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An Examination of How Universal Design for Learning Can Satisfy Student Expectations

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Abstract— This paper investigates first year social science students' expectations and how these expectations can direct the design of continuous assessments. This paper shows how student expectations can be framed using the universal design for learning (UDL) framework. The data was collected using an online survey based on the MEPU questionnaire developed by (1,2). Analysis of the data revealed the expectations of the sampled social science students are both practical and altruistic. The students expect their time at higher education (HE) to not only prepare them to work in the job they want and develop new skills but to also facilitate a way to give back to society and relate what they have learnt to real life. This paper demonstrates how student expectations can be met by redesigning assessments. Using UDL, learning engagement for first year social science students is more relevant, authentic, and meaningful. Students' expectations were satisfied. Findings allow for better informed curriculum and teaching to assist students in their transition to higher education resulting in higher-quality learning. There are implications for educators in terms of marrying students' expectations using multiple modes of expression. Recommendations suggest the continued use of UDL to enhance student engagement and enjoyment on their learning paths.

Keywords— Higher education, social science, curriculum, expectations, universal design for learning.

I. INTRODUCTION

This study explores the expectations of first-year social science students as they begin their studies at an Irish higher education institution. Undergraduate students are likely to have a range of expectations regarding their education. The impetus for this work emanates from the fact that expanded access to and participation in HE has necessitated the development of a more informed curriculum wherein educators facilitate students in their adjustment to higher education. This paper demonstrates how social science student expectations can be met by redesigning assessments. The UDL approach is applied to design assessments accurately and authentically. The paper is organized in the following manner. The next section analyses prior literature on student expectations. A review of the literature in relation to integrating the UDL approach into modules in the HE system is then presented. Next, the data collection process and subsequent results are described. Following this, the application and analysis of UDL is documented. The paper concludes with a

discussion of the study's implications and recommendations for further research.

II. LITERATURE REVIEW

A. *Expectations for Higher Education*

Expectations are a person's anticipation of future events and conditions in any environment (3). Expectations and readiness for higher education (1–6) affect not only how students approach learning tasks, but also how they adapt to the larger higher education environment (3). Students' expectations for the outcomes of higher education vary depending on their prior educational experiences, academic self-concept, promotional material for the school, and exposure to current students or graduates (4). Students find the transition from secondary school to university to be a particularly difficult (5,6) and uncomfortable experience (5,7) as they are entering an unfamiliar uncertain area (8,9). Furthermore, students' expectations of higher education often influence their academic discipline selection, as they strive to match their degree program to their perceived strengths, interests, and personality (10). For example, (11) cite social science students are concerned about caring and people factors, with less personal value for attaining a well-paid job (12,13). Students' expectations can therefore influence the learning process, as well as their success and pleasure in higher education, in the same way that motivations for entering higher education are worth studying because of the indications they provide about motivations for learning (14).

Additionally, (15,16) suggest that those who feel isolated or disconnected from the institution are more likely to withdraw than those who feel a sense of belonging or sense of community with the institution and its occupants. (17,18) found most students who drop out of higher education do so in their first year as their expectations are not met. An important influence in non-completion is the misalignment of students' expectations of higher education with the reality of that environment's requirements (19), students become dissatisfied and may change their course of study or even drop out of higher education (4,20). First-year students have a variety of learning approaches and practices when adjusting to the wider higher education setting (21). An effective strategy to ensuring students are interested and satisfied with their course and, eventually, lower drop-out rates, is the use of UDL to align students' expectations of higher education with the reality of that environment's requirements.

B. Literature Integrating the UDL Approach

A crucial pedagogical strategy used in education to advance inclusive and equitable education is called Universal Design for Learning (UDL) (22). Research in the areas of education, neuroscience, and the impact of digital technology gave rise to UDL (23). It is a framework for education that directs the development of learning objectives, resources, teaching strategies, and evaluations for a variety of learners (24). By incorporating flexibility that considers students' strengths and needs into program design, delivery, and assessment (25,26) the entire education and training system can be made more inclusive (27). Learner variability akin with diverse expectations in the classroom is a fundamental tenet of UDL (23). Educators can reduce learning barriers and stimulate interest for students by proactively incorporating flexibility, choice, and engagement into their lesson plans to meet learner variability (28). Within UDL, the "why" of learning or the motivation for learning have been referred to as multiple forms of engagement (24). This idea helps educators to maintain their student's interest in and motivation for learning. How learners become involved and maintain motivation and interest is determined by their brain's affective networks. The purpose of lecturer instruction is to enable students emotionally connect with the subject (29). When it comes to evaluation and assessment, this means that there should be ways for students to show what they can do and chances for them to develop into more independent learners (27,30)(31). UDL serves to provide options in how students exhibit the skill to boost their passion for the program thereby raising the likelihood that lecturers will be able to connect with their students and their learning requirements (30,32,33) and expectations. According to (34), allowing students to make informed decisions about the tasks they do and the peers with whom they collaborate can increase engagement helping them to take advantage of their abilities, and meet their unique learning needs. Students desire the chance to demonstrate their knowledge in authentic situations (30). UDL encourages creativity and can enhance the experience of all those engaged in a variety of ways.

The study aims to:

- (1) Determine social science students expected outcomes for attending higher education.
- (2) Explain how UDL can be utilized to increase engagement and meet a range of expectations.

III. DATA COLLECTION

The data was collected using an online survey based on the MEPU questionnaire developed by (1,2). The research was conducted with first-year students enrolled on the BSOC Social Science programme offered at University College Cork. The questionnaire was circulated online in the early weeks of their first semester. Ethical approval for the study was granted by the university's relevant research ethics committee (*protocol reference number: Log 2021-250*). The

objectives of the study were explained to the students face to face and via email announcement. Students were also reassured that their responses are for the purposes of this study only. In total, 107 were distributed and 88 were returned representing an overall response rate of 82 per cent.

IV. RESULTS AND FINDINGS

A. Expectations

Table 1 shows students expect that their time at university will prepare them to work in the job they want (99%), to educate them about giving back to society (99%), to develop new skills (98%) and to relate what they have learnt to real life (97.7%). To have a good time (87%) and to increase my self-esteem and self-confidence (88.5%) were ranked the

Motivation item	No, not at all	Badly	Not so well	Well	Yes, very well
To develop new skills	0.00	1.14	1.14	44.32	53.41
To meet new people	1.15	3.45	4.60	32.18	58.62
To broaden my horizons	0.00	1.16	1.16	39.53	58.14
To have a good time	1.16	2.33	9.30	33.72	53.49
To experience intellectual growth and stimulation	0.00	1.15	4.60	36.78	57.47
To learn about new ideas	0.00	0.00	4.65	38.37	56.98
To increase my self-esteem and self-confidence	1.15	1.15	9.20	34.48	54.02
To learn more about giving back to society	1.15	0.00	0.00	45.98	52.87
To relate what I learn to real life	0.00	0.00	2.30	40.23	57.47
To be prepared to work in the job I want	0.00	0.00	1.15	37.93	60.92

least important.

Analysis of the data revealed the expectations of the sampled social science students are both practical and altruistic. The students expect their time at higher education (HE) to not only prepare them to work in the job they want and develop new skills but to also facilitate a way to give back to society and relate what they have learnt to real life. These responses are consistent with (11) because social science students are more concerned with caring for others and people than they are with their own personal value for obtaining a well-paying career (12, 13). Rather, they are more concerned with finding a profession they are passionate about. Here, the application of UDL is utilized to demonstrate how authentic assessments may be used to assist students develop new skills,

prepare for employment in a field they desire, and connect what they have learnt to real-world situations.

B. UDL Application

In 2002, the Centre for Applied Special Technology (CAST) published their iteration of UD for education, which they refer to as Universal Design for Learning, UDL (24). The framework includes three learning principles: (i) to provide multiple means of engagement, where educators should encourage motivation and long-lasting enthusiasm for learning; (ii) to provide multiple means of representation, where educators should make sure that learners are given a variety of learning formats; and (iii) to provide multiple means of action and expression, where learners can express themselves in a variety of ways (35).

Using the UDL framework, the assessment modes for the social science students sampled here were wholly changed to meet expectations and inclusivity. Giving students options can help them develop self-determination, pride in accomplishment, and a stronger sense of connection to their study. One of the most essential ways educators acquire interest in an educational context is to emphasize the utility and relevance of learning and to illustrate that relevance through authentic, meaningful activities. Individual choice and autonomy (36) was optimized by providing choice. The creation of academic assignments and classroom activities were open to student input, giving them as much autonomy and discretion as possible. The class voted on assessment type, weightings per multiple choice question (MCQ) as well as the number of MCQ's. Suitable dates for assessments and deadlines were also discussed and voted upon by the students. Times that suited everyone were chosen. By allowing students choose in the context for practicing and assessing skills, continuous assessment was no longer one assignment. Instead, the continuous assessment was now divided into three distinct tasks, namely a lower weighting MCQ, a video assignment, and a qualitative newspaper article review, satisfying student expectations of making the course as real to life as possible. Applying the UDL framework students could create their own academic and behavioural goals to meet their expectations whenever and wherever possible. Relevance, value, and authenticity (36) was optimized by providing tasks that allow for active participation, exploration, and experimentation. For example, each student recorded a short video on their phone of a real-life scenario where they recognized and applied course content. In this short video, the students included an audio explaining their interpretations, yet again making it as real life as possible.

Customizing the display of information (37) was also implemented whereby digital materials were displayed in flexible and customizable ways. PowerPoints were bullet points; videos were played with captions.

Newspaper articles were displayed with accessibility links. Patterns, critical features, big ideas, and relationships were displayed by emphasizing key elements in diagrams and formulas. Most importantly, multiple real-life examples were used to emphasize critical applications. Students' expectations were met. Options for expression & communication were provided by using multiple media for communication (38) equipping the students with a variety of ways to express themselves in their assignments. Choice was given to explain and or illustrate by way of a graph or audio to allow diverse students convey their knowledge, ideas, and concepts in the classroom. Text, speech, and drawing were used to master composition. The grading rubric for the assessment allowed for multiple expressions to meet multiple expectations.

C. UDL Results and Analysis

T Interviews were conducted with students to see how the UDL-inspired course qualities met their expectations. A sample of the responses are presented below.

- *Continuous assessment is great like this!! It is less stress and easier to learn by breaking down everything little by little.*
- *Assessments like this make learning real to life, which helps my understanding. This is what I wanted when I entered college.*
- *Assessments were diverse- just what I expect my working life assignments to be. Not all essay based.*
- *Including us in deciding the assessments made the course more relatable and far more interesting.*
- *Listening to what I and my friends expected from the course, assessments like this suited us.*
- *UDL was beneficial for me as it made me really like the course, I was very engaged with no thoughts of dropping out. Real life examples helped me explain what I was learning to my family.*
- *We were presented options that optimized what is relevant, valuable, and meaningful to us.*

Students praised the course structure and felt that the integration of UDL across the curriculum increased flexibility, the variety of assignments made them more attractive to employers, and the development of skills related to what they have encountered in real life facilitates an easier pathway to giving back to society. Students gave the course design very positive feedback. Overall, students felt more empowered to make decisions that would best promote their own learning and more in charge of their own learning experience and expectations (39).

V. IMPLICATIONS AND RECOMMENDATIONS

This paper demonstrates how student expectations can be satisfied by redesigning classroom assessments. Using UDL, learning engagement for first year social science students is more relevant, authentic, and meaningful. Using multiple means of engagement, multiple means of representation and multiple means of action and expression, UDL allowed students the freedom to choose their own learning paths and interact with the course material, as was already highlighted by (29). The use of UDL in this case meant that students could participate in class, express their opinions, and interact with lecturers; expectations were met, and classroom engagement was improved. It is acknowledged that the misalignment of students' expectations of higher education with those of that environment is a significant factor in non-completion (19). Consequently, giving students a voice in the assessment-creation meant students become more satisfied with less inclination to change their course of study or drop out of college (4,20). Ultimately, the UDL approach allowed students freedom in demonstrating their abilities in a diverse range of ways (30,31,35) ultimately satisfying their expectations. The authentic assessment UDL method received favourable feedback from students overall. Students took use of the variety of options provided and expressed themselves in original ways. The findings ought to be immediately useful and applicable to maintain engagement and limit drop-out rates.

Recommendations and future works suggest the continued use of UDL to enhance student engagement and enjoyment on their learning paths. Furthermore, at the beginning of the module, a needs analysis of the cohort of students who will be entering higher education should be conducted. This significantly affects how the UDL assessment design will be put into practice. It is recommended that university management and policy makers broaden the scope of this study to include more university courses and carry out a college-wide comparison. This will enable better-informed curriculum and instruction to support students' transition to higher education and lead to higher-quality learning.

Students here developed a sense of ownership generating innovative ideas for how to interact, express themselves, and meet expectations when they were included in the design process. However, although this work offers details regarding the incorporation of a UDL approach, a few constraints were unavoidable when undertaking a survey of this type. To begin, the research employs a single descriptive analysis. While the method provides an assessment of students' ideas and UDL application, it does not provide an in-depth analysis. Secondly, the study is limited to social science students studying one course at one university in Ireland. The relationship between class size and mode of

instruction could be the subject of further study. Does the use of authentic assessments have a recommended class size? Would the research results alter if the same method had been applied to a smaller or larger group of students enrolled in a higher degree program? Future work could also include peer evaluations, group projects and reflective journals amongst others. Future research may focus on how to give students more influence over their education by assessing expectations regarding grades, grade retention, and accomplishments. Additionally, added qualitative research would enhance the present study's findings by revealing a richer understanding of students' expectations and experiences.

This work does however carry implications for educators in terms of marrying students' expectations using multiple modes of expression. Sensitivity and understanding between lecturers and students are critical in overcoming expectations gaps, particularly at the start of an academic program (5). In the academic community, it stands to reason that faculty and institutional buy-in with respect to UDL would be furthered by strong evidence of its effectiveness (39). Results could then enable a realignment of module delivery to adapt to diverse students.

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