

Assessing Students in Higher Education in Light of UDL Principles

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ABSTRACT: The increasing diversity among students in higher education institutions requires implementing a variety of assessment methods to assess their academic performance in ways that reflect what they have learned in line with their abilities and needs. To achieve this goal, faculty members can incorporate the three principles of Universal Design for Learning (UDL) within their university courses' assessments; these principles include multiple means for representation, engagement, and expression. This paper provides faculty with methods to consider each principle within different types of assessments in their courses.

Keywords- assessment, diversity, higher education, Universal Design for Learning

I. INTRODUCTION

Recently, there has been increasing diversity among students enrolled in institutions of higher education, as there are growing numbers of students enrolled from different cultural and ethnic backgrounds [1]. The number of students with disabilities has also grown, with 19% of undergraduate students in 2015-2016 reporting that they have disabilities [2]. This diversity among students reflects different learning needs that are difficult to address by following traditional teaching methods [3]. Further, using a single approach in teaching students of differing needs cannot respond to the distinct challenges each student faces [4]. There is, therefore, a need to find multiple methods of helping all students, including those with disabilities, to access the curriculum and achieve success, and this is what Universal Design for Learning (UDL) can achieve [5]. Indeed, the implementation of the UDL framework in higher education institutions has become supported by law, as the Higher Education Opportunity Act [6] supports the implementation of UDL principles in order to facilitate access to learning for all students (20 U.S.C. § 1003(24)).

According to Rose and Meyer [7], UDL is a framework designed to provide alternatives that make the curriculum accessible and flexible to all students of different abilities and needs. Faculty members can work to implement flexibility in the curriculum by considering the principles underlying the UDL framework that enable multiple means of representation, expression, and participation [8]. However, the UDL framework not only applies to providing information and teaching, but also extends to assessment [9].

Incorporating the principles of UDL into assessment will give students multiple ways to demonstrate their knowledge and skills [10]. Considering UDL in assessment also provides faculty with accurate information on student performance on an ongoing basis, which will help them to make the necessary changes to improve the learning process and thus increase learning opportunities for students [11]. Faculty members play an important role in the application of UDL principles, which in turn enables them to remove barriers that may prevent students from accessing academic content [12]. Nevertheless, faculty may face some challenges when teaching diverse students, despite their experience and expertise in teaching academic content, as they may not have sufficient experience in assessment methods [13]. Given that faculty members have to consider UDL in their course assessment [10], the purpose of this paper is to provide them with methods of incorporating these principles into their assessment.

II. INCORPORATE UDL PRINCIPLES IN ASSESSMENT

Faculty members use assessment with students in higher education settings in order to identify their competence in achieving the objectives of the course and the challenges they face in achieving the required competence [14]. Through the results of the assessment, faculty can identify the effectiveness of their teaching and thus make the necessary adjustments [7]. A curriculum based on the UDL framework would help educators to conduct flexible assessments that reflect students' performance continuously and accurately [15]. Faculty members can rely on UDL principles to provide students with choices in their assessment when developing formative assessments that are continually conducted, as well as within summative assessments at the end of a particular unit or level [16].

It is important to note that assessment within the concept of universal design does not mean passing all students, but rather removing barriers in order to enable everyone to show their skills and abilities [17]. Assessment within the UDL curriculum is characterized by its flexibility in providing options that give students the opportunity to demonstrate the knowledge and skills they have acquired in the way they prefer. Such flexibility in assessment also has a role in encouraging students to seek knowledge beyond the requirements of the assignment they are being asked to do, especially as they have chosen what interests them [15; 10]. Furthermore, the integration of UDL into assessment is not only beneficial to students, but also to faculty, as these practices would enable them to look more deeply at the course's goals and objectives, to determine what students should show during the learning process, and to notice the students' enthusiasm and creativity in their courses [10].

Faculty members can provide different assessment methods and options to allow students to express their knowledge and skills based on the three principles of UDL: providing multiple means of engagement, representation, and expression [18]. The engagement principle refers to the use of different methods that support the diverse interests of students in ways that increase their participation in a variety of learning opportunities [19]. The principle of representation means presenting the content by providing different methods and options [8], while the principle of expression means allowing various ways for students to express their skills and knowledge [15]. However, faculty may be wondering how to apply the three principles of UDL to make their assessments more flexible and diverse. Therefore, the following section offers suggestions on how to consider each principle within different types of assessment.

1. *Provide Multiple Means of Representation*

Providing multiple means of representation in the assessment means presenting the components and elements of the assessment in a variety of ways, enabling faculty members to obtain accurate information about students' performance without any obstacles that may prevent them from accessing the required content [20]. Based on this principle, the content of the assessment may include the use of concept maps, tables, drawings, videos, and images, taking into account the need to provide alternatives to these media, such as reading text, to meet the different needs of students [20; 7]. Assessment content can also be supported by adding links to essential information or a list of key vocabulary and terms [7]. Tobin and Behling [10] also point to another form in which assessment could be provided, in which the faculty member can use the university's learning management system to activate electronic discussions and motivate students to research and share information through this platform. It is also important to note that the feedback provided by the faculty member is not limited to the written form, but can also be audio [10].

2. *Provide Multiple Means of Expression*

Through this principle, assessment is developed by providing different means through which students can express what they have learned, in line with their preferences and needs [7]. In order to obtain accurate results, it is important to consider the different ways in which students can demonstrate what they have learned, as well as to determine what is being measured and how that relates to the content of the assessment [20]. Giving students access to technology is one way they can respond to assessment without barriers. This may include the use of spell checking or allowing them to answer through voice recording (which can be transcribed into text using software), in writing, or through illustrations [21; 7]. According to Black, Weinberg, and Brodwin [22], allowing students to use technology during testing, such as writing on a computer or using a screen reader, would help many students, not just those with disabilities. Using a computer facilitates writing for students who find it challenging; it also helps students focus and think better, and it makes their responses more structured [22].

It is important to note that the options provided to students should be linked to the goals and objectives of the assessment [10]. Nonetheless, in some cases, there may not be a chance to provide options for the format of the assessment, especially if the assignment requires students to write an essay [23]. In this case, the flexibility could be in guiding students toward writing the essay through speech-to-text conversion, in advising them to prepare by providing them with ways to organize their ideas, or in showing them examples through

which they can understand the expectations [23]. On the other hand, if the goal of the given assignment is not writing itself, but rather to encourage students to think critically, faculty can provide more flexible options for students to do this task, which may include a written response, a video recording, a presentation, or an audio recording. Thus, students receive different and flexible options to perform the task that are commensurate with the objective of the assessment [10].

3. *Provide Multiple Means of Engagement*

Based on this principle, students' performance can be improved by providing stimulating options that increase their participation in assessments [20]. There are many methods of motivating students to participate in an assessment effectively. One such method, which is especially effective for large projects, is to allow students to submit the assignment in parts and receive continuous feedback before turning in the final version [24]. Thus, the students have the opportunity to practice their skills and get feedback on the parts of the project they are working on before getting the final grade [10]. The importance of providing continuous feedback is due to its role in enabling the student to recognize their level of achievement and what they still need to do to achieve the desired goal in a way that develops their performance [22; 19]. In addition, students can be more involved in the assessment by having the opportunity to choose between a range of topics for the essay, for example. On a test involving multiple-choice questions, it is possible to increase the number of items and ask students to select a specific number of them to answer them instead of answering them all [10]. Burgstahler [24] suggests that tests include different question formats to show knowledge, such as short answer, multiple-choice, or essays, and that instructors should provide students with a study guide on how to prepare for the test.

It is also important for faculty members to provide clear expectations for the students about the course and the tasks required; to describe those tasks clearly; and to clarify assessment methods, grading rubrics, and due dates [24]. Such stimulating conditions will encourage students to feel confident about their ability to meet expectations regarding their level of performance [20]. Additionally, providing students with different options in assessment makes them comfortable to choose what suits their abilities, and it also increases their level of motivation and the value of the requirements for them [25].

Some faculty may reject or be challenged by the idea of incorporating the principles of UDL into assessment to allow all students to express their knowledge and skills through the provision of multiple methods of assessment, as some believe that this may make assessment more complex, especially with regard to achieving fair grading for students who select different options for an assessment [26; 10]. Fairness can be achieved in grading students' work despite its diversity by preparing a rubric form that includes a single set of criteria for evaluating these different works [26]. Thus, with one set of evaluation criteria that take into account the goals of the assignment, it will not be difficult to evaluate different types of work as long as they achieve the purpose of the assessment [10].

III. CONCLUSION

The UDL framework provides a promising model to facilitate access to course content for all students in higher education settings, due to its flexibility and provision of multiple means for representation, engagement, and expression. This flexibility and these options will facilitate access for all students by taking their differing abilities and needs into consideration. Interestingly, when the UDL framework is implemented in a curriculum, this is not limited to teaching content, but extends to assessment as well. Through developing assessments based on the three principles of UDL, faculty members will enable all students, including students with disabilities, to demonstrate what they have learned in line with their abilities and needs, which in turn enables the faculty member to obtain accurate information about their students' skills and knowledge. This will not be without challenges, but with a clearly defined purpose of assessment aligned with the objectives of the course, it is possible to overcome many challenges.

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