Universal Design for Learning: A Theoretical-Practical Model for Quality Inclusive Education, Case Study Postgraduate and Continuing Education Directorate of the State University of Bolívar

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Abstract

The Universal Design for Learning UDL is a model that is based on theories, academic-scientific research, the learning results of the different curricula, each learning environment and neuroscience specifically in neuro education, in order to be able to generate inclusivity in the actors of the teaching-learning process, and based on the experience of generating practical, real and universal proposals, that is, for it to be universal it must be understood that its conceptualization starts from the recognition, methods and strategies to link them to the representation of information and what is conceived in the educational process and the implication – action. In this sense, Universal Design for Learning integrates and covers the educational process, from planning to the reinforcement process, with the aim that students take advantage of various learning opportunities, in the same way it makes teachers more flexible. the micro, meso and macro curricular design, in order to minimize limitations and unforeseen events in academic execution. Finally, the DUA has potential both in episteme and in praxis, facilitating academic activity and being aligned with Sustainable Development Goal 4 of the 2030 Agenda, inclusive and quality education is guaranteed, promoting learning opportunities for students of the different master's programs in the Postgraduate and Continuing Education Directorate of the State University of Bolívar.

Keywords: *Teaching - learning, inclusive education, Universal design for learning*

Introduction

Universal design for learning was proposed as a theoretical-practical model for inclusive quality education in the Directorate of Graduate and Continuing Education of the State University of Bolívar, with the aim of determining the degree to which professors have generated universal and inclusive proposals for the teaching-learning process of the

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students of the different master's degrees offered.

The need arises, since, as he mentions, in every classroom there are students with different abilities, languages, cultures, ways of learning, interests and illusions. And teachers who have to ensure that everyone learns and achieves the planned objectives. Equality of opportunity is often confused with equality of learning situations and teaching is proposed based only on homogeneous activities, equal for all students. In the same way, they consider that today, the educator has the great challenge of attending to each of the students in a comprehensive and inclusive way, since there is a heterogeneity of learning styles and rhythms, since each student learns differently.(Alba, 2018)(Dominguez & Esteves, 2013)

The first steps towards educational inclusion date back to 1990, when the International Conference on Education in Jomtien (Thailand) set out the goals of Education for All. However, it has its starting point in 1994 with the Declaration of Salamanca (Spain), when the regular school is recognized as the educational institution that should and can provide a good education to all students, regardless of the different aptitudes they possess.(Valencia Pérez & Hernández González, 2017)

In this context, this article is developed on the importance of Universal Design for Learning (UDL), which is known as a benchmark for Inclusive Education. According to UDL, it is a model that aims to reformulate education by providing a conceptual framework – along with tools – that facilitate the analysis and evaluation of curricular designs and educational practices, to identify barriers to learning and promote inclusive teaching proposals.(Švarbová, 2017)

(García & Bordoy, 2023) They define "Universal Design of Learning" as a didactic approach aimed at providing the same opportunities to learn to all students in the classroom, making the curriculum more flexible from the beginning of the teaching-learning process. (Morin, 2022) He says that universal design for learning gives all students an equal opportunity to progress. This approach to teaching and learning offers flexibility in the ways in which students access material and show what they know. And, universal design for learning also looks for different ways to keep students motivated.

This approach provides a theoretical framework in educational intervention to respond to diversity from an inclusive perspective, as opposed to existing curricula based on the pedagogy of homogeneity and students who conform within the average. According to CAST (2011), it refers to a scientifically valid framework to guide educational practice that: a) provides flexibility in the ways in which information is presented, in the ways in which students respond or demonstrate their knowledge and skills; and, b) reduces barriers to instruction, provides appropriate accommodations, supports, and challenges, and maintains high expectations of achievement for all students, including those with disabilities and those limited by their language proficiency in the language of instruction.

Universal Design for Learning (UDL), from its perspective of curricular organization, provides different pedagogical options that offer students the possibility of learning continuously, based on accessible and flexible teaching methodologies that adjust to different learning rhythms and styles. This pedagogical model seeks to mobilize all the resources of expression and representation of information to meet the learning needs of all students in a personalized way without any exception (Espada et al., 2019; Sánchez-Fuentes et al., 2016; Villoria & Fuentes, 2015) cited in. (Parody, Leiva, & Santos-Villalba, 2022)(Parody, Leiva, & Santos-Villalba, 2022)

In other words, the implementation of inclusive pedagogical strategies in the classroom favors

the learning of vulnerable students and creates a welcoming environment that values diversity. Promoting gender equality and raising awareness in the classroom, through creative strategies such as games and gamification, contributes to fostering attitudes of respect and equity in inclusive education.(Arteaga & Chico, 2023)

The challenge of implementing an inclusive education must be a shared value and projected towards respect and appreciation of the whole person and that teachers, through their global and systematic approach such as UDL, can improve their pedagogical practices to attend to diversity and thus, ensure the presence, participation, and success of all students. (Delgado, 2021)

However, there is still an important gap in terms of teacher training, but this is understandable since UDL is a rather recent theory, which is practically less than 30 years old and therefore there is still much to learn. It can be said that the theoretical framework that underpins it is quite solid and consistent; However, as with many theoretical aspects of education, there is a large gap between theory and practice. On the other hand, although it is something that needs to be investigated further, it is clear that applying the principles and guidelines of this theory implies a great effort on the part of teachers and, preferably, doing very well coordinated teamwork. (Heredia Heredia, Guamán Naranjo, Vélez Sarmiento, & Vásquez Ayala, 2023)

In the same way, in the master's thesis it is mentioned that the knowledge about the main components of the UDL, obtaining very low scores and as a result unsatisfactory knowledge in this regard, where, in addition, only two of the participants have received training. These data demonstrate a great lack of knowledge and little training on this curricular approach, an aspect that coincides with other research and studies such as the study by Espada, Gallego, and González (2019), where the results reflect a limited knowledge of UDL and its principles, highlighting that in those centers where there is a higher percentage of students with disabilities, 29% of teachers have an approximate understanding of what UDL means.(Sánchez, 2020)

In today's society, characterized by information, knowledge and constant changes, participation, in its triple educational, social and cultural dimension (Ventosa, 2016), must be perceived as a right that transcends personal and social circumstances, and where the context facilitates effective and egalitarian spaces for interaction that enhance empowerment.(Rodrigo, Galán, Mampaso, & Rivera, 2022)

That is why the focus of intervention should be placed on the curriculum and not on the student, it allows you to act on the educational context that all your students share, instead of focusing the intervention on how to adapt the individual educational process of each student. In the same way, he mentioned it:(Zubillaga, 2021)(UNICEF, 2023)

"When the education system moves away from educational models that try to standardize teaching, learning outcomes improve for all children and adolescents, whether they have disabilities or not, and students' motivation to learn increases."

Finally, Universal Design for Learning is emerging as a model to support educational transformation and thus advance in the achievement of SDG-4 in the 2030 Agenda, Ensure inclusive and quality education and promote learning opportunities for all (Alba Pastor, 2019, p.64). In the same way, it is framed in article 41 of the LOEI, which determines that education is for everyone.

Results

The research was carried out from three angles: professors, students and directors. A survey was applied to the teachers and students and an interview was given to the directors, in which the following results were obtained:

The profile of the professors of the Directorate of Postgraduate and Continuing Education do not have a dependency relationship and their hiring is carried out by the module taught, some are from the same institution and others are external. The first thing asked was whether they felt committed to inclusive and comprehensive education in students, which 100% answered positively. When asked if mechanisms have been proposed to optimize individual choice and autonomy in students, they answered yes. If mechanisms have been considered to minimize the feeling of insecurity in the classroom, 80% answered no, since they have not perceived cases of fear and insecurity. On the topic of student collaboration, they answered 100% yes and the open option to answer in what way, they responded with collaborative work, such as exhibitions, work, research and/or solving practical cases in groups.

Regarding whether they have promoted expectations and beliefs that optimize motivation in their students, they answered 100% yes and in the part to answer how 60% was blank and from 40% it is rescued that one of the motivations in the treatment of the student, grading in the fair way, involving you in the process and development of the case.

It was asked if mechanisms have been proposed to facilitate strategies and personal skills, they answered that 100% of respondents and the way they do it is by allowing them to investigate and propose the development of the class with a specific theme. We asked if the reflection had been raised after the evaluation, and they answered yes in its entirety. And, finally, they were asked if they know about Universal Design for Learning and only 3% of respondents answered yes.

The directors were interviewed through a discussion and in the first instance they were asked if the feedbaack carried out by the teachers has been used to improve the teaching-learning processes? What was mentioned is that in certain cases all the suggestions raised by the students and the coordinators of each program are applied and taken into account, since they are aware that this allows them to grow and depending on the cases allows them to correct any mistake made during the master's degree process.

It was mentioned that in order to guarantee the training process in the master's students, the best profiles of the teachers are sought, highlighting the experience in the area of knowledge and that it is proven to have at least two years of university teaching, in addition to courses that validate the updating and improvement of the module that is going to be facilitated. Based on the methodology part, it is required that you have at least 100 hours of a course to ensure that andragogy and pedagogy are understood and applied in the classroom. Finally, it was mentioned that the management respects academic freedom, but if any case warrants it, they act accordingly.

When current students were surveyed and it was found that they have had professors who rate them as excellent, but that they have also had professors who have gone to learn and the methodology part in certain cases has been by nature the researcher's own. However, there are other teachers who, from the planning and on the first day with clear and explanatory explanations of the educational process, involve them and make them participants in the decisions that are made. They consider 100% that when the teacher has a good teaching methodology, it is easier to grasp the content they are taught.

100% mentioned that they learn more by doing, 85% that teamwork helps them learn more, 64% prefer to make presentations, 85% fieldwork, 12% individual research and 38% previously researching the topic that is going to be discussed in the next class.

Methodology

For the development of the research, it was based on a mixed approach, that is, for a better understanding of the problem, the qualitative and quantitative approach was used; the qualitative approach of the research seeks to understand and analyze the importance of Universal Design for Learning, through the response obtained from the teachers. directors and teachers. In addition, it has a quantitative approach to the collection of specific data that facilitates statistical analysis and thus achieves satisfactory results. deductive, descriptive, bibliographic methods and techniques and instruments, which allowed us to reach the final results.

By decision of the researchers, a non-probabilistic intentional or convenience sampling was carried out, in which 1 official of the Graduate Directorate was surveyed, so that convenience sampling is a commonly used technique. It consists of(NETQUEST, 2015)Select a sample of the population because it is accessible. That is, individuals employed in research are selected because they are readily available, not because they have been selected by statistical criteria.

In addition, approximately 90% of all teachers have been surveyed, in order to obtain sufficiently representative figures that reflect general results, and teachers who are currently teaching a module were also surveyed. For the processing of results, Microsoft Excel was used for tabulation and graphical visualization and the Word word processor to perform the respective analysis and interpretation, since the research was purely descriptive and correlational.

Discussion

This article seeks to provide a possible and plausible answer, highlighting a new methodology that has been producing important transformations in many educational centers throughout the world. This is the Universal Design for Learning or Universal Design of Learning (UDL), which in this case will be adapted by professors and students of the different master's degrees that are executed in the Directorate of Graduate Studies and Continuing Education of the State University of Bolívar.

The aim is for the education offered to be inclusive and to integrate the right to education that we all have, the diversity of thoughts in the actors of the educational process, the curriculum that is the planning established in each master's program, equal opportunities and access to information and communication technologies. Thus, based on the adaptation of the teaching and learning methodologies, it is proposed that the teacher applies the teaching-learning methodologies as proposed in the following scheme: (Švarbová, 2017)

DUA	Implicación	Innovar con metodologías para captar el interés
		Motivar para mantener el esfuerzo y persistencia en estudiantes
		Buscar que se genere valores dentro y fuera de clase
	Representación	Innovar con metodologías para mejorar la percepción
		Innovar con metodologías para mejorar la comprensión
		Generar opciones de expresión, con lenguajes sencillos
	Acción	Buscar la inteacción física
		Buscar expresión y comunicación entre los actores de la educación
		Trabajar en equipo

With this, the knowledge acquired and to be developed will be maintained or enhanced from the involvement in each of the tasks, works and research proposed, to contribute with information and to express it or act on it. The learning objectives are analysed with the master's degree or at the same time reconsidered with them according to their expectations with the subject, giving them the opportunity to propose and materialise their ideas.

At all times, listen to the teachers in order to build the planning, the learning context in which they wish to work and the needs of each one of them for the development of learning; in addition to offering the opportunity for them to respond to activities or demonstrate mastery of skills, with a variety of methods, that are compatible with the objectives set.

Motivation as one of the pillars to create trust and a good classroom and non-classroom environment, with rules of coexistence for work in the unit. Communicate about the diversity of materials, resources, tools and learning strategies, so that they can be freely used in pedagogical development. Offer different evaluation mechanisms and promote the self-evaluation of all actors in the educational process.

With all this, the aim is for teachers to have a quality educational experience, both in the depth of the knowledge transferred and also in the way in which they are taught. And thus, to be a benchmark in higher education from the grassroots.

Conclusions

It is necessary to consider new paradigms and pedagogical approaches that involve all actors and can reach students by understanding and respecting diversity, since the need for change in the current teaching-learning model is imminent due to its unviability, in terms of inclusive education.

The UDL is a semi-new but innovative proposal that aims to respond to the challenges posed by inclusive education, that is, to respond effectively to the needs of each student, including

those with a physical and/or cognitive disability, within the same classroom.

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