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## Universal Design for Learning (UDL): A Paradigm Shift in Inclusive Education

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### Abstract

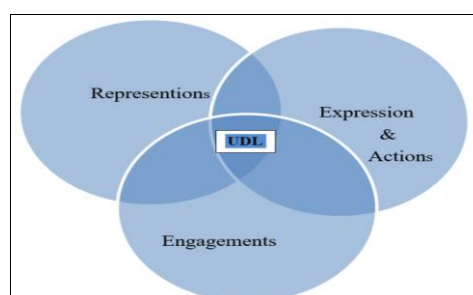
Present article aims to explain the basis nuances pertaining to the concept of Universal Design for Learning (UDL) and its possible application in inclusive class room setting. UDL is an instructional approach with flexible, interactive, proactive and multiple means of engagement in content delivery, students' reactions and assessment mechanism during the teaching and learning process. It incorporates the philosophy of need-based shifting of pedagogical aspects from text to audio-visual, traditional to blended & OER, one size fit curricula for all to need based varying, passive to interactive, mono content delivery & assessment system to multiple one. It also envisages for providing equal learning opportunities to all types of learners with regards to their

varying abilities. Removal of architectural, pedagogical and curricular barriers from academic institutions is the fundament and inherent aspects of UDL. It addresses one's right to access the quality education as per his learning styles and approaches. However, inclusive education is also regarded for providing equal learning opportunities but with the limitations of not offering much options regarding pedagogical aspect of teaching and learning as UDL supposed to provide. In true sense, UDL has the potential to meet out the diverse need of learners of inclusive classroom setting and it may be regarded as the paradigm shift in inclusive education.

**Keywords:** Universal Design for Learning, Inclusive Education, Challenges

### Introduction

The Concept of Universal Design for Learning (UDL) is the result of architectural movement mooted out by Ronald at the North Carolina State University, USA by which automatic doors, curb removal, ramp and so on was attached to institution buildings before the construction process takes place. Moreover, concept of UDL was also give place in developing web page dedicated to students with special needs for accessing the internet. UDL has been formally introduced into the field of educational world with the potential and promising use of technologies available for making use of it effectively. However, Meyer, Rose and their colleagues in the year of 1990 have introduced the formal concept of Universal Design for Learning (UDL) to the field of education. Rose & Mayer (2002) has defined UDL as "an educational framework based on research in the learning sciences, including cognitive neuroscience, that guides the development of flexible learning environments and learning spaces that can accommodate individual learning differences". Moreover, Rose and the Centre for Applied Special Technology (CAST) firstly explained principles of UDL framework in 1990 with the three components like:



**Fig 1:** Principle Components of UDL Framework

“*Multiple of Means of Representations* to give learners various ways of acquiring information and knowledge, *Multiple Means of Expression & Actions* to provide learners alternatives for demonstrating what they know and *Multiple Means of Engagement* to tap into learners’ interest challenging them appropriately, and motivate them to learn” (1990). It is a framework of improving teaching and learning with the help of advanced technologies and learning sciences, and may have potential and promising applications in the optimisation of learning experiences for every learner.

Singh (2017)<sup>[9]</sup> has also explained UDL as “an instructional approach that opens opportunities for all students by using digital media and flexible instruction to help students meet their educational goals”. It is considered as one of the effective academic mechanisms in reducing the barriers of learning disregard to the degree of disability, psycho-social and economic identity and background of millions of learners. It does envisage in developing a learning design wherein learning environment and experiences are framed in a manner to ensure full participation of every learner based on the individual capacity and ability. It is a flexible, accommodative and learner centric framework of learning experience designated to meet out the different learning needs of different learners. Moreover, it has also been regarded as a learning framework designated for educating every child. UDL is a framework of learning with much flexibility encompasses with learning environments and learning experiences dedicated to support in access, developing knowledge, understanding, skills, internalising behaviours and to support expert learning (Meyer *et al.*, 2014)<sup>[3]</sup>.

### UDL and Inclusive Education

UDL can be deliberated as the paradigm shift in the field of special education more precisely in inclusive education. Concept of inclusive education has been mooted out and made formalised across the world in the conference of Salamanca, France in 1994. Inclusive education talks about the zero rejection policy in the process of education supposed to be rendered to each and every child disregard to his disabilities. Prior to inclusive education concept and policy, Secondary Education Commission (1952), Kothari Commission (1964-66)<sup>[2]</sup>, NEP (1986)<sup>[4]</sup>, PWD Act (1995), RTE Act (2009), NEP (2020) including the constitutional provisions enshrined in the constitutions of India like Articles 15, 17, 21, 29, 45, 46 (The constitution of India, 2019)<sup>[10]</sup> and so on has categorically pointed out responsibilities and accountabilities linked to providing educational opportunity to ever one and has also suggested the means and methods required in bring out each and every individual in the realm of education disregard to his physical abilities, gender, race, region, colour, socio-cultural, religious and economic background. RCI (1992)<sup>[7]</sup> made provisioned to govern and administer the matters associated with special education in India. Finally, India opted the concept of Inclusive education with the intention of no child should be left out from being educated up to the age of 14 Years. However, concept of inclusive education or inclusion of all types of children in the process education is predominated with the notions of enrolment, retention and achievement by using the traditional and available educational resources with the provisions of ensured

disability friendly institutions’ building, financial incentives and reservation in admission and employment.

Inclusive education is considered as a human right issue pertaining to one’s right to avail education and ensure personal development of his potentials. It concerns to bring out the child to the general educational community, realise the equality of educational opportunities disregard to disabilities, spell out against the disciplinary exclusion of child at different grounds, promotes the philosophy of education and society along with education for all and ensures participation to every child with or without disabilities in teaching learning process for realising the goal of equality of educational opportunities with additional supports to institutions. However, limited attentions were paid to the different universal approaches suitable to teaching learning process except to bringing them out to academic environment. Traditional as well limited teaching practices are being carried out to educate such children under the egis of inclusion of all, whereas UDL is more concerned to the universal principles of teaching and learning with the flexible, proactive and interactive character of class room teaching practices. It lays emphasis on providing multiple options to the students in teaching learning process with reference to multiple means of content representation, actions and engagement. Meyer *et al.* explained that UDL “integrates and classifies variables associated with the design of effective learning environments for all learners, including students with disabilities. Generally, UDL is focused on ensuring learning environments and associated experiences are designed to support access, build understanding of knowledge and skills, and help learners internalize behaviours that support expert learning” (2014).

### UDL in Inclusive Class Room Setting

UDL is an instructional approach which addresses issues related barriers to teaching and learning process. It is also concerned to address issues pertaining non-flexible and one curriculum for all that leads to unintentional barriers to the learners with certain disabilities even many students without any disability experienced that their curricula including learning strategies are poorly designed to meet their learning needs. UDL is considered to have potential ability in meeting out the challenges and diverse needs by endorsing the use of more flexible, proactive, interactive and engaging instructional materials, techniques and strategies that enable teachers to meet out the varying needs of students with and without disabilities.

Ideally, UDL framework works with three universal principles:

1. **Multiple Means of Representations:** presentations and delivery of content and information by using varying methods and strategies as per the needs and potentials of learners.
2. **Multiple Means of Actions and Expressions:** provides opportunities to the learners to react on the content provided to them and demonstrate their understanding over the contents and information through different ways.
3. **Multiple Means of Engagement:** takes the learners to the pool of different engaging activities and learning tools as per their interest by providing choices of contents and tools (CAST, 1990).

In connection to incorporating the UDL in class room teaching, Rose and Mayer in 2002 devised the following strategies that may be used in inclusive class room setting.

1. **Use of Multiple Strategies to Present Content:** learners including disabled may improve their learning outcome as they have their own learning style. One size curricula for all may hamper their learning outcome. Thus, multiple means of presenting contents like audio, audio-visual, tactile, hand on practices, field trips, educational software & OER, role play, group work, cooperative learning, music, peer learning and so could be useful in meeting out the diverse needs of learners in inclusive class room setting.
2. **Use Variety of Materials:** in order to present or introduce the new content or information and keeps motivated the learners in inclusive class room setting, podcasts, power point presentations, e-books, videos, audios, animation, manipulation and customisation of learning materials may be used in class room teaching to meet out the needs of diverse learners.
3. **Provide Cognitive Support:** it incorporates the giving of clues, summarising the entire teaching session, using different audio-video teaching aids not based on lecture, scaffolding to learners in dealing with complex concepts, providing the study materials, copies of PPTs and so on may help to the learners.
4. **Teach to Variety of Learning Style:** it includes the variety in learning style by giving instructions orally and in writing in order to engage the learners auditory and visually by using visual aids as slides, graphics, charts, models and so on. Need based shifting from text to video, audio to video, oral to activities, face to face to on line, traditional to virtual & blended, individual to peer and pair group, and vice versa may be incorporated in inclusive class room setting in order to enhance the learning out come with flexible and interactive means of learning style.
5. **Provide Flexible Opportunities for Assessment:** it allows the learners to demonstrate and reflect their understanding and learning through audio, visual, oral presentations, and by activity and performance than only the written assessment. In conclusion, flexible assessment opportunities may be helpful to the learners of inclusive classroom as diverse style of learning cannot be assessed with the mechanism of traditional assessment system.

### Conclusion

UDL has been considered as an effective instructional approach in USA in providing universal principles of learning design at school and university stage since twenty years. However, its application at across the level of education is still a herculean task but consistent efforts are being made to expand it across the USA. Moreover, it is been considered as architectural approach in education system where nobody should be left out from the access to formal education. It works with the framework of grounded principles like multiple means of representations, multiple means of action and expressions and multiple means of engagement. It is a flexible, interactive, proactive and engaging approach of learning opportunities for general as well disabled learners. UDL is also seen as the paradigm shift in inclusive education as its principles of universal learning design has potential effectiveness in meeting out

the diverse pedagogical needs of all types learners of inclusive class room setting. Its application demands structural changes from inflexible, one curricula for all to flexible, proactive, interactive and in need based shifting of content delivery and assessment of learning by using varying means in meeting out the needs of inclusive class room setting. UDL has acclaimed the effectiveness in meeting out the diverse needs of general and disabled learners but the question arises whether on going Indian education system is ready to adapt it as it needs architectural, pedagogical, curricular, technical and approach-based restructuring and customising the educational infrastructures for providing effective and meaningful learning opportunities to all under the ages of inclusive education. However, UDL may be appeared as an effective paradigm shift in inclusive class room setting in coming years if it could be adapted fully in general education system.

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