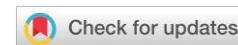




ORIGINAL ARTICLE

<https://doi.org/10.30545/academo.2025.n3.1124>

The DUA for inclusive education in primary school

El DUA para una educación inclusiva en básica primaria

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Abstract

This article arises from the investigative work carried out within a public educational facility, in the Department of Magdalena - Colombia, focusing on sizing the tools that can be used for inclusive education in such a way that they minimize limitations within learning, such as such as, the universal design for learning (UDL), helping to enable and project that sequential and growing line in teaching and learning, addressing the diverse needs that may arise in classrooms; In fact, the objective that guided said research focused its interest on interpreting how the processes of educational inclusion in primary basic education are strengthened through the implementation of the Universal Design for Learning (UDA), giving applicability to the qualitative approach with design of action research, enabling this, reception of data under the execution of workshops and a form-type instrument through the Google forms platform, to the eleven (11) teachers sample of the investigative work. Finally, through a detailed analysis, it is concluded that the DUA as a tool can be very useful for teachers, strengthening the inclusion processes in them and in turn the educational institution, minimizing barriers to learning.

Keywords: Education, educational strategies, learning, teaching, social inclusion.

Resumen

El presente artículo, surge del trabajo investigativo realizado al interior de un plantel educativo de índole público, del Departamento de Magdalena – Colombia, centrándose en dimensionar las herramientas que pueden ser utilizadas para una educación inclusiva de tal forma que minimicen limitantes dentro del aprendizaje, tal como, el Diseño Universal para el Aprendizaje (DUA), ayudando a posibilitar y proyectar aquella línea secuencial y creciente en la enseñanza y el aprendizaje, abordando las necesidades diversas que se pueden presentar en las aulas de clase; en efecto, el objetivo que permitió guiar la investigación, centró su interés en interpretar cómo se fortalecen los procesos de inclusión educativa en la educación básica primaria mediante la implementación del Diseño Universal para el Aprendizaje (DUA), dando aplicabilidad al enfoque cualitativo con diseño de investigación acción, posibilitando este, recepción de datos bajo la ejecución de talleres y un instrumento tipo formulario por medio de la plataforma Google forms, a los once (11) docentes muestra del trabajo investigativo. Finalmente, a través de un análisis detallado se concluye que el DUA como herramienta, permite ser de gran utilidad para los docentes fortaleciendo en ellos y a su vez a la institución educativa los procesos de inclusión minimizando barreras en el aprendizaje.

Palabras clave: Educación, estrategias educativas, aprendizaje, enseñanza, inclusión.

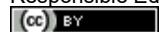
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Article received: July 19, 2024. Accepted for publication: August 27, 2025. Published: September 15, 2025.

Conflicts of interest: None.

Funding source: None.

Responsible Editor: Herib Caballero Campos  Universidad Americana. Asunción, Paraguay.

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Website: <http://revistacientifica.uamericana.edu.py/index.php/academo>

Introduction

With the changes that emerge over time, and with them the new educational trends that permeate each teaching qualification, tools, strategies, and methodologies consistent with the needs presented by educational institutions are contextualized. For this reason, viewing Universal Design for Learning (UDL) as a tool that enables improvement in every learning process encourages teachers to reduce barriers and/or limitations to the teaching–learning process. This reflects an immersion in inclusive processes established by different educational institutions, which characterize them and create a progressive sequence aimed at strengthening and positioning strategies for inclusive education—defined by Sebba and Sachdev (1997) “as the process through which an educational institution responds to the diverse individual and group needs of students, adjusting the organization of its curriculum and the distribution of its resources to promote equity in access to education” (p. 14). This definition is the foundational antecedent for understanding an otherwise ambiguous concept of inclusive education.

Thus, continuous innovation as a means of establishing UDL as a thread that weaves together strategies for educational inclusion—particularly in primary education—requires constant reinforcement and teacher training to improve professional practice. It is important to note that inclusive education adapts to the management and handling of cultural diversity, reflecting the idea that “inclusive education goes beyond mere integration, enabling teaching that seeks tools to address and integrate all academic diversity present in the classroom” (Montoya-González, 2021, p. 14). This positions UDL as an inclusion tool within the classroom, implying that teachers must continually train themselves, addressing the central research question in positive terms: *In what ways does the implementation of UDL strengthen inclusion processes for primary education in the Guáimaro Departmental Technical Educational Institution?*

Along these lines, and following the research interest, consultations and explorations of theoretical frameworks that support a journey through inclusion—full of ups and downs and numerous antecedents—

make it possible to establish specific objectives based on four theoretical–conceptual pillars.

1. Inclusion

The ambiguity inherent in addressing inclusion in modern contexts highlights cultural and social dimensions, enabling articulation between contexts that make education a pathway that prepares learners for society by reducing barriers to educational access. It is precisely here that inclusion brings together concepts and definitions that frame it as a field of inquiry responding to diverse needs, as defined by Duk and Murillo (2016), who “describe inclusion as equitable access to the diverse world of students, maintaining a quality educational trajectory free from discrimination, and closing gaps that hinder adequate development for children and adolescents” (p. 11).

Projecting inclusion onto the educational context brings together elements that support the attention to diverse needs within the classroom, supported by guidelines that frame inclusion as an equitable gateway that fosters educational evolution and unrestricted participation. Duk and Murillo (2016) also affirm that “inclusion refers to maximizing the presence and participation of students in learning contexts, enabling the identification and removal of obstacles that separate and limit educational opportunities” (p. 12). Thus, inclusion is framed as a direct bridge toward an educational ideal, reducing both physical and logical limitations to the lowest possible expression for learners. This means that inclusion becomes a vehicle for change within the systems in which children interact directly with themselves and with their environment.

In summary, to reflect on inclusion is to navigate concepts that arise from social issues and translate into needs within the sociocultural system, establishing an articulation that focuses on mitigating, through strategies and curricular designs, all types of barriers to educational access.

2. Educational Inclusion and Its Strategies

Having established a clear understanding of what inclusion entails and the elements involved in its implementation, the educational context integrates a series of aspects that convey a clear idea of what the

teaching–learning dynamic encompasses. This implies an undeniable search to implement and/or meaningfully appropriate knowledge among students. In other words, education—beyond being integrative and inclusive through its specific areas of knowledge—is centered on manifesting those tools that play a significant role and are currently the gateway to inclusive education. These include methods designed, implemented, and carried out both inside and outside the classroom to promote meaningful learning.

The variety of strategies that converge within education make inclusive practice possible. As Figueroa Ángel et al. (2017) explain, “inclusion focuses on highlighting individuality, recognizing personal differences, and transforming them into tools for learning. In this way, learners experience respect, appreciation, and active involvement in educational processes, reflecting an essential articulating role for the student” (p. 13).

In this search for suitable strategies for inclusive education, it is necessary to mention that, over time and due to new innovative waves, information technologies (ICTs) play a central role. Figueroa Ángel et al. (2017) note that “it is essential to take advantage of current channels of social participation facilitated by technologies, which offer new avenues for communication and collaboration in innovative ways, opening new directions for traditional strategies adapted to a systematized reality” (p. 20). Likewise, “didactic strategies influence the development of inclusive practices in basic education teachers” (Palacios-Garay, 2020, p. 66).

Thus, the proposal of strategies for inclusive education highlights UDL as a pedagogical model that addresses learners’ needs. Ultimately, educational inclusion establishes strategies that move from the particular to the general, supporting the reduction of barriers to educational access, instruction, and knowledge acquisition.

3. Universal Design for Learning

Defining UDL (Universal Design for Learning) is complex when viewed from an application perspective. Extending this concept into the

educational system, the Universal Design for Learning, as defined by Morín (2014), describes UDL as a teaching approach that offers flexibility in how students access material and demonstrate what they know, ensuring that all students have equal opportunities to progress academically. Its purpose is to be resourceful, offering equality and equity to learners. This confirms that the strategy aligned with students’ needs is the implementation of UDL, which equips teachers with resources and elements for improved practice. Palaguachi-Tenecela et al. (2020) add that “Universal Design for Learning (UDL) can serve as an effective pedagogical strategy to strengthen teachers’ intervention in teaching–learning processes in early education” (p. 84).

The implementation of Universal Design for Learning facilitates integration between teaching methods and diversity, ensuring that all learners have access to the same learning opportunities. This approach proposes removing learning barriers through flexibility in teaching and equitable curriculum access (CAST, 2011, translated by Alba Pastor et al., 2013, p. 9). Similarly, the National Ministry of Education (2019) states that “Universal Design for Learning is a strategy that enables planning from the beginning of pedagogical practice, ensuring the participation and learning of all students” (p. 7).

Along these lines, UDL is structured around three neural networks, as shown in Figure 1: representation, referring to the “what”; engagement, referring to the “why”; and action and expression, referring to the “how” of each process. These components encompass key principles to be applied throughout the teaching–learning process, promoting diverse ways of engaging with content.

In this regard, the “What” of the network explores and implements the best resources for representing information and adjusting formats that strengthen students’ initiation into the teaching–learning process. With respect to the “Why”, the focus is on the stimuli that continually encourage and motivate learners by providing emotional support throughout the process. In this way, the “How” emphasizes providing the most suitable environment for students to express their feelings verbally, through gestures, or, if necessary, in

whatever reasonable way they can demonstrate what they know (CAST, 2018).

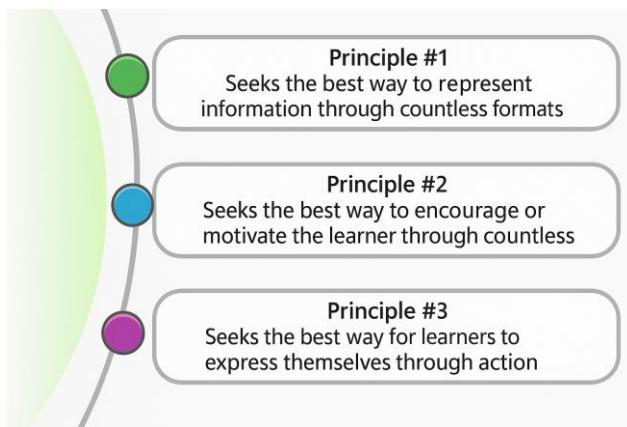


Figure 1. UDL Principles.

Note: Principles that make up Universal Design for Learning for each of its action networks

In summary, UDL contributes to the development and evolution of the educational context by offering advantages in articulating specific knowledge and new technologies that help reduce learning barriers, making it today one of the most adaptive approaches within the classroom.

4. UDL – A Strategy for Inclusive Education

Among the approaches that enrich the educational system, UDL stands out as a tool that enhances and strengthens the teacher's work in the classroom. It is versatile in focusing on educational inclusion by adjusting curricula and programs toward a common goal.

In this way, “*The Ministry of National Education of Colombia (2018) highlights that Universal Design for Learning (UDL) must be sufficiently adaptable so that teachers can make real-time adjustments according to the difficulties students encounter, reaffirming UDL as a solid strategy that widely supports teachers according to their daily needs*” (p. 23). Similarly, Gutiérrez (2018) refers to the resources teachers have access to and that align with the teaching–learning process, emphasizing the materials used in the classroom as a fundamental component of every learning process. These materials serve as the mediating mechanism between the transmission of knowledge and student reception.

Consequently, the integration and articulation offered by Universal Design for Learning bring together a

series of characteristics that foster the development of attitudes and competencies in learners related to decision-making and solving problems that arise in contexts beyond the educational setting. Thus, group work, the development of critical thinking, self-evaluation, and the pursuit of meaningful learning are actions that allow UDL to contextualize the reality of classrooms in order to reduce limitations in education. In line with Cayo and Procel (2017), “*improving the distribution of students within the physical classroom space through the creation of small heterogeneous groups enables personalized, diversified, and more interactive work in which the teacher mediates learning and receives support in the process*” (p. 51).

In this light, the specific objectives that guide the research, aligned with the elements described, are: to determine the inclusion processes at the Técnico Departamental de Guáimaro educational institution; to identify the characteristics of UDL in relation to the variety of inclusion procedures used at the Técnico Departamental de Guáimaro educational institution; to design workshops focused on training teachers in the use of UDL at the same institution; and to evaluate the strengthening of inclusion processes based on the use of UDL as a strategic tool within the Técnico Departamental de Guáimaro educational institution.

Methodology

The research adopts a qualitative approach which, according to Guerrero Bejarano (2016), “qualitative research seeks to understand social situations in their entirety, considering both their distinctive characteristics and their dynamic evolution over time” (p. 3). This is complemented by Bernal (2016), who states that “qualitative research is based on the assumption that the social world is made up of meanings and symbols shared intersubjectively; therefore, its objective is to understand those meanings and symbols” (p. 2). The study also employs an action-research design, understood by Cabrera Morgan (2017) “as a practical solution to address the daily and urgent challenges that teachers face in their work, enabling them to improve their educational methods through the interpretation, observation, and analysis of the findings obtained” (p. 143).

In this way, the qualitative approach aligns with the investigative work developed and described in previous sections, acting in an articulated and interconnected manner with action research. Through each of its phases—identifying the thematic concern, establishing the initial diagnostic reflection, planning, and finally the action—observation cycle—it operates within an educational context associated with UDL (Universal Design for Learning) strategies.

Thus, the age-appropriate sample for this study consisted of eleven (11) primary school teachers from the Institución Educativa Técnica Departamental de Guáimaro, ranging from 40 to 60 years old. Likewise, the institution serves 530 students across different primary grades. It is important to highlight that the school is located in a rural area of the municipality of Salamina, Magdalena. Based on the above, four categories were established to compile, categorize, and analyze the information collected, contextualizing it to each of the specific objectives defined *in situ*.

Results

Guided by the general objective of this research—and thus fulfilling the requirement to interpret how educational inclusion processes in primary school are strengthened through the implementation of UDL—the findings obtained are as follows:

1. Determining the inclusion processes in the Institución Educativa Técnica Departamental de Guáimaro

In order to determine the inclusion processes within the school, two main reference points were considered: first, the institutional documents that guide institutional actions, and second, the diagnostic information obtained through the SIMAT platform (Integrated Enrollment System), which provides data on students identified as having any type of inclusion-related condition.

Accordingly, table 1, a registry matrix on inclusion processes at the school, presents data organized into five (5) aspects that describe institutional practices related to inclusion, based on documentation. Table 1 identifies each inclusion process carried out by the school and the mechanisms through which these practices take place. It offers a characterization of students requiring inclusion and outlines the institutional guidelines that support classroom actions. This allows confirming the fulfillment of the objective and the institution's commitment to inclusive practices.

2. Specifying the characteristics of UDL in relation to inclusion processes in the school

Identifying the characteristics of Universal Design for Learning required an extensive search for bibliographic and documentary sources. These are presented in table 2 as a documentary matrix, which highlights the key elements of UDL needed for designing workshops aimed at strengthening educational inclusion processes in primary school through the implementation of UDL.

Table 1. Registry Matrix on Inclusion Processes at the Institución Educativa Técnica Departamental de Guáimaro.

Element	Description
Institutional Vision	By the year two thousand twenty-three (2023), it will be recognized as a social integrator within the educational system, as a high-quality institution that prioritizes inclusion, promoting values and principles that help shape well-rounded and capable human beings able to face various academic and coexistence-related needs.
Institutional Mission	A public entity dedicated to forming well-rounded individuals with basic civic, academic, and professional skills, with children and adolescents as the main actors. It aims to contribute to the community through environmental development associated with a technical emphasis that supports the broader system.
Institutional Framework	As an official public institution, it offers a full-day academic schedule to provide comprehensive education from preschool through upper secondary levels, strengthening students' knowledge and critical thinking. This is based on implementing research as a pedagogical strategy and integrating new technologies.
Code of Conduct	Chapters I and II promote cultural diversity throughout the school, ensuring that classrooms embrace inclusivity, including work with youth with physical or cognitive disabilities. Chapter IV highlights the rights and responsibilities of all members of the educational community, promoting equality and equity among students.
Population Characterization	The school serves 530 students in total. Two percent (2%) fall under the inclusion policy, meaning ten (10) students are identified by the SIMAT system as having inclusion-related diagnoses in grades 1 through 5, as follows: <ul style="list-style-type: none"> • Motor disability: two (2) students • Wheelchair users: two (2) students (in grades 2 and 4) • Cognitive disability: eight (8) students • Autism spectrum disorder: one (1) student (grade 3) • Dyslexia: one (1) student (grade 5) • Learning disability: six (6) students

Note: Description of inclusion processes identified at the Institución Educativa Técnica Departamental de Guáimaro.

Table 2. Documentary Matrix: Characteristics of UDL.

Nº	Source	Type of Source	Characterization of UDL in Strengthening Inclusion
1	Pastor, C. (2013). Pautas sobre el Diseño Universal para el Aprendizaje (DUA). <i>Universal Design for Learning Guidelines version 2.0. Wakefield</i> .	Article Book	Strengthens classroom work through the affective network. Flexible curricula: Teachers adapt planning to classroom needs. Exploration & experimentation: mirrors, surprise boxes, simple experiments. Modeling problem situations: recreating real scenarios with multiple solutions.
2	Alba Pastor, C. (Coord.). (2016). Diseño Universal para el Aprendizaje: Educación para todos y prácticas de enseñanza inclusivas. Ediciones Morata. Acuña, A. K. (2019). <i>Estrategias pedagógicas para el manejo de la inclusión en niños y niñas del grado segundo en la Institución Educativa Gran Colombia de Fusagasugá Cundinamarca</i> . Fusagasugá. https://repository.uniminuto.edu/handle/10656/12144	Article	Strategies aligned with UDL to represent information in multiple ways. Focus on objectives and strengths. Identification & optimization of abilities: attention, memory, perception. Activities: lotteries, repetition, songs, sequences, chess, 2D/3D figures. Note: Avoid activities that exceed children's executive function abilities.
3	Espada Chavarría, R. M., Gallego Condoy, M. B., & González-Montesino, R. H. (2019). Diseño Universal del Aprendizaje e inclusión en la Educación Básica. Alteridad. Revista de Educación, 14(2), 207–218. https://doi.org/10.17163/alt.v14n2.2019.05	Article	Links UDL with educational inclusion and student diversity. Highlights engagement as the core of inclusion. Activities: group work, dynamic guides, collaborative problem solving, video-based case studies.
4	Movilla-Gastelbondo, I. F., & Suárez, S. (2019). El diseño universal del aprendizaje (DUA): una estrategia pedagógica para la cualificación de la intervención docente en el marco de la escuela inclusiva. Universidad de la Costa. https://repository.cuc.edu.co/handle/11323/4379	Article	Integrates UDL principles into teacher planning and classroom intervention. Strategic: varied planning. Representational: use of games, videos, audio. Affective: motivation embedded in teaching.
5	Bou Gerena C. M. (2011). Diseño Universal para el Aprendizaje (DUA) como herramienta para la inclusión. [Tesis de maestría, Universidad Metropolitana]. Repositorio Institucional de la Universidad Ana G. Méndez. https://documento.uagm.edu/cupey/biblioteca/biblioteca_tesisedu_bougerenac2011.pdf	Article	Positions UDL as the primary tool for inclusion, recognizing social and academic contexts. Uses: theater, case studies, parent meetings. Avoid: personal cases; use of real names.
6	Badillo Cano, K y Hernández Imbacuan, G. (2021). Diseño universal para el aprendizaje (DUA) como herramienta de inclusión en el aula, desde la articulación artística, en los estudiantes del grado 11° de la Institución Educativa Mallama. CECAR. https://repository.cecar.edu.co/handle/cecar/2433	Article	During the pandemic, UDL strengthened inclusion by identifying observable student traits. Elements: student profiles, social characterization, motor activity.
7	Rioja, U. d. (2023). Diseño universal para el aprendizaje (DUA): el camino hacia una educación inclusiva. https://colombia.unir.net/actualidad-unir/diseno-universal-aprendizaje/	Article	Presents UDL as a sequential model reducing learning barriers. Tools: short didactic guides, images, large font, games, ICT, group work, recognition of physical & cognitive abilities.
8	Valencia Pérez, C., & Hernández González, O. (2017). El Diseño Universal para el Aprendizaje, una alternativa para la inclusión educativa en Chile. Atenas.	Article	UDL addresses needs and diversity in classrooms. Proposals: teacher training workshops, institutional selection opportunities, placement based on training.
9	Procel, I. E. (2017). El diseño universal de aprendizaje como herramienta de inclusión en el aula. Revista Para el Aula, (21), 25–29. Universidad San Francisco de Quito. https://www.usfq.edu.ec/sites/default/files/2020-07/pea_021_0025.pdf Zamora, M. M. (2022). Topología para la inclusión: una propuesta didáctica desde el DUA. https://scholar.google.com/citations?user=Zud7WCUAAAJ&hl=es	Articles	UDL strategies tailored to cognitive development stages. WHAT: Recognition Network: colorful guides, animated videos, acted stories, theater. HOW: Strategic Network: presentations, oral evaluation, group work. WHY: Affective Network: incentives, motivation, representative stimuli.
10	Morín, A. (2014). ¿Qué es el diseño universal para el aprendizaje? Understood. https://www.understood.org/es-mx/learning-attention-issues/treatments-approaches/educational-strategies/universal-design-for-learning-what-it-is-and-how-it-works Conole, G. (2012). Designing for learning in an open world. Springer. https://doi.org/10.1007/978-1-4419-8517-0	Articles	Reduces learning barriers and strengthens autonomous learning. Methods: visual, auditory, kinesthetic, expository.

Note: Description of UDL isolating attributes for the development of workshops aimed at strengthening inclusion processes. Source: Own elaboration, extracted from the research project *UDL as an Articulator of Strategies in Educational Inclusion for Primary Education* (Pérez, 2023).

Having presented the matrix, the characteristic elements of Universal Design for Learning (UDL) are associated with each representative, allowing UDL to be characterized in a specific way by carrying out activities, games, and methods that promote the reduction of barriers throughout the sequence of knowledge acquisition.

3. Develop workshops focused on training teachers from the Guáimaro Departmental Technical Educational Institution in the use of UDL.

Based on the identification of attributes that characterize UDL as a strategy for educational inclusion, the design of the workshops revolved around the three action networks and the principles identified in class three (3) on Universal Design for Learning. The workshops grouped together the needs observed in teaching practice and the lack of teacher qualification, with the aim of strengthening inclusive processes in the classroom.

4. Assessing the strengthening of inclusion processes through the use of UDL as a strategic tool in the Technical Departmental Educational Institution of Guáimaro.

To establish how inclusion processes were strengthened, and how UDL functioned as an articulator of strategies for educational inclusion—focusing on eleven (11) primary school teachers from the Technical Departmental Educational Institution of Guáimaro—the study involved answering seven (7) questions using Google Forms as an online questionnaire. Two of these questions are contextualized here, allowing for an analysis of acceptance and fulfillment of the general objective of the research project.

In this regard, evaluating the strengthening of inclusion processes provided a clear perspective on the existing needs within inclusive education and on the barriers that disrupt the teaching–learning processes carried out by teachers in their classrooms. The results for each of the questions surpassed expectations regarding UDL, raising awareness and sensitizing teachers, as reflected in each of their responses.

At first glance, it was observed that 27.3% of the 100% of participating teachers were not familiar with UDL. In other words, very few teachers—due to the lack of training and professional development—knew about the scope of Universal Design for Learning or the advantages it offers in mitigating learning barriers.

On the other hand, understanding how effective and essential the design and implementation of the workshops were for strengthening inclusion processes translated into 100% favorability among teachers. Their responses clearly demonstrated an improved capacity to identify educational diversity within their classrooms.

In summary, the information analysis process made it possible to identify the degree of awareness among teachers, reflected in their willingness to continue implementing strategies that support teacher training and professional growth. This includes the application of the four workshops aimed at strengthening inclusion processes in the Technical Departmental Educational Institution of Guáimaro.

Discussion

Universal Design for Learning (UDL) is presented as a powerful pedagogical strategy for educational inclusion, as it enables the adaptation of teaching–learning processes to the diverse abilities of students. One of the main strengths identified in the literature (Alba Pastor, 2016; Imbacuán, 2021) is UDL's versatility to integrate different forms of knowledge and methodologies, promoting more flexible and diversity-sensitive teaching practices.

Specifically, the implementation of pedagogical workshops, as proposed by Imbacuán (2021), proves to be an effective strategy to improve teaching practices. The results indicate that, after the application of workshops based on UDL, there is a positive evolution in teachers' attitudes and greater appropriation of knowledge regarding inclusion. This ongoing improvement results in a significant reduction of learning barriers, strengthening both pedagogical practice and teachers' pro-social commitment in the classroom.

Taller # 1 ¡Compartiendo y Sintiendo!		Taller # 2 ¡Navegando por la escuela!	
Logo		Logo	
Tomado de: https://img.freepik.com/vector/gratis/diseño-ninos-jugando_1308-610.jpg?w=2000		Tomado de: https://static.vecteezy.com/system/resources/previews/002/49/08/01/non_2x/simpler-shapes-cartoon-comic-geometric-shapes-for-education-vector.jpg	
Tema	Red afectiva	Tema	Red de reconocimiento
Área	Español y Educación física	Área	Matemáticas
Objetivo	Sensibilizar a los docentes sobre los miedos e inseguridades que presentan los estudiantes con discapacidad motora, física dentro de su entorno escolar.	Objetivo	Concientizar a los docentes sobre las diferentes formas de representación al momento de transmitir información, contextualizando la diversidad del aula de clase.
Labor docente	El docente brindara la confianza necesaria para que el alumno sienta confianza en él mismo y su entorno, estableciendo clímax de apoyo y variar los niveles de estimulación visual, sensorial y táctil.	Labor docente	El docente brindara al estudiante las multiplex formas de representar la información motivando y contextualizando la realidad académica y social.
Grado	1º y 2º	Grado	3º y 4º
Metodología del taller	Para el desarrollo del taller, compartiendo y sintiendo cada docente deberá: <ul style="list-style-type: none"> Mantener la disposición y actitud propia durante la sección: Extrapolar la disposición de tal forma que sienta y actúe con algún problema de discapacidad motora o física entre ellas: <ul style="list-style-type: none"> Sillas de ruedas por falta de extremidad inferior Con poca visión, utilizando lentes Con paraplejia en sus extremidades superiores El docente se dispondrá a realizar las actividades y/o acciones propuestas por el profesional o experto que orienta el taller, sin expresar su discapacidad ante los demás. Deberá caminar por el aula de clase en parejas, ubicándose en diferentes puntos del aula constantemente. Realizarán un dibujo en el cual plasmen su rol en el aula de clase Harán grupos de tres docentes y compartirán sus dibujos Después de realizar lo orientado por el orientador del taller, cada docente se dispondrá a moverse frente a sus compañeros en su rol de estudiante con discapacidad, lo cual se lleva en cada acción llevada a cabo centrado en: <ul style="list-style-type: none"> Las dificultades Las frustraciones Las habilidades desarrolladas Sus miedos Su motivación para el desarrollo de las mismas Las emociones y emociones. Finalmente, el docente participa del taller presentara una reflexión, no como docente que el aula de clase, sino como padre de familia y estudiante siendo estos dos roles diferentes. 	Metodología del taller	Para el desarrollo del taller los docentes deberán: <ul style="list-style-type: none"> Contar con el tiempo necesario para la culminación de cada actividad Que cada docente de forma individual represente con los recursos aportados como fomi y cartón, los lugares de la escuela que evidencien figuras geométricas. Con los recursos restantes entre ellos monedas didácticas y videos casuísticos, cada docente asocia su situación cognitiva, física y académica, de acuerdo a: <ul style="list-style-type: none"> Las imágenes más sencillas Las imágenes más representativas Las imágenes más complicadas Las imágenes más repetidas Las imágenes que resaltan por color Las imágenes más sencillas Después de realizar la representación solicitada, se formarán grupos de trabajo de cuatro docentes, de tal forma que cada uno comparta a viva voz lo que evidencia y/o percibe de lo realizado por su compañero. Compartir lo realizado por cada docente con la realidad social y con lo que se solicita. Realizar reflexión sobre lo que representa cada docente de acuerdo a cada situación y lo que se solicita en atención al cumplimiento de un logro o mets.
Recursos	Aula de clase Hoja, colores, esferos, lápiz	Recursos	Exterior, fomi, figuras en cartón, videos casuísticos, monedas didácticas, computador, parlantes.
Duración	Una (1:30) hora para los docentes de 1º Una (1:30) hora para los docentes de 2º	Duración	Una (1:30) hora para los docentes de 3º Una (1:30) hora para los docentes de 4º
Evidencias	Fotografías de las acciones realizadas	Evidencias	Fotografías de las acciones realizadas

Figure 2. Workshops 1 and 2 for strengthening inclusion processes, based on the Universal Design for Learning strategy. **Note:** Workshops for the areas of Spanish, Mathematics, and Physical Education, guided by UDL. Source: Own work, extracted from the research project el DUA Como Articulador de Estrategias en Inclusión Educativa Para Básica Primaria, (Pérez, 2023).

Taller # 3 ¡Actuando como soy!		Taller # 4 ¡Alcanzando mis metas!	
Logo		Logo	
Tomado de: https://img.freepik.com/vector/gratis/animacion-ninos-jugando_2431-197200.jpg?w=2000		Tomado de: https://static.vecteezy.com/system/resources/previews/002/49/08/01/non_2x/running-persona-que-corre-en-la-calle-para-ir-a-la-escuela-vector.jpg	
Tema	Red Estratégica	Tema	Red Afectiva
Área	Ética	Área	Todas las incluidas en el pensum académico
Objetivo	Sensibilizar a los docentes frente a como los estudiantes pueden socializar e interactuar sin estereotipos o prejuicios que surgen por su contexto social, o por la diversidad cultural que emerge del momento.	Objetivo	Concientizar a los docentes sobre el interés de asistir a clase y culminar los estudios en básica primaria, proyectando una visión alcanzable en los estudiantes.
Labor docente	El docente brindara al alumando las diversas formas de expresar sus sentimientos, su actuar y su comportamiento bajo los parámetros del respeto y la confianza en su entorno.	Labor docente	El docente brindara al alumnado las diversas formas de motivación con el fin de alcanzar sus estudios en básica primaria, proyectados a la media.
Grado	5º	Grado	Multivariado
Metodología del taller	Para el desarrollo del taller, actuando como soy, cada docente deberá: <ul style="list-style-type: none"> Mantener la disposición y actitud propia durante la sección: Con base en la orientación del profesional que desarrolla el taller, cada docente se apropiará de un personaje de ficción que, en su niñez, halla soñó o siguió como ejemplo y lo preparará así: <ul style="list-style-type: none"> Se dirige "Lo dibujo" Se apropiará de él mismo en cuanto vestimenta, voz y actuación Elabora un libreto de cómo será su actuar en contextos educativos, dejando de lado todo tipo de margen social o cultural que pueda causar limitación en su libre expresión. Realiza una puesta en escena de su personaje lo más real posible, sin prejuicios a su ser. Reflexiona sobre cómo se sintió y qué limitantes hubo para poder interactuar y ser participante dentro del contexto educativo sin limitantes a su libre expresión. 	Metodología del taller	Para el desarrollo del taller, alcanzando mis metas, cada docente deberá: <ul style="list-style-type: none"> Mantener la disposición y actitud propia durante la sección: Cada docente, intercambia de rol y opta por ser un estudiante de básica primaria que reside en el sector rural. Después de optar por su rol, cada docente deberá pasar y culminar a buen fin la pista de obstáculos diseñada para llegar hasta las instalaciones de la institución educativa. Durante el recorrido del paso de cada uno del obstáculo, el docente leerá la reflexión allí plasmada y realizará una retroalimentación frente a la misma, hasta llegar a la última. A medida que cada docente va superando obstáculos, deberá gritar un motivo por el cual seguirá venciendo barreras, hasta alcanzar la llegada final ilustrada en ingresar a la institución educativa. Cada docente al finalizar la pista de obstáculos, en frente de sus compañeros, expresará una reflexión de tal forma que motivé a sus compañeros de concientizar a cada alumno de seguir adelante con sus estudios pese a las adversidades que se presenten en el camino, así mismo, el docente que lidera y/o guía el curso de nivel multivariado tomará como pilar en sus clases la motivación como medio de fortalecer el nivel académico constante.
Recursos	Polideportivo de la institución Hoja, lápiz Ropa usada para caracterización Parlante, micrófono Lazo	Recursos	Salón de clases Hoja, lápiz Pista de obstáculos en madera
Duración	Dos (2) horas para los docentes de 5º	Duración	Dos (2) horas para la docente del grado multivariado.
Evidencias	Fotografías de las acciones realizadas	Evidencias	Fotografías de las acciones realizadas

Figure 3. Workshops 3 and 4 for the strengthening of inclusion processes under the strategy of Universal Design for Learning (UDL). **Note:** Workshops for the areas of ethics and interdisciplinary studies, guided by Universal Design for Learning. Source: Own elaboration, extracted from the research project "UDL as an Articulator of Strategies in Educational Inclusion for Primary Education" (Pérez, 2023).

However, certain weaknesses are also identified regarding the implementation of UDL. One of the main ambiguities lies in its practical interpretation: although it is promoted as a structured tool, in some cases it becomes a dispersed set of strategies that may lose coherence if not properly aligned with the institutional context. According to Alba Pastor (2016), although multiple strategies have been designed, there is not always a clear sequence in their application, which may limit their effectiveness.

Another major issue is the need to contextualize UDL within the social, cultural, and economic realities of each educational institution. Although the approach is intended to be universal, its implementation requires adjustments to address local particularities. Thus, designing institutional inclusion plans becomes essential, integrating UDL not only as a methodological guide but as an integral part of the broader pedagogical project.

A practical solution is the continuous professional development of teachers in UDL, not from a purely technical-instrumental perspective, but from a critical and contextualized one. Training through workshops—such as those studied by Imbacuán (2021)—not only facilitates the appropriation of the approach but also enhances collaboration among teachers and fosters the development of inclusive learning communities.

On the other hand, as Cansino (2017) notes, cultural diversity should be understood not as a challenge but as a pedagogical potential. In this sense, UDL can support the construction of more democratic classrooms where diverse knowledge is recognized, valued, and used as a resource for teaching. As this author affirms, “cultural variety is the door to inclusive education that embraces knowledge” (p. 218), reinforcing the need for education that is not only accessible but also meaningful for everyone.

Finally, a remaining challenge is to ensure that UDL transcends the classroom and becomes a cross-cutting educational policy influencing curriculum design, assessment, and institutional management. Otherwise, its application risks being limited to individual good intentions without structural impact.

Author contributions

Idea: *all authors* Approach and contextualization: J.M. Project development: J.M. Literature review (state of the art): *all authors* Methodology: J.M. Field activities: *all authors* Data collection: *all authors* Data analysis: J.M. Presentation of results: *all authors* Discussion and conclusions: *all authors* Writing (original draft): J.M. Final revisions: J.M. Project supervision and management: J.M.

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