

The Application of the Universal Design for Learning in University Curriculum Design

Ukrainian education today is going through a number of important reforms. Among them is raising accessibility and introducing inclusiveness both in schools and universities. This complex modernization is based on a number of international human rights documents (e.g. the Declaration on the Rights of Disabled Persons and the Salamanca Statement and Framework) that have been ratified in our country and reflected in the basic national regulatory acts (e.g. the Laws of Ukraine "On Education", "On Secondary Education" and "On Higher Education").

Since 2018 the Ukrainian educational system has experienced multiple transformations at the national and regional levels, like modernized and reconceptualized Inclusion and Resource Centers, the introduction of inclusive schools, the engagement of teacher's and learners' aides, obligatory in-service teacher training in the context of catering for special educational needs of their learners etc. At the same time, there is a certain stagnation and disproportion in finding solutions of the issue of curriculum accessibility.

According to Cambridge dictionary **accessibility** is interpreted as the fact of being able to be reached or obtained easily [7]. Accessibility is also explained as the elimination of **barriers** which are classified into 6 broad categories:

- *Architectural* (that emerge if locations are inaccessible due to peculiarities of building or territory design);
- *Information* (if information is presented in some inaccessible format);
- *Procedural* (if complex procedures cause person's inability to use a service);

- *Psychological* (that are caused by biases and prejudices for definite groups of people or when people are self-prejudiced);
- *Economic* (if the lack of money prevents people from having a typical life-style);
- *Regulatory* (when a necessary document cannot be accessed due to some access limitations or regulations) [3].

Curriculum can present information and procedural barriers for students accompanied by psychological ones and having a highly demotivation effect. To overcome these barriers reasonable accommodation and universal design can be applied. **Reasonable accommodation** is defined in the Law of Ukraine "On Education" as the implementation of necessary modifications and adjustments aimed to ensure that special educational needs of all learners are met according to their constitutional right for equal education [5]. In the United Nations Convention on the Rights of Persons with Disabilities (CRPD) reasonable accommodation is interpreted as necessary and appropriate modifications and adjustments used situationally to give persons with disability possibilities of implementing all human rights and fundamental freedoms [11]. Reasonable accommodations are usually applied if buildings, processes, services, environments after a period of (more or less) successful application are found inaccessible for a person or a group of persons and have to be adjusted to their special (educational) needs. These *adjustments* can refer to learning principles, methods, means and environment. *Modifications* mean that the amount or complexity of material is changed according to a person's abilities. During modification, the teacher usually simplifies the content of the curriculum for a particular student, taking into account his characteristics. The teacher can also exclude parts of topics or condense the content of the program; the main condition is to ensure the child's activity during educational socialization and active participation during class life [10].

Another and more rational way of meeting special educational needs of all or most learners is the **universal design**. It is understood as a design of all things that takes into account the needs of each and every one [2].

There are 7 *principles* of the universal design, namely:

1. Equality and accessibility of use.
2. Flexibility of use.
3. Simplicity and intuitiveness of use.
4. Availability of information presentation.
5. Tolerance for mistakes.
6. Little physical effort in using educational facilities and means of learning.
7. Availability of the necessary size, place, space [1].

The Universal Design can be used to raise the accessibility of:

- social spaces [1: 150];
- products and things [4; 6];
- environments and places [1; 4; 6];
- information, communication and policy [4; 6];
- the organization of information technologies or services [4].

In its turn, the **Universal Design for Learning** (UDL) is interpreted as a set of principles for *curriculum development* that give all individuals equal opportunities to learn guiding the creation of learning outcomes, resources and assessments that work for everyone. It is substantiated by research in the field of neuroscience and is designed to improve the learning experience and outcomes for all students, including students with disabilities, students from diverse cultural and socio-economic backgrounds, mature students and international students [12].

According to surveys higher education places various difficulties on students. Some of them are quite discouraging as they are not connected to the mastery of content or engaging into practical activities but rather to the inflexibility of curricula – students' motives and preferences for the media of material presentation, methods and modes of instruction and assessment. Making curricula accessible for all or most of students is a problem which can be solved by means of applying a framework of the Universal Design to its development. This **framework** is based on the following *ideas*:

1. All learners are different (variability of learners).
2. Everybody can become an expert learner to the feasible extent [8].

As compared to the Universal Design for Learning framework, the traditional curriculum design practice presupposes that a "fair" curriculum is when everyone is learning in the same way [9] because "one size fits all".

The framework of the Universal Design allows a designer to take into consideration students' diversity providing them with various opportunities of using their strengths to cover the material. Namely, the *learner variability* idea means that due to their differences all students can have different challenges caused by discreet learning difficulties, disabilities or other reasons due to diverse social, genetic, professional and other backgrounds. As enabling them to act effectively at a workplace is definitely more important than to make sure that they have accomplished a set of standard timed activities, it is worth getting to know their preferences and special educational needs and to give them voice and choice by means of the multitude of material presentation, activity and learning outcomes variants. It is attainable by means of engaging a virtual learning environment of a subject. To make curriculum accessible academics have to ask themselves, "Is the curriculum designed to optimize learning for all students?"

The second framework premise states that *all students can become expert learners*. According to the definition by A. Meyer, D. H. Rose and D. Gordon [9] the process of mastering knowledge is described as becoming an expert learner. The main features of the latter are being:

- purposeful and motivated;
- resourceful and knowledgeable;
- strategic and goal directed [9].

To raise the accessibility of a curriculum by means of the Universal Design for Learning 3 correspondent recommendations can be followed:

1. Consider how a curriculum can provide learners with options to be engaged in what they are learning.
2. Find out how to provide learners with multiple means of representation to foster deeper understanding of concepts.

3. Find ways in which curriculum can provide learners with options to act on and show what they know [9].

The suggested recommendations illustrate the basic principles of using the Universal Design for Learning in curriculum development. The 1st one can be implemented by means of survey, interview and observation methods. The outcomes can reveal students' interests and motives in learning that can be used to adjust content, methods and means of learning. The 2nd one leads to giving students various opportunities to learn the subject (menus of activities for classwork and home task, different modes of content presentation – text, audio-, video-, illustrative materials, possibility to develop competences in the class or independently having access to all assignments and content etc.). The 3rd one means that students are able to present materials choosing from a number of options (orally in the class, using recorded oral presentation, in writing etc.).

The Universal Design for Learning is an approach which taken systematically can significantly improve students' performance and reduce difficulties, give them a possibility to use their strengths, learning preferences and styles to develop personally and professionally.

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