# **Building Inclusive Mind-Set: The Role Of Teacher Empowerment In Implementing UDL**

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#### Abstract

This paper explores how empowering teachers through Universal Design for Learning (UDL) can transform classroom pedagogy and enhance inclusive education. At Seth Piramal Senior Secondary School, Baggar, under the School of Inclusion initiative by the Piramal Foundation, teachers evolved from traditional, one-size-fits-all instruction to inclusive, accessible, flexible, and child-centred practices. Through intensive capacity-building workshops, ongoing mentorship, and collaboration between general and special educators, 18 teachers were trained in UDL principles and later mentored 40 peers and 24 Fellows. Over 400+ UDL-based lesson plans were co-created and implemented across 12 classrooms, directly impacting 45 children with diverse needs in the classroom. This process led to measurable shifts in teacher mind-set moving from "supporting" to "designing for" inclusion. Teachers integrated differentiated instruction, assistive technology, and multiple means of representation, engagement and expression resulting in a 70% increase in participation and improved learning outcomes for all students. Case studies of students such as Ruksaar, Madhav, Rahul and Priyanka reflect how empowered teachers became channel for inclusive transformation. The study underscores that teacher empowerment through UDL implementation is not merely skill-building but a reimagining of pedagogy laying the foundation for equitable, inclusive, and higher-education-ready classrooms.

**Keywords:** Diverse needs; inclusive education; accessibility; flexibility; teacher capacity

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## I. Introduction

Jhunjhunu, located in the Shekhawati region of Rajasthan, is known for its educational aspiration and strong cultural heritage. Within this district, Seth Piramal Senior Secondary School, established in 1932, underwent a historic transformation in 2022 through the School of Inclusion initiative of the Piramal Foundation. The school shifted from traditional, teacher-centred instruction to an inclusive model where children with and without disabilities learn together in the same classrooms.

Inclusive education is a fundamental right that ensures all children regardless of disability, background, or learning differences receive meaningful access to learning. However, in most Indian classrooms, teaching remains uniform and rigid. The same method, same material, and same assessment are expected to work for every student. Such a one-size-fits-all approach unintentionally excludes learners who need different ways of accessing content, engaging with activities, or expressing understanding. Despite progressive policies

such as NEP 2020 and the Rights of Persons with Disabilities Act (RPwD Act 2016), classroom-level inclusion remains limited.

Universal Design for Learning (UDL) offers a scientifically grounded solution to this gap. Developed by the Centre for Applied Special Technology (CAST), UDL promotes flexible, accessible, and learner-centred pedagogy. Instead of expecting children to fit into a fixed system, UDL redesigns the learning environment to fit every child. By providing multiple means of representation (what students learn), engagement (why they learn), and action and expression (how they show learning), teachers can remove learning barriers and create participation opportunities for all learners.

This research paper examines how Seth Piramal Senior Secondary School transitioned to a UDL-based inclusive model. The transformation began in 2023 with intensive UDL training for 12 general teachers and 3 special educators, followed by continuous mentorship, collaborative lesson planning, classroom demonstrations, and reflective workshops.

At the centre of this transformation is teacher empowerment. The study explores how teacher mindset, confidence, and professional practices evolved shifting from supportive roles to proactive design of accessible classrooms. Using Google Form surveys, classroom observations, student-level evidence, IEP records, and reflective discussions, this research documents measurable improvements in student participation, academic outcomes, and socio-emotional development.

The purpose of this study is not merely to describe a program, UDL emerges here not only as a teaching strategy, but as a mindset shift transforming classrooms into spaces where every child learns, belongs, and aspires to higher education.

# II. Understanding UDL (Universal Design For Learning):

UDL was developed by CAST (Centre for Applied Special Technology), USA, and is based on scientific research on how the brain learns. It provides flexibility in:

- What students learn (content)
- **How** they learn (methods)
- **How** they show learning (assessment & expression)

The Three Core Principles of UDL

Principle	Focus	Examples
1. Multiple Means of Representation	Providing content in different formats so	Visuals, videos, gestures, sign
("What children learn")	students can understand in their preferred way	language, tactile objects, models
2. Multiple Means of Engagement	Motivating and involving students in learning	Games, group work, real-life
("Why children learn")		examples, interest-based activities
3. Multiple Means of Action &	Allowing students to express learning in different ways	Writing, speaking, drawing,
Expression ("How children show		performing, demonstrating, using
learning")		technology

The principle of providing multiple means of representation, UDL Principle 1 is used to support teachers in designing instructional methods and materials that make learning content accessible to all students with diverse backgrounds, learning preferences and abilities. In planning lessons for all learners, various formats such as videos, audio texts, images and animations are provided to demonstrate content and information. Hitchcock et al. (2016) mentions that critical features, vocabulary and big ideas need to be highlighted for students, with guidance at various levels to connect with their prior knowledge. This facilitates both broader access to and deeper engagement with the learning concept.

In providing multiple means of action and expression, UDL Principle 2 teachers are guided to provide alternative media such as film, text, speech and music for students to demonstrate their learning (CAST, 2018c). Personalised pedagogical supports are embedded in teaching to provide formative and summative feedback. The increased number and variety of participation and assessment options for students to demonstrate their understanding will also increase their engagement across the curriculum.

The principle of providing multiple means of engagement, UDL Principle 3 focuses on designing various classroom activities where teachers motivate students and stimulate their learning interests and perseverance through hands-on, creative and meaningful instruction (CAST, 2018a). Providing opportunities for students to work and communicate collaboratively with clear learning goals, roles and responsibilities is also necessary in developing an inclusive educational environment (Rose et al., 2012). Within the UDL framework, providing multiple means of representation, action and expression leads to improved student engagement, intellectual engagement and classroom interaction (Katz, 2015).

# Journey of UDL Implementation at Seth Piramal Sr Sec School

The journey of UDL implementation at Seth Piramal Senior Secondary School officially began in 2023, when 12 general teachers and 3 special educators underwent a five-day intensive UDL training. In the beginning, many teachers believed that inclusion was the responsibility of special educators alone. However, continuous classroom demonstrations by Gandhi Fellows using TLMs, project-based learning, visual aids, and flexible activities helped shift mindset and practice. The school introduced weekly collaborative lesson planning, regular classroom observations, Saturday workshops, and reflection cycles to support teachers in applying UDL in real classrooms. For Children with and without disabilities, individualised IEP support was integrated along with assistive tools such as speech-to-text, digital boards, and tactile books. Peer learning gradually strengthened teacher confidence. Slowly, UDL stopped being a "method to remember" and became a daily habit visible in classrooms, interactions, and student progress. Today, UDL is part of the school culture ensuring that every child participates, learns, and belongs.

# III. Methodology: Teacher Empowerment Model

This study was conducted to understand how Universal Design for Learning (UDL) has influenced teaching practices within the school. Over the last 2.5 years, teachers, fellows, and special educators have been trained and supported to shift from traditional, single-method instruction to flexible, child-centred, and inclusive pedagogy. However, very limited documentation existed on what enabled this change, how teachers enabled, what challenges teachers faced, what impact UDL brought in classrooms and student learning. The data is collected directly from practitioners; the study brings authentic evidence of change from the ground rather than theory alone.

**Research design:** This study used a **mixed-methods data collection** to understand how Universal Design for Learning (UDL) was implemented and how it influenced classroom practices and student learning. Data was collected from multiple stakeholders involved in the School of Inclusion initiative:

- 22 General Teachers
- 4 Special Educators
- 14 Fellows
- 4 School Leadership

#### **Ouantitative Data Collection**

Quantitative data was collected using a structured Google Form that included close-ended questions, multiple-choice, and Likert-scale responses ranging from "Strongly Agree" to "Strongly Disagree." The tool captured information on teachers' understanding of UDL principles, their confidence in applying UDL strategies, the use of assistive tools and classroom resources, the level of participation of children with and without disabilities, and overall perceptions of inclusiveness and student learning outcomes.

**Qualitative Data collection:** to understand behavioural change and classroom transformation, qualitative data was collected through classroom observations, collaborative lesson planning sessions, Saturday UDL workshops, reflective meetings, student work samples, and activity outcomes. Additional evidence such as IEP records, progress notes of children with special needs, and informal conversations with teachers and Gandhi Fellows further enriched the findings. Together, these data sources provided deeper insight into how UDL strategies were practiced in real classrooms and how students responded to inclusive teaching approaches.

**Resources Used:** Various tools were used to support data collection and classroom analysis, including observation checklists during classroom visits, IEP formats to track the academic progress of children with special needs, and visual or digital evidence of TLMs and learning aids used by teachers. Student learning was also documented through notebook work, examination results, participation in classroom learning models created during classroom activities, helping to capture both academic progress and engagement.

# **Data Analysis**

Quantitative data was analysed to identify trends and compare responses across different stakeholders. Qualitative data was examined using thematic analysis to understand changes in teaching behaviour, student engagement, and inclusive classroom practices. Triangulation of Google Form responses, classroom observations, and learner evidence further strengthened the accuracy and reliability of the findings.

#### **Ethical considerations**

All participants were informed of the purpose of data collection.

Responses were voluntary, confidential, and used only for academic and improvement purposes.

No personal identifiers of students or teachers were disclosed.

#### Limitations

The study was limited to one school, which means the findings may not represent all educational contexts. In addition, some Google Form responses relied on self-reporting and may contain personal bias, while time constraints and workload may have influenced teacher participation in reflective activities. Despite these limitations, the combination of surveys, classroom observation, learner evidence, and reflective discussions allowed the methodology to capture both measurable outcomes and real behavioural changes. This mixed approach provided a comprehensive view of UDL implementation and its impact on learners.

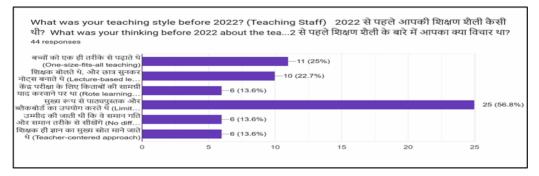
#### IV. Result:

**Transformation began from capacity building to Ownership:** A total of 44 respondents reported their years and months of experience working in Inclusion. Responses have been captured from 26 (59.1%) female and 20 (40.1%) male staff. The survey is conducted with School of Inclusion staff. The profession of these staff includes a total of 22 mainstream classroom teachers who teach students directly, 5 special educators, 14 Fellows who support teachers and special educators in the implementation of innovations and creative ideas in UDL, and 3 leaders who design and strategize the program. The UDL planning and implementation is set up in a trio (Teacher, Special Educator, and Fellow). Each pillar in the trio plays a very important role in the deliverables.

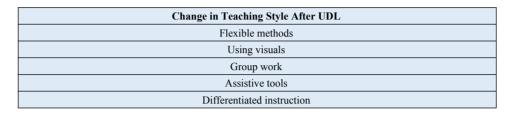
Experience level varied widely from newly appointed professionals with 0 years to highly experienced educators with 18 years in the field. Most respondents have 1–3 years of experience, which shows that UDL implementation is driven largely by a recently trained workforce. A notable group reported 16 months of experience (4 respondents), indicating that many teachers are in the early transition stage of learning and applying inclusive practices. The data also shows a cluster of teachers with 3 years of experience (6 respondents) and another group with 2 years (3 respondents). Only two respondents reported 5 years of experience, while a small number represent senior professionals with more than 5 years, including special educators. This diversity highlights that UDL implementation involves both emerging practitioners and experienced educators working together within the School of Inclusion. This strategy of teacher training and empowerment proved effective. At Piramal Foundation, it is strongly believed that behaviours and mindsets can be transformed, and leadership is developed through ongoing training, constructive feedback, hands-on practice, role play, and reflective learning—and Seth Piramal School is a strong example of this transformation in action.

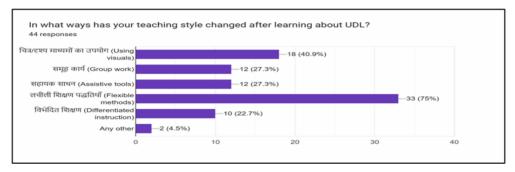
**Teaching style reported before 2023:** The multiple choices survey shows that before the introduction of UDL in 2022 in Seth Piramal Sr Sec School, the thinking and classroom practices were traditional, rigid, and uniform. Learning depended on memorizing content and listening to teachers, with minimal participation or flexibility for students with diverse needs. The responses had different experience in teaching strategies before 2023 as they have experienced teaching:





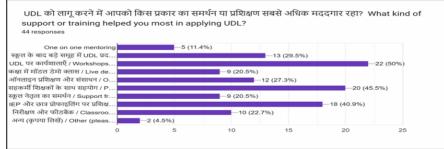
**Progressive change in teaching style:** After learning about UDL, reported significant changes in classroom practice. The most common shift was the adoption of flexible teaching methods (26 responses). Many teachers began using visual aids such as pictures, charts, and videos (18 responses) and incorporated group work and peer-supported activities (12 responses). Assistive tools were used by 12 respondents to support children with special needs, while 10 respondents explicitly mentioned differentiated instruction. This data shows a move from traditional, one-way teaching toward multi-sensory, collaborative, and inclusive pedagogy.





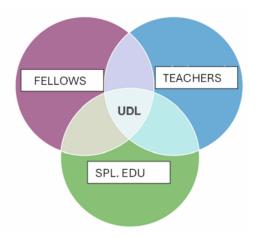
Strategies that gradually transformed Teachers' classroom practices: In 2023, when 12 general teachers and 3 special educators underwent a five-day intensive UDL training. The responses show that teachers and fellows benefitted from multiple layered supports rather than a single intervention. Most respondents highlighted that UDL workshops, peer collaboration, and IEP and student profiling training were the strongest enablers in applying UDL. A significant number benefited from UDL demonstration sessions after school, model classroom support, and online resources. A smaller but important group emphasized the value of school leadership support, classroom observation with feedback, and one-on-one mentoring. The responses clearly show that UDL implementation was not the result of a single training, but a layered ecosystem of support. Workshops created awareness, peer collaboration sustained motivation, demonstration classes-built classroom-level skills, and observation-feedback cycles helped refine the practices. This combination made teachers prepared, confident, and consistent in applying UDL.





Trio model is general teachers, special educators and Gandhi fellows

The Trio Model of Seth Piramal Senior Secondary School is a self-designed model in which teachers, special educators, and fellows work together to design and implement UDL. In this model, work happens through collaboration. If even one pillar does not function, gaps can appear. The role of teachers is to implement UDL in the classroom, prepare lesson plans, and share classroom challenges. The role of special educators is to make the lesson plan inclusive according to the diverse needs of students and add strategies in the lesson plan while keeping children with diverse learning needs in mind. The fellows work as creative minds and innovators. When the lesson plan is ready, fellows either create an activity or a new way of representation so teachers can represent the content, and students can stay engaged. Teachers also map how children can express their learning. Teachers complete "Know Your Child" formats and share them with special educators and fellows so that both can understand the needs properly. Collaboration among all three is very important. If support from special educators or fellows is needed for any chapter delivery, it is provided. Equal communication among all three is also necessary. Representation is decided collectively, which saves teachers' time and helps in smooth syllabus completion.



#### **Teacher Practice to Student Impact: Real Classroom Examples:**

Case 1: Kirti - Academic Progress through Visual and Flexible Learning: Kirti, a class 10th student with cerebral palsy and locomotor disability, was initially quiet, hesitant, and dependent on others. Traditional written assessments were difficult, and she rarely spoke in class. After UDL-based teaching was introduced, her teachers used visual aids, sign-supported instructions, and flexible assessment options such as oral responses, presentations, sports engagement and digital tools. Kirti gradually developed confidence, began answering in class, and actively participated in group projects. She scored overall 83% topped in the whole class in her board examinations and became more independent, emotionally stable, and socially engaged. Kirti's journey highlights how UDL builds not just academic learning, but also self-belief, communication, and agency.

Case 2: Ruksaar - Building Confidence and Conceptual Clarity: Ruksaar, a class 10 student joined the school in 2023 with low confidence and fear of Mathematics and Science. She struggled to understand abstract concepts and avoided participation. Through UDL strategies such as hands-on activities, collaborative problemsolving, and real-life examples, she gained conceptual clarity and started enjoying learning. Her teachers encouraged her to participate in cultural and academic events, which built her confidence and social presence. Ruksaar not only scored 80% in her board exams but also represented the school in sports and debates. Her transformation shows how UDL empowers silent learners to become active, expressive, and self-driven.

Case 3: Priyanka - Accessibility through Sign Language: Priyanka, a class 4 student with hearing impairment, struggled to follow classroom instructions and often isolated herself. After UDL training, her teachers incorporated Indian Sign Language (ISL), visual charts, videos, captions and written instructions into subject lessons. The multimodal approach enabled Priyanka to access the content, ask doubts, and participate independently. Her assessment scores improved significantly, and she began teaching mathematical concepts to her peers using sign language shifting from a passive learner to a learning leader. Priyanka's case demonstrates how accessibility tools can turn barriers into opportunities.

Case 4: Rahul Bhargav - Strengthening Communication and Classroom Engagement: Rahul, a class 11<sup>th</sup> student with learning and speech difficulties, faced challenges in reading aloud, responding verbally, and

staying focused during lessons. Teachers used UDL techniques such as speech-to-text tools, visual cues, reading strips, flashcards, and peer-supported learning. Slowly, Rahul began expressing himself, reading in smaller groups, and responding confidently to classroom questions. He became comfortable participating in morning assembly.

# **Progressive Change and Tangible Outcomes**

Despite challenges such as syllabus pressure, time constraints, lack of resources, and varying levels of UDL readiness, teachers demonstrated consistent behavioural and pedagogical change inside classrooms.

#### After attending the UDL session, one teacher shared:

"My teaching has become more inclusive and effective. I now use different ways to present lessons, allowing each child to learn in the way that suits them best. This has helped all students participate with more confidence and interest. I see better understanding and active involvement from every child. UDL has made my classroom a happier and more supportive place for learning."

#### Another teacher reflected:

"At the beginning, I had very little knowledge about inclusion because I had never worked in an inclusive setting before. However, after attending the UDL sessions, I received immense support and guidance. I learned how to design lesson plans tailored to each child, use TLM, videos, sign language, assistive devices, and accessibility tools. I also learned how to design IEPs, set academic and integrated goals, and implement them effectively. Thanks to UDL workshops, my teaching methods have transformed significantly."

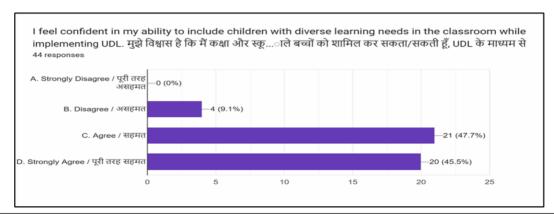
**Measurable Impact of UDL practices** 

ible impact of CBE practices		
No. Of trained staff on UDL	18	
No. Of classes implementing UDL	12 classes (Primar, middles and secondary)	
No. Of CWSN impacted	45	
Lesson plans developed	400	
Teachers who further trained others	40 and above (including fellows	
No. Of others sensitized on UDL	200 above (Community, visitors, interns etc)	
Increase in student participation due to UDL	70%	

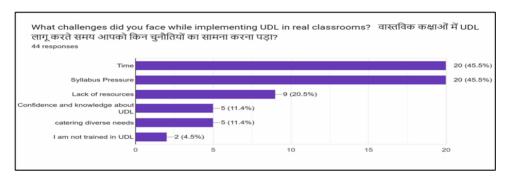
**Student-Level Impact:** Feedback from students highlighted that learning became easier, interesting, and enjoyable due to visuals, TLM, games, peer support, and simplified explanations. Students who were previously passive or silent began responding actively and showing progress.

**Teacher Confidence Outcome:** To understand how confident teachers felt in including children with diverse learning needs while implementing UDL, responses were collected using a four-point scale: Strongly Agree (D), Agree (C), Disagree (B), and Strongly Disagree (A).

A large majority selected Strongly Agree or Agree, indicating increased confidence after UDL exposure. Multiple teachers reported Strongly Agree, while several marked Agree, showing that UDL training positively influenced their belief in their ability to teach inclusively. Only a few responses reflected Disagree, and none selected Strongly Disagree, which implies that confidence gaps exist but are minimal. Overall, measurable responses show that most teachers now feel prepared to include children with diverse learning needs in the classroom through UDL strategies.



Barriers Encountered During the Journey of Transformation: The journey toward inclusive and flexible pedagogy was not without its hurdles. Syllabus pressure appeared in a large majority of responses, indicating that the demand to complete the curriculum within limited timelines often restricted the effective application of UDL principles. Time constraints were another recurring concern, reflecting the difficulty teachers faced in planning and integrating UDL-based approaches into their daily classroom practices. The lack of adequate resources, such as learning aids and teaching materials, further added to the challenge, limiting opportunities for differentiated instruction. Teachers also shared that catering to diverse learning needs required additional effort and capacity building training to understand the needs as general teachers and fellows are not from professional backgrounds. Integration of technologies into the classroom as teachers were into a non-tech background Moreover, several respondents highlighted gaps in confidence and professional knowledge about UDL, with some explicitly stating that they were not trained in UDL, underlining the need for continued capacity building. Many responses combined multiple barriers showing that these challenges often intersect and collectively impact the consistent implementation of UDL in real classrooms.



#### V. Conclusion:

The transformation observed at Seth Piramal Senior Secondary School demonstrates that when teachers are empowered through structured training, ongoing mentoring, and collaborative implementation, inclusion becomes both practical and sustainable. The Universal Design for Learning framework enabled teachers to move beyond traditional, rigid methods and adopt flexible, child-centred and barrier-free practices. Data collected through mixed methods Google Forms, classroom observations, lesson planning evidence, and case studies shows clear improvement in teaching quality, student engagement, and participation of Children with Special Needs.

A total of 18 teachers were trained directly and later mentored more than 40 peers and 24 Gandhi Fellows, creating a ripple effect in the ecosystem. This professional strengthening translated into classroom-level impact, where 12 classrooms implemented UDL and 400+ UDL-aligned lesson plans were developed. The practice impacted 45 CWSN and hundreds of neuro-typical learners through visuals, TLM, flexible assessments, sign language, peer learning, and assistive tools. As a result, participation of CWSN increased by 70%, indicating that UDL does not help one category of children, it universalizes learning for all.

While challenges such as syllabus pressure, limited time, lack of resources, and uneven confidence existed, teachers consistently made progress through collaboration, peer support, leadership handholding, and capacity building. The presence of trios (teacher, special educator, and fellows) became a powerful system of support. Ultimately, the study establishes that UDL is not an add-on method, but a philosophy of teaching that respects learner diversity. When teachers are empowered, classrooms shift ultimately. This model of teacher empowerment lays a foundation for scalable, equitable, and higher-education-ready learning environments across India.

# VI. Discussion:

The findings of this study open important areas for discussion about teacher capacity, inclusive practices, and systemic change. First, the data confirms that most traditional classrooms are designed for the "average child," while real classrooms have diverse learners with different needs. UDL flipped this assumption by making teachers think proactively about learner diversity rather than reactively after children struggle. Teachers reported that earlier they relied heavily on lecture-based methods and memorization, but after UDL training, they began using flexible tools, visuals, TLM, peer learning, assistive technology, and differentiated instruction.

Another critical discussion point is the importance of continuous, layered support. One-time training alone did not create transformation. Teachers changed because they received demonstrations, feedback, Saturday workshops, collaborative planning, and mentoring. This findings suggests that capacity building must

be ongoing, practical, and classroom-linked not theoretical. The trio model (Teacher + Special Educator + Fellow) emerged as a strong structural element. It enabled teachers to share responsibility, learn from each other, and co-solve classroom barriers.

The study adds to the understanding that inclusive education cannot rely only on special educators. General teachers must be equipped, empowered, and confident. When schools build a culture of observation, reflection, and shared responsibility, change becomes sustainable. Therefore, inclusion is not merely a school initiative it is an institutional change driven by pedagogy, mindset, and leadership.

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