available in a customisable written form, audio versions of written notes were made available, and much of the course material was available in multiple formats. For this redesign activity the instructions that were given to students in relation to peer review were considered. This activity provided a good basis for assessing the impact of UDL principles in the short-term as it was an activity that occurred more than once throughout the semester.

Learners participated in a peer feedback activity in week 5 and again in week 8 of the semester. While originally both feedback activities were identical in structure, this redesign reviewed the instructions for the second activity with a view to increasing clarity using structure and formatting. In accordance with UDL Guideline 1 the following were implemented: break-down of instructions into step-by-step guidelines, increased use of headings and sub-headings, and increased use of font size and colour to communicate information and to separate and differentiate advice from instructions. Overall, the aim of this redesign was to provide a clear visual hierarchy of information which would help learners to engage more effectively with this activity.

Following completion, a short survey was issued to learners. Findings included an indication that most learners (73%) perceived the instructions for the second task as clearer. Most respondents (93%) enjoyed giving feedback more the second time, however this finding should be considered in the context

that most respondents (93%) perceived that their comfort with the task increased because it was the second iteration of the activity. Having said that, all respondents indicated that they appreciated the breaking down of instructions into steps, and most (86.7%) indicated that following a prescriptive step-by-step method made the task easier.

In practical terms, a significant improvement was noted in the learner comprehension and completion of the activity on the second occasion. Following the first completion several learners submitted work that had missed one or more steps in the process as laid out in the task instructions. There was a notably higher level of completion in the second feedback activity and there were less queries received relating to the second activity, and the tasks were more likely to have been carried out correctly and completely. While several variables, (stage in the semester, prior experience of the task) influenced the learner experience and feedback, this case study provides encouragement that providing additional options for perception increases activity completion and learner satisfaction.

2.3. Case study 3: Providing multiple means of action and expression

Multiple means of action and expression is considered the "How" of Learning. Invisible disabilities and other learning difficulties can have a significant impact on a student's mode of action and knowledge expression (Ross, 2019). Because learners differ, there is no one-size-fits-all approach to expressing themselves that will work for everyone. It is incumbent therefore on the educator to provide multiple means of expressing how they represent their knowledge and skills.

For this case study the UDL principle "Multiple means of action and expression" was applied in the redesign of a final assessment brief for an undergraduate module in visual design that accounted for 40% of the overall grade of the module. There are three areas where multiple means of action and expression can be provided: physical action, expression and communication, and executive functioning (CAST, 2018). The latter two guidelines were implemented into the redesign of the assessment brief.

The first guideline "Expression and Communication" was incorporated into the assessment brief in two ways. The first was by including activities that fostered the use of imagination in order to solve novel and relevant problems, or to make sense of complex ideas in creative ways that suited their mode of expression. The students presented their own interpretation of the broad problem that required solving. This ensured autonomy and freedom to express how their creativity and problem-solving skills related to their own interpretations of the problem solution; this promoted solving complex problems in a creative way that suited their mode of expression. To promote this autonomy within their own learning, the assessment brief was co-designed with the students.

The second was by providing students with options of presenting their knowledge in different formats; from the perspective of assessing knowledge transfer this was considered crucial for the effective evaluation of students who struggle with certain types of communication. Students could choose to present their assessment in a written report or by presenting their final output addressing the outcome and process via a recorded presentation.

Post assessment, students (n=52) completed a feedback survey on the redesign of the assessment brief. 50% strongly agreed, while 24% somewhat agreed they were more engaged with the assignment as a result of offering flexibility in choosing the scope of their project. 61% strongly agreed that providing a choice of topics for the assignment gave them more scope for creativity, 54% strongly agreed that choice gave them freedom in a more creative way. As a result of co-designing the assessment brief with the students 51% reported that they had more ownership of their own learning. 40% of the students indicated that having implicit milestones in the brief worked for them. 46% of students agreed that feedback at certain milestones engaged them to keep on track with their assignment.

To complement the "Executive Function" guideline of assisting students in becoming expert learners, the assessment brief emphasised planning and building a time management strategy; this was accomplished by offering weekly goals and checklists to keep students on track. To ensure that the students could monitor their progress, feedback milestones were built into the assessment brief, feedback sessions enabled the student to move from various stages of their project. A self-assessment rubric was implemented so that students could grade their own progress giving them a sense of ownership of their own progress. Providing the student with weekly milestones engaged and motivated the student to keep on track with their assignment so that feedback could be given allowing them to move on to the next stage of the assignment.

Reflecting on this redesign process, it was encouraging to see the positive learning experience reported by the students. Providing learners with options and flexibility in their assessment increased engagement and rates of completion and gave the students a sense of autonomy in their own learning. It is evident that implementing even minor changes in line with UDL principles provides a more inclusive experience for the learner.

3. Conclusion

Throughout the digital badge a "plus one" approach was advocated, asking participants to focus on one small area of their course design and delivery and make changes to improve the learner experience. The case studies discussed above indicate that it is possible to implement small, incremental changes over a short period of time, and these can be built on to enable continued improvements. Results, while tentative, are very positive overall, indicating that even small changes that are informed by a UDL perspective can improve learner experience, engagement, and output.

While each group member came to this process with some interest and understanding of UDL, through the digital badge each member has developed a more structured and robust approach to UDL and has identified areas that can be improved by further refinement. Continuous engagement and dialogue with both learners and colleagues throughout the redesign process has proved invaluable. The collegial format has provided a dedicated space and time to explore the UDL principles and consider how these can be best applied to both teaching and learning activities to create a more inclusive learning experience for our diverse cohorts of learners. This process of examining where UDL improvements can continue to be embedded into each member's teaching practices allows consideration on how to implement elements in small but significant ways. The incremental nature of the UDL plus one approach means that each module design and delivery can continue to be improved on an ongoing basis, where small efforts over time can result in substantial changes for learners.

As a newly established university, TU Dublin is committed to the goal of supporting the learning community through a Universal Design approach to all provision and services and to the physical environment, through a culture of equality, inclusion, and respect for all. The University's advances in UDL have been officially recognised by the Centre for Excellence in Universal Design (CEUD) and the National Disability Authority (NDA), and the institute continues to demonstrate a commitment to UDL through a variety of initiatives (Centre for Excellence in Universal Design, 2020). It is our intention to build on the insights we have gained in this area to contribute to the further development of a UDL culture within the University. Our own experiences peer learning group have enabled us to appreciate the challenges faced by our learners. By consciously allowing our teaching practice to be informed by UDL principles, we maintain rigor and high expectations, and perhaps more importantly we strive to enable our students to reflect on their own learning experiences and develop lifelong learning skills.

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