SJIF Impact Factor (2025): 8.688| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 10 | Issue: 6 | June 2025 - Peer Reviewed Journal

A PERSPECTIVE ON APPLICATION OF UNIVERSAL DESIGN FOR LEARNING IN HEALTH CARE EDUCATION

Dr. Sangeeta Abhay Patil
Academic Consultant, School of Health Science, Yashwantrao Chavan Maharashtra Open University, Nashik (MS)

ABSTRACT
Presently health care education is the second largest system in the world and with the Generation Z or zoomers as primary aspirants. This Generation is born with smart phones and social media platforms and are quick to grasp and use Artificial intelligence tools. The government of India Survey mentions that India has 26.52 crore students in school, 4.33 crore in Health care education and 11 crore plus learners in skilling institutions. (Bureau, 22 Jul 2024 2:38PM) . Students of all diverse groups take admissions to the Health care education colleges for becoming a Proficient and competent Health care expert. The National education Policy guidelines recommend Inclusiveness, Flexibility and Holistic approach in Health care education. Universal design for Learning is the educational structure which aims at adjusting the teaching and learning methods for all individuals or students in the classroom to meet the varied learning methods of the students in aligning with the National Education policy 2020. This article is a perspective on how the Application of Principles of Universal design for Learning can be used in Health care education.
KEYWORDS: - *UDL, Inclusiveness, Health care education, Teaching- Learning Strategies*

BACKGROUND

Health care education today caters primarily to Generation Z students, a generation raised with digital connectivity, social platforms, and real-time information access, showing a strong preference for AI-based solutions in their learning. They have short attention span and favour visual and interactive learning. Gen Z values flexibility in their learning experiences and often prefers personalized learning paths tailored to their interests and preferences. They appreciate educational platforms and resources that allow them to customize their learning journey. (Ranjan, 2024). A clear understanding of the unique learning traits of each generation can help Health care education to tailor instructional approaches and create more effective learning experiences for diverse audiences and groups. (Ranjan, 2024). With the advent of AI Technology most of the students learning is characterised by personalized learning, Technology driven, using learning platforms like coursera, udemy etc. that adapt to their learning style, pace, creating more engaging and effective learning. They give more emphasis to practical knowledge (therefore the Teaching should focused more on critical thinking, problem –solving, competency based learning. And real world application). Curriculum should be aligning with the demands of the evolving employability skill development and focus on mental well-being. This generation tries to balance studies with other activities therefore incorporation of mindfulness and meditation will help to manage stress and enhance focus. Today's generation is self-driven about what they want to learn – their interest, what subject they are best at, very few want to learn or take admissions in Health care colleges to please their parents. The government of India Survey mentions that India has 26.52 crore students in school, 4.33 crore in Health care education and 11 crore plus learners in skilling institutions. (Bureau, 22 Jul 2024 2:38PM) . Students of all diverse groups take admissions to the Health care education colleges for becoming an Expert, Proficient and competent Health care expert. Health care education is the second largest system in the world. There are different types of learners in the Health care education and so the teaching strategies should be different to embrace and cater to in Health care education system. (Suhasini Kotcherlakota, 2023) Enhanced learner engagement is a fundamental feature of Universal Design for Learning (UDL). (Howard, 2024). Universal design for Learning is the educational framework which aims at adjusting the teaching and learning methods for all individuals or students in the classroom to meet the diverse learning methods of the students. Since English is not their first language of many students, they might struggle with reading and writing.

A lack of guidance from the family, mentors or absence of Role Model can hinder the students' progress. Male students may also encounter gender discrimination in certain clinical settings, such as maternity wards. Also National Education policy 2020 emphasizes on Multidisciplinary, Holistic, Inclusive, flexible and skill orientation. As per National Education policy 2020, students of all backgrounds, including varying castes, abilities, genders, languages, and regions are entitled to Health care education this approach articulates that a Health care education student can take up a course in philosophy or commerce or History and there should be Easy Entry and Exit Facility for the student. The Curriculum should be flexible and the Teaching – Learning should be diverse to meet the needs of all types of Learners – Auditory, visual, Kinaesthetic, reading and writing.

The Universal design for learning recognises each student is unique and has individual learning needs ensuring that educational materials and practices are diverse, flexible and engaging.

SJIF Impact Factor (2025): 8.688| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 10 | Issue: 6 | June 2025 - Peer Reviewed Journal

The term Universal Design for Learning was first formulated by Ronald Mace in 1990. It is a design and composition of an education environment so that it is accessed, understood and used to the greatest extent by all the people regardless of age, size, ability or disability. Universal Design for Learning has significant potential for diverse learners in multiple settings. (Sherrilyn Coffman, 2021)

The focus of education moves in the direction of the learner and away from the teacher highlighting the educators to appreciate the characteristics of varied learners. Although the Universal Design for Learning is applied till Level 12 there are articles emphasizing the Application of Universal Design for Learning in Health care education.

In this article we will study in detail basics of Universal design for Learning and how core principles of universal design for learning can be effectively implemented in health care education system to enhance the learning outcomes (Audrey M K Dempsey 1, 2022)

Universal Design for Learning (UDL) is an approach that aims to provide greater educational opportunities for all learners. The Health care education student can directly benefit from two major aspects of UDL – 1. Flexible curriculum. 2 variety of Instructional practices, materials and experiential learning. 3. Use of assistive technology. For including the students with disabilities in Health care education changes must be made in curriculum, organization, Teaching-Learning Strategies (Linda P. Ewe, June 2023). Taking into account the fundamental ideas of Universal Design for Learning, following approach can help to elevate learning outcomes of student.

The core principles of Universal Design for Learning (UDL)

1. Multiple means of Engagement (Why of learning) how we engage with and are motivated by learning. This involves two brain areas the Amygdala, responsible for emotional responses, and the Hypothalamus which regulates the motivation and arousal.
2. Multiple means of Representation. (What of learning) how we perceive and make sense of information. The areas of the brain involved are occipital lobe for optical information, Temporal lobe for auditory & language understanding, parietal lobe for integrating the sensory information, hippocampus involved in Memory and Learning.
3. Multiple means of Action and Expression (How of Learning) how we plan, organize and execute. The area of the brain involved prefrontal cortex of frontal lobe for planning and decision making, cerebellum for movement coordination.

Multiple means of Engagement (WHY of Learning)

1. Infrastructure and facilities

Campus should be welcoming where the student should feel at safe and at ease.
* Digital well equipped Classroom, Ramp, Toilet, practical hall facility, for physically disabled. * Campus services should be readily available to the students. *Sign languages board at various places in the campus. *Clean Food and boarding Facility for girls and boys. *Transport facility – City bus, private bus and distance to various places from the bus-stand, railway station or airport must be depicted in the prospectus. *Create a classroom environment that is welcoming and adaptable to different learning needs. *Use of AI and Digital learning platforms help in engaging the students.

2. Elucidation of Language barriers

For many Indian and foreign students English is not their primary language therefore may have problems in understanding the subject. *Infrastructure boards and signs should be in English and state language with picture on the sign board. *Any student with the urge to learn has the right for admission. *Students should be allowed to use Digital tool for Language translation.

3. Flexibility in curriculum

As per the NEP 2020 Curriculum should be flexible and enabling students to learn at their own pace.*For example, online modules can provide opportunities for self-directed learning while accommodating different schedules. *Providing choices and flexibility in learning activities.*Offering resources such as tutoring services and access to mental health resources.*by fostering an inclusive environment, educational institutions can warrant that all students feel supported in their learning journeys.

4. Lateral and vertical Entry and exit Facility

For lateral entry provision can be made allowing Health care students to take can take admissions to the Diverse Health care sector, they choose by fulfilling the criteria of entry. For Vertical entry provision to exit the program and enter later if they choose to with a period of validity for the program.

5. Financial aid and scholarships

Earn and learn scheme can be useful for economically backward student.* Bank loan facilities, scholarship and various government schemes should be explained to the student.* Cater Employability through Campus Interviews. *Provide scholarships and financial assistance specifically for students from low-income or marginalized backgrounds to reduce barriers to entry

SJIF Impact Factor (2025): 8.688| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 10 | Issue: 6 | June 2025 - Peer Reviewed Journal

6. Mentorship
Blend the teacher and students in small groups for mentoring. This helps the student to get accustomed with the teacher and learning environment. * Students are paired with faculty's example Mentor-Mentee student support and guidance in Health care education colleges for counselling students from different cultural and religious backgrounds.

Peer mentoring system where senior students from diverse backgrounds mentor newer students. This helps students feel a sense of belonging and builds confidence.* Also form peer groups in classroom that will help in group discussion and support.

Motivation through real life situations arranging Eminent guest lectures so that the student gets motivation and has emotional connections to the program. *Engaging students through simulations, case studies and Group projects can help them to relate to the real life situations and stay motivated.* Experiential learning should be a part of curriculum.* Help students develop intrinsic motivation and a sense of ownership over their learning journey.

7. Cultural celebrations
Cultural activities should be a part of Academic Calendar to make all feel respected and inclusive. * To celebrate the various cultures, religions, and identities represented within the college community.* this could include cultural festivals, guest lectures, and discussions. * Organize events, workshops, and awareness campaigns on diversity and inclusion issues within the healthcare field.

Multiple means of Representation (WHAT of Learning)
1. Encourage student inter-actions
This can be accomplished by ice breaking activities, collaborative learning game. Group projects sharing ideas in small groups during class face to face meeting telephone video conferencing return feedback on assignments and email. Recognition of students name gives a positive feedback respectful interaction

2. Eluding Language barriers
The curriculum should be in at least 03 languages – State language, National language and English, even though the medium of instruction is in English.

3. Learning resources
Students should have access to different learning resources and the literature mentioned using internet sites, electronic as well as paper textbook, presentation of subjects on University website.*Journals, videos, audio recording, PowerPoint presentation, social media, 3D images, podcast, concept maps and personal experience resources can be used in delivery of class content.* Different students may understand and comprehend information in various ways, therefore it is crucial to present information in multiple formats—such as videos, info-graphics, and interactive modules—catering to different learning styles.*For instance, visual learners can benefit from diagrams and charts, while auditory learners may prefer lectures and discussions. * The method of Facilitation content should stimulate a variety of senses like textual, visual, aural and kinaesthetic.* the lectures/ ppt should be recorded or shared with the students to view later. This will aid the slow learners and diverse lingual students.

4. Diverse Teaching Learning methods
The Diverse Teaching Learning methods should be inculcated by the facilitator like Problem based learning, Case based learning (Patil, 2023) , and Flipped Classroom, Role play, Interview, Think pair share and many more along with Instructive lectures.*Should plan the newer teaching learning method every fortnight so as to meet all the diverse learners need.* Assistive technology also should be used – Digital classroom, incorporating technology like virtual simulations can provide immersive learning experiences for students preparing for clinical practice.*Additionally, using peer teaching and collaborative learning groups can encourage students to learn from one another, catering to diverse knowledge backgrounds. *Teacher's role shifts from Teaching to guiding or facilitating, using various teaching strategies to meet the diverse learner needs, like mentor, friend, guide, facilitator, helping with AI Tools to personalised support and address individual student needs and reduce the learning gaps.

5. Unbiased approach in Health care education settings
Students should be trained to recognize and address cultural biases in Health care education practice settings. This would be an essential part of Health care education practice training, given the emphasis on individualized approach and the importance of considering the clients mental, emotional, and social factors.* Training on cultural competency and cross-cultural communication to prepare students for interacting with diverse consumer populations.

6. Assistive technologies
Can use speech-to-text software or screen readers or captioned videos to support students with disabilities.* The instructors can present a content using i-clickers simulation portfolio using key element like text graph diagram flashcard and sticky notes.* Real world scenarios, chunking assignments, storytelling, personal reflection, helps in maintaining a compassionate classroom climate.

SJIF Impact Factor (2025): 8.688| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 10 | Issue: 6 | June 2025 - Peer Reviewed Journal

7. Significance and Validity
Connect learning to real-world situations and students' lives, making the content more meaningful and relatable.

8. Support
Provide support and guidance to help students build confidence and gradually increase the challenge of learning tasks.

9. Coping Approaches
Prepare students with strategies to manage challenges, setbacks, and emotions related to learning.

Multiple means of Action and Expression HOW of Learning
Clear Expectations should be made to achieve learning goals and expectations explicit to help students understand what is expected of them.

Reflection: Provide opportunities for students to reflect on their learning, identify areas for improvement, and develop self-monitoring skills

UDL encourages students to demonstrate their knowledge in various ways. In the context of health care education, this might include traditional assessments (exams and quizzes), as well as practical demonstrations (clinical skills assessments), presentations, or digital portfolios, Practise based assessment.

Allowing students to choose how they express their understanding can lead to deeper learning and greater retention of knowledge. The assignment can be part of assessment in the form of Class presentation, essays, poster presentation, infographics, paper presentation, reflection, review questions, Role play etc.

Feedback: Focus feedback on effort and progress rather than just grades, encouraging a growth mind-set.
Less formal options will remove the anxiety of the learner who are developing skills (Ailish Malone and Fiona Daly, 2023)**.**
Internship students can prepare portfolio and undergo evaluation or feedback from patients, their relatives, non-medical staff- 360^0 evaluation.

CONCLUSION

Essential to any Learning engagement is a clear Learning outcome. By adopting the Principles of UDL educators can effectively demonstrate its application to support flexibility, multiple learning options of various fields to meet the diverse needs of the student regardless of the Health care education specialization. UDL motivates the Facilitators to use various different strategies to serve the expanding variety of learners in Health care education. As the student demographics continue to evolve, implementing inclusive curricula and reducing learning barriers are essential for Broad, effective educational engagement. Students can undergo assessments at regular intervals based on clearly outlined criteria to enhance skills and Health care education quality. Through the adaptation of Universal Design for Learning, the health care education sector will prepare professionals who are not only skilled and confident but also capable of making meaningful contributions to society.

BIBLIOGRAPHY

1. *Ailish Malone and Fiona Daly, R. U. (2023, October 9). Tips for applying universal design for learning in healthcare practice placements. Retrieved June 28, 2025, from Google.com: https://www.rcsi.com/impact/details/2023/10/applying-universal-design-for-learning-in-healthcare-practice-placements*
2. *Audrey M K Dempsey 1, E. H. (2022, September). Awareness of Universal Design for Learning among anatomy educators in higher level institutions in the Republic of Ireland and United Kingdom. National Journal of Medicine(Clin Anat. 2022 Sep 20;36(1):137–150). doi:doi: 10.1002/ca.23947*
3. *Bureau, G. P. (22 Jul 2024 2:38PM). Total number of enrolment in Higher education. GOI, Ministry of Finance. Delhi: PIB Delhi. Retrieved June 24, 2025, from https://www.pib.gov.in/PressReleseDetailm.aspx?PRID=2034925#:~:text=As%20per%20All%20India%20Survey,by%20the%20Union%20Finance%20and*
4. *Howard, M. C. (2024, May 21). The application of UDL and SoTL to health care education. doi: https://doi.org/10.1002/tl.20598*
5. *Linda P. Ewe, E. M. (June 2023). Inclusive Education and UDL Professional Development for Teachers in Sweden and India. Sweden, India. doi:DOI: 10.4018/979-8-3693-0664-2.ch002*
6. *Patil, D. M. (2023, 09 23). Efficacy of Case based Learning In understanding the physiology of Erythrocytes. EPRA International Journal of Research and Development, 08(09). Retrieved June 27, 2025, from https://eprajournals.com/IJSR/article/11395*
7. *Ranjan, S. (2024, March). Learning Habits of Gen X, Y & Z. linkedin. Retrieved June 26, 2025, from https://www.linkedin.com/pulse/learning-habits-gen-x-y-z-santosh-ranjan-cto1f*
8. *Sherrilyn Coffman, P. R. (2021, july 29). Universal design for learning in higher education: A concept analysis. journal homepage: www.journals.elsevier.com/, 36-41. Retrieved June 26, 2025, from https://www.sciencedirect.com/science/article/pii/S1557308721000962*

SJIF Impact Factor (2025): 8.688| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 10 | Issue: 6 | June 2025 - Peer Reviewed Journal

9. *Suhasini Kotcherlakota, P. ,.-N. (2023, October 3). Implementing universal design for learning in nursing education: Faculty Perspective. Teaching and Learning in Nursing, Volume 19, , January 2024, Pages e138-e144(Issue 1). Retrieved 06 18, 2025, from https://www.sciencedirect.com/science/article/pii/S1557308723002032.*