

Full Length Research

Promoting Inclusive Pedagogy through Universal Design for Learning in Special Needs Education

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Learners with special educational needs require special intervention and programmes due to their sensory, cognitive or intellectual and physical impairments. Special educators are expected to design instruction that will maximize the potentials of students with special learning need in the classroom. Universal design for learning is an inclusive approach that provides a structure and framework for special educators to design instruction that will maximize the potentials of students with special learning needs in an inclusive classroom. Incorporating universal design for learning will enhance inclusive practice by accommodating a wider variety of the special needs of learners as well as eliminating potential barriers or unnecessary learning obstacles. The paper examines the concept of Universal Design for Learning (UDL) in the context of special needs education and its global relevance in special needs education. Moreso, the paper outlines the guidelines for universal design for learning in special needs education and finally, a way forward for promoting inclusive pedagogy through universal design for learning in special needs education.

Key words: Universal Design for Learning (UDL), Globalization, Inclusive Education, Inclusive Pedagogy Learners with Special Needs

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INTRODUCTION

The provision of educational programmes and specialized services to meet the diverse needs of learners with special learning needs entails special needs education. Effective teaching and learning is a conscious and deliberate act in which special education teachers plan and execute lessons and activities that are necessary to achieve teaching/learning objectives. The World Health Organization (WHO, 2012) defines disability as any restriction, lack of ability, usually one that prevents a person from performing an activity within the range considered normal for a human being (answers.com). It is estimated that there are about 650 million disabled persons in the world. It recognizes that the disability can be physical, sensory, cognitive and intellectual. The visually impaired (blind), speech impaired, physically challenged (wheelchair users, ambulant persons, etc) and those with multiple disabilities are considered disabled. Similarly, the United Nations International Children's Education Funds' (UNICEFs') portfolio on children with disabilities has four (4) main goals: 1) Empower and recognize children with disabilities as their own best advocates 2) Ensure children with disabilities grow up in enabling environments with access to resources and opportunities to realize their full potential and (3) Ensure children and persons with disability benefit from a full range of programs and

organizational investment that embrace inclusivity and diversify (UNICEF, 2022).

Similarly, as emphasized by Izzo (2012), Universal Design for Learning (UDL) is an approach that creates a more flexible and student centered learning environment that seeks to integrate a variety of strategies such as multi-modal teaching, differentiated instruction, cooperative learning, self-monitoring, embedded assessment, relevant context and demonstrated learning via multiple media.

Concept Universal Design for Learning (UDL) in the context of special needs education

Universal Design for Learning (UDL) is a term that emerges from the application of Design for All (DA) and Universal Design (UD) in the field of education. Based on the same principle of accessibility to all, UDL carries the same broad philosophy that human diversity is not ordinary (International Disability Alliance, 2021). UDL is based on the learning styles theory and is not designed for one particular group of students but to address the learning but to address the learning needs of a wide range of groups (CAST, 2018). This is based on the philosophy of special needs education which entails special interventions and programmes provided to learners with disabilities which ranges from sensory, cognitive or intellectual and physical impairment.

According to Allison (2022), the ultimate goal of UDL is for all learners to become “expert learners. Expert learners are purposeful and motivated, resourceful and knowledgeable, strategic and goal-directed about learning. Moreso, Kurts, (2006) maintained that the use of Universal Design for learning to meet the educational needs of diverse learners (including learners with special needs) is a promising instructional approach. Moreso, collaboration between in-service and pre-service teachers in the use of UDL my help in understanding of such practices modeled by the UDL lesson plan. As opined by Izzo (2012), UDL integrates accessible technology into the teaching and learning process, thereby harnessing a set of technological innovations such as you tube, podcast, ipads etc.

Universal design for learning is an inclusive approach that provides a structure and framework for special educators to design instruction that will maximize the potentials of students with special learning needs in an inclusive classroom. According to Okuoyibo (2011), inclusive education is process whereby students with disabilities (regardless of the nature or severity of their unique special needs) are put into all planning activities in general school setting such as the school setting as well as in their immediate environments. The principle of inclusive education aligns with the principles of UDL which ensures that all children (irrespective of their unique impairment) are brought together to learn in one classroom setting, are active members of the classroom, have a sense of belonging and also participate in all classroom activities as presented in the table below:

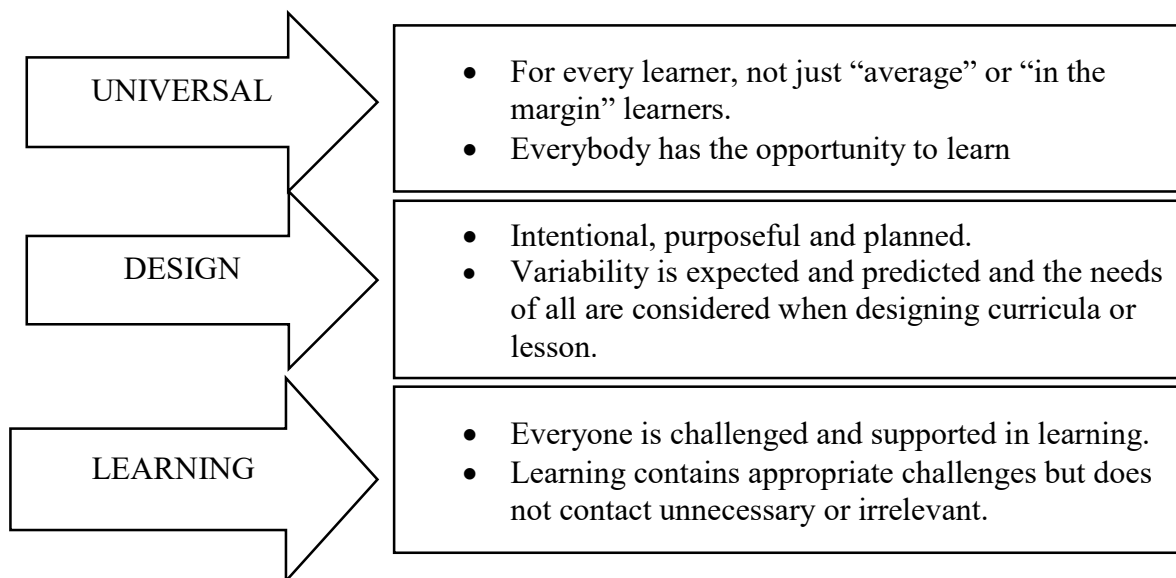


Figure 1: Universal Design for Learning

Source: *Universal Design for Learning. Meyer, Rose and Gordon (2014).*

As indicated in figure 1 above, every child (irrespective of the nature of their disability) has the opportunity to learn, every lesson must be intentional, purposeful and planned and also every learner is challenged and supported in learning. Therefore, universal design for learning is relevant in teaching and learning for learners with special learning needs. A study on UDL in inclusive classrooms (Kurts, 2006) have revealed that participants agreed that UDL appeared to be an effective instructional approach. Moreso, planning for instruction using UDL lesson plan format made participants more aware of differentiating instruction for diverse learners.

Universal Design for Learning and its Global Relevance in Special Needs Education

The need for Universal design for learning especially in this 21st century is a crucial in promoting special needs education in Nigeria. The provision of opportunities for the creation of a democratic society which will ensure and promote the respect for values of tolerance of diversity and in addition, quality educational provision for all learners (irrespective of their special needs), schools and communities. Universal design for learning as a principle of inclusive education ensures that all children (irrespective of their unique impairment) are brought together to learn in one classroom setting, are active members of the classroom, have a sense of belonging and also participate in all classroom activities. All accommodations and modifications carried out in the classroom are adequately implemented to meet their unique learning needs. Inclusive education is the most effective medium of combatting discriminatory attitudes, creating a welcoming community, building an inclusive society and thereby achieving education for all. As asserted by the International Disability Alliance (2021), UDL is a deliberate design of instruction that meets the needs of diverse mix of learners, providing students with an equal opportunity to learn through flexible approaches and distinguishing between the desired learning outcome and the means of achieving them.

Incorporating the principles of UDL will enhance inclusive practice by accommodating a wider variety of the special needs of learners well as eliminating potential barriers or unnecessary learning obstacles. More so, it helps to build physical learning environments that accommodates the diverse groups of learners in the classroom and also creating equal access irrespective of these learning needs. In addition, universal design improves/promotes access and outcomes for everyone in a variety of situations and also benefits a wide range of learners with varying learning styles and abilities. It also improves human performance, health and wellness and also social participation of groups that have been marginalized by traditional design practices (Centre for Inclusive Design and Environmental Access (IDeA CENTRE, 2022). Another major advantage of UDL is that it is a proactive approach that supports planning for every learner with special need (individualized learning).

UDL can support educational opportunities for students with special needs are as follows: a) Identifying preliminary level of personal development (experiences and skills) that is to say the starting point of a student. b) Assisting in personal development by shaping new skill or updating existing ones. c) Improving access to information d) Overcoming geographical or social isolation via communication support and networks and also improving the image/perception of an area by enhancing motivation and awareness regarding the UDL benefits in special needs education. UDL can contribute significantly to the teaching and learning of students with special needs irrespective of students with special needs irrespective of their unique learning needs. It is essential in providing students with special needs. It is essential in providing students with special need the ability to perform specific tasks that would otherwise be impossible for them to perform. Therefore, stakeholders in special needs education are expected to understand the potential of UDL in supporting learners with special needs and also explore ways to provide adequate training for teachers in its effective use at all levels of education.

Guidelines for Universal Design for Learning in Special Needs Education

The UDL guidelines and principles are designed to provide a framework for special educators in promoting an all-inclusive pedagogy that is aimed at transforming the educational system in order to meet the needs of all learners with special needs at all levels of education irrespective of their specific learning needs. UDL is based on three major principles and guidelines for its effective implementation at all levels of education and takes into cognizance the special/unique needs of learners. The guidelines and principles are presented in Figure 1 below:

	Provide multiple means of Engagement	Provide multiple means of Representation	Provide multiple means of Action & Expression
Assess	Provide options for Recruiting Interest Optimize individual choice and autonomy Optimize relevance, value, and authenticity Minimize threats and distractions	Provide options for Perception Offer ways of customizing the display of information Offer alternatives for auditory information Offer alternatives for visual information	Provide options for Physical Action Vary the methods for response and navigation Optimize access to tools and assistive technologies
Build	Provide options for Sustaining Effort & Persistence Heighten salience of goals and objectives Vary demands and resources to optimize challenge Foster collaboration and community Increase mastery-oriented feedback	Provide options for Language & Symbols Clarify vocabulary and symbols Clarify syntax and structure Support decoding of text, mathematical notation and symbols Promote understanding across languages Illustrate through multiple mediums	Provide options for Expression & Communication Use multiple media for communication Use multiple tools for construction and composition Build fluencies with graduated levels of support for practice and performance
Internalize	Provide options for Self-Regulation Promote expectations and beliefs that optimize motivation Facilitate personal coping skills and strategies Develop self-assessment and reflection	Provide options for Comprehension Activate or supply background knowledge Highlight patterns, critical features, big ideas and relationships Guide information processing and visualization Maximize transfer and generalization	Provide options for Executive Functions Guide appropriate goal-setting Support planning and strategy development Facilitate managing information and resources Enhance capacity for monitoring progress
Experts or Learners who are:			
Goal	Purposeful & Motivated	Resourceful & Knowledgeable	Strategic & Goal-Directed

Figure 1: Universal Design for Learning Guidelines

Source: Center for Applied Special Technology (CAST 2018,2020). *The Universal Design for Learning Guidelines*

As deduced from Figure 1 above, the UDL as conceptualized by CAST, encourages educators to provide a) multiple means of engagement (the “WHY” of learning, b) multiple means of representation (the “WHAT” of learning) and multiple means of action an expression (the “HOW” of learning (Sanger, 2020). These guidelines and principles of UDL are further explained below:

Multiple Means of Engagement: The full inclusion of children with special needs in inclusive settings provides an opportunity for teachers to identify classroom management principles and practices that promotes diversity and acceptance. Teachers can develop self-awareness in students by not hiding from their differences. To do this, teachers should use inclusive teaching strategies and technique to actively engage students in the classroom. According to Polirstok (2015), creating an emotionally safe classroom environment where students can be successful involves not only high approval interactions between students and teachers, but also requires an emphasis on structure and routine. Moreso, UDL provides multiple means of engagement in classroom situations to tap/arouse the interest of learners with special needs, offer appropriate challenging learning experiences (enriching and exploratory) and also increase motivation of the students. Engagement includes a) letting students make choices within the classroom b) presenting lessons in a way that feels relevant to students’ lives and c) creates opportunities for students to explore and move around the classroom to promote learning

Multiple Means of Representation: Representation in special needs education gives a clear idea as to the groups most likely to be negatively impacted by a lack of representation eg. the nature of disability of students in the classroom. It helps to give learners various ways of acquiring information and knowledge. It is important to consider the visible and/or hidden disabilities that students may have. According to Wynter (2022), representativeness makes the idea of success tangible for many students especially when seeing themselves in others. Diversifying the curriculum we teach, ensuring that students have a range of role models and opportunities to learn. It accommodates the multiple means of representation in its application. It provides options for perception, provides options for language and symbols, provide options for comprehension. UDL recommends offering information in no more than one format and promotes hands-on-learning activities, including activities to improve mindfulness and attention in the classroom.

Multiple Means of Action and Expression: UDL provides multiple means and options for physical action, expressive skills and fluency and also provide options for executive functions. This is aimed at providing learners alternatives for demonstrating what they know. Encourage interaction, adopts practices that reflects high values with respect to diversity, equity and inclusion. Example disability related accommodations and other special learning needs and flexibility in its use.

A Way Forward for Promoting Inclusive Pedagogy through Universal Design for Learning in Special Needs Education

UDL provides a promising approach to meeting the needs of all students irrespective of their unique learning needs (Kurts, 2006; Izzo, 2012). Therefore, Special educators, curriculum planners, and relevant stakeholders in special needs education and regular education are expected to; A) Further validate the UDL principles and guidelines different context to ensure its usability in diverse settings (Izzo, 2012). B) Understand the potential of UDL in supporting learners with special needs and also explore ways to provide adequate training for teachers in its effective use at all levels of education and C) It is important to provide special teachers and regular teachers with adequate capacity building and adequate resources to meet the diverse learning needs of students with special needs in the classroom. From the foregoing, it is recommended that:

- ❖ An Inclusive Education Policy (IEP) should be formulated and designed to facilitate the implementation process of inclusive education. This policy should provide clear and detailed statements on staff implications, curriculum issues, support services, degrees of inclusion and the roles of schools and communities when implementing inclusive education programmes.
- ❖ The existing National Policy on Inclusive Education should be adequately implemented and developed to ensure that programmes are developed based on the stated philosophy of inclusive practice and UDL guidelines in planning education programmes at all levels of education.
- ❖ Teachers who are knowledgeable and drawn to the core principles of UDL usually lack the knowledge base to enact and implement these principles in inclusive classrooms. Therefore, further training and retraining will be necessary to enable them acquire the competencies they require.
- ❖ There is need for extensive networking, cooperation and consultation among all stakeholders (government, advocacy groups, community, parent groups, Non-Governmental Organizations (NGOs), organizations of persons with special needs, etc.) in the planning and implementation of inclusive programmes through UDL.
- ❖ There should be an emergence of a global consensus and vision on Inclusive pedagogy through universal design for learning for promoting the full implementation of inclusive education in Nigeria.

CONCLUSION

In a bid to curbing the challenges of inclusive education and promoting its full implementation as strategy for improving educational equity, there is need to adopt the guidelines and principles of inclusive pedagogy through universal design for learning. The peculiar nature and structure of inclusive pedagogy through universal design for learning has made it widely accepted globally due to the fact that instructional practices in inclusive classrooms reflects the belief that individual differences can be accommodated and that learning will vary upon each child's priorities. This will fully address the issues of diversity as well as supporting the United Nations Sustainable Development Goals (SDGs) which set the global education agenda for the year 2030 in SDG (4) seeks to ensure inclusive and quality education for all and promote lifelong learning.

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