

Adapting Pedagogical Strategies for Students with Disabilities in University Classrooms

Dr. Prasad Ghodke¹, Gopal Singh², Achala Dwivedi³, Dr Dilip patil⁴, Baxtigul Nurullayeva⁵, Rustamov Shavkat Shuxratovich⁶, Azizbek Ismailov⁷

¹Assistant Professor ,Department* of MBA,Institute*: Modern Institute of Business Studies Nigdi

Savitribai Phule Pune University Pune

Email: prasadspu1@gmail.com

*ORCID*0009-0007-2194-1116

²Assistant Professor, Department of Education, Chhatrapati Shahu Ji Maharaj University, Kanpur, Uttar Pradesh, INDIA

Email: gopal@csjmu.ac.in

ORCID: 0000-0003-0662-6146

³Assistant Professor,School of Sciences,Noida International University,Uttar Pradesh 203201,India.

achala.dwivedi@niu.edu.in

⁴(corresponding Author), Asspciate Professor, Dept. of Medicine,

Krishna Institute of medical Sciences, Krishna Vishwa Vidyapeeth "Deemed to be University",

Taluka-Karad, Dist-Satara, Pin-415 539, Maharashtra, India

patilhospitalkarad@gmail.com

⁵Department of Psychology, Mamun university, Khiva Uzbekistan

Email:lady.bakhtigul@mail.ru

<https://orcid.org/0009-0001-8976-3105>

⁶Doctor of Psychological Sciences (DSc), Associate docent"

s.s.rustamov@buxdu.uz

ORCID 0000-0002-1194-4977

⁷Faculty of Economics, Alfraganus university, Tashkent, Uzbekistan

Email: a.ismailov@afu.uz

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ABSTRACT:

Inclusive education is now a significant issue in higher education whereby universities have attempted to meet the diverse needs of their learners and more so disabled students. This literature research explores the customization of learning methods to promote access to education, interaction and academic achievement in higher education institutions. The mixed approach research strategy was used and it involved surveys, interviews, classroom observations, and document analysis, to analyze the current practices of teaching and to pinpoint the major issues affecting students with disabilities. The results have shown that the conventional teaching techniques are usually a hindrance with their strict format and absence of the consideration of accessibility. In order to deal with such

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challenges, the study suggests a holistic modified pedagogical model that incorporates the inclusive instructional design and assistive/adaptive technologies, varied assessment plans, and institutional support tools. The framework is founded on ideas of flexibility, accessibility and continuous improvement. Comparative study reveals that the proposed framework is much more successful in engaging students and enhancing their learning outcomes in terms of conventional approaches to the teaching process. The technological integration, especially the use of assistive devices and adaptive learning platforms is very important in helping to engage individualized learning experiences. Moreover, the paper also emphasizes the significance of faculty development and institutional preparedness to achieve success in implementing inclusive practices. Although the problems of resource scarcity and the fluctuation of the expertise level remain, the findings demonstrate that systematic and comprehensive, i.e., holistic, approach toward pedagogy can be a successful way to help students with disabilities. This study adds to the existing body of literature on inclusive education, offering an effective and scalable model of higher education institutions. It highlights the importance of a paradigm shift in more inclusive, technology-based and learner-centered teaching practices.

Keywords: Inclusive Education, Pedagogical Strategies, Students with Disabilities, Higher Education, Universal Design for Learning (UDL), Assistive Technology, Artificial Intelligence in Education, Differentiated Instruction, Learning Analytics, Inclusive Pedagogy.

I. Introduction

Over the past decades, the landscape of higher education has been changing significantly due to the globalization of the focus on equity, diversity, as well as inclusion. The need to ensure that learning environments in universities are conducive to the needs of all learners such as students with disabilities is becoming a widespread expectation. Inclusive education has become popular as both a right to human beings and an essential factor towards sustainable educational development. When discussing inclusion in the context of higher education, it cannot be reduced to just access to physical spaces; it includes equal opportunities to learn, designing the curriculum, and even assessment (Moriña, 2019). With the growing

diversity of student populations in universities, there has been a growing impetus to alter pedagogical practices that may foster the inclusion of students with disabilities in university classes.

Students with disabilities are a diverse population having different learning requirements such as physical, sensory, cognitive and psychological. They can be visual and hearing impairments, mobility problems, learning (e.g. dyslexia), attention-deficit, and autism spectrum disorders. This variety in the population will require adaptive and flexible methods of teaching that will be able to accommodate various learning styles and capabilities. Nevertheless, conventional pedagogic models within the universities tend to be based, on the standardized approaches to teaching and

learning which do not necessarily respond to these different needs. This leads to students with disabilities often facing obstacles to their success in education and the learning process in general (Soetan et al., 2021).

Standard practices in teaching like lecture-based teaching and standardized forms of assessment are not usually accommodating to the needs of accessibility. As an example, hearing impaired students might have difficulties with listening to verbal lectures unless equipped with suitable assistive technologies and visual impaired students might have trouble accessing digital materials. Studies have revealed that assistive technologies can be successfully used to enhance the learning process and engagement with students having disabilities, especially when they are thoroughly considered in instructional design (Soetan et al., 2021). Regardless of this, the uptake of such technologies is not even in institutions of higher learning.

To deal with such challenges, over the last few years, inclusive pedagogical frameworks have become more popular. One such framework that focuses on the development of flexible learning is the Universal Design of Learning (UDL), which focuses on the use of multiple access points to representation, engagement, and expression. This will foster teachers to expect learner diversity and create instruction in ways that are naturally accessible by all learners. Otherwise differentiated instruction is based on the idea of making the teaching strategies more adaptable to needs of individual learners so the students can work with the material in the way that suits their strengths and interests. All these methods are designed to minimize learning obstacles and equalize opportunities to succeed in their educational journey (Adeleye et al., 2024).

The potential of inclusive education in the university set ups has also been boosted by the incorporation of emerging technologies. The innovations in artificial intelligence (AI), virtual reality (VR), and online learning have brought forth the prospects of personalized and adaptive learning. AI-based systems may process the data on student performance to give students personal feedback and learning opportunities, whereas VR technologies may be used to build the learning environment that

will help students with different requirements to learn through experience. The systematic reviews have underscored the great potential of AI and VR in improving the accessibility and engagement of students with disabilities especially in higher education settings (Chalkiadakis et al., 2024). Furthermore, individualized learning through technology has been indicated as one of the important facilitators of inclusive education whereby educators can be able to deal with individual differences better (Shireesha and Jeevan, 2024).

Besides AI and VR, many other technologies that contribute to an inclusive learning experience, including screen readers, speech-to-text applications, captioning systems, adaptive learning platforms, and more, are vital to inclusive learning environments. Such technologies not only enable access to educational materials, but they also enable students with disabilities to engage in classroom activities as well. The studies conducted recently underline the fact that the effective introduction of such technologies can be achieved only with the profound knowledge of their types, functionalities, and pedagogical use (Navas-Bonilla et al., 2025). More so, the inclusion of these tools to the mainstream pedagogy process can be useful to not only the disabled learners, but also all the learners in that it fosters flexibility and participation.

Although the availability of inclusive technologies and pedagogical models is increasing, a number of challenges still stand in the way of implementing these inclusive technologies and pedagogical models in higher education. Lack of proper training and awareness of members of the faculty is one of the major obstacles. A lot of teachers might lack adequate knowledge and skills that they need to develop inclusive curricula or optimally make use of assistive technologies. Also, institutional factors like scarcity of resources, huge classes and inflexible academic systems might further impede the implementation of inclusive practices. Studies show that even though inclusive education policies are commonly established, there is a gap between the theory and practice, which is why the practical implementation of the policies is inconsistent (Toto et al., 2024).

The other urgent issue is the requirement of the holistic and collaborative approach towards inclusion. To have an effective inclusive education, it needs to be coordinated between faculty, disability support services, administrators and technology providers. It also requires ongoing assessment and readjustment of the teaching methods depending on the student feedback and outcomes of learning. In the absence of such collaboration, initiatives to adopt inclusive strategies can still be disjointed and ineffective.

Under the circumstances, it is urgent to conduct research to examine effective and scalable strategies that can be adapted to the classroom to support the practice of pedagogical strategies in universities. This paper aims to meet this requirement by investigating the efficacy of some of these inclusive teaching methods and suggest an elaborate system of implementing them. The research will combine both the knowledge in the literature and the observations made to come up with practical recommendations to be implemented by teachers and schools.

This paper has three main aims. To begin with, it will determine the main issues of student with disabilities within the higher education context. Second, it tries to measure the current pedagogical tactics and technology interventions that facilitate inclusive learning. Third, it suggests an overall model of the adjustment of teaching practices to address the needs of students with disabilities. The paper too highlights how the faculty development, institutional support and technological innovation contribute towards inclusive education.

To sum up, as a means of creating a fair and productive learning experiences in higher education, modifying pedagogical approaches towards students with disabilities should be regarded as a necessity. With universities increasingly becoming diverse in nature, there is growing need to shun the old teaching styles and embrace inclusivity in the teaching processes that take into account and embrace individual distinctions. The combination of new pedagogies and technologies has a lot of potential towards reaching this purpose. Through focusing on access and inclusion, institutions of

higher learning have an opportunity to not only improve the educational performance of learners with disabilities but also the quality and inclusiveness of the education systems.

II. Literature Review

This has contributed to the increasing number of studies on pedagogical interventions that can support students with disabilities since the focus of inclusiveness in higher education is taking a more significant role in the research. The goal of inclusive learning environments is a fair level of access, participation and performance by all learners by meeting the varied needs of learners through adaptive teaching methods. Technology, innovative pedagogy and institutional support are very important in the realization of these objectives. Nonetheless, the introduction of inclusive education is a complex and manifold process that needs to be constantly reviewed and improved to adapt.

A. Theoretical Foundations of Inclusive Pedagogy

The concept of inclusive pedagogy is based on the principles of equity, access and learner centered education. Models like Universal Design of Learning (UDL) have stressed the need to develop instructional resources that can support a wide array of learners at the very beginning of the learning process. This method eliminates retrofit accommodation, and encourages active inclusion. The combination of new innovative technologies in the framework of Education 4.0 contributes to increasing the flexibility of teaching work and providing teachers with an opportunity to create an interactive and personal experience in the classroom (Udvaros & Forman, 2023). The artificial intelligence (AI) has become a revolution within the area of inclusive pedagogy. The AI-powered systems make it easier to conduct personalized learning, analyzing student data and giving them custom content and feedback. They allow the learner to work at his/her own pace thus helping in the individual learning differences. The studies demonstrate that a systematic inclusion of AI can considerably benefit the learning process of

students with disabilities, providing them with tuned and available learning support (Ramya, 2024). These changes are in line with the greater objective of establishing fluid learning system that meets diverse learning requirements.

B. Challenges in Inclusive Higher Education

Although there are improvements in the inclusive pedagogy, a number of challenges still remain as far as implementation is concerned. The major ones are the insufficient training of the faculties and their sensitization on inclusive teaching. The teachers are usually challenged with the difficulty of adjusting teaching strategies to suit all learners more so when the classroom has many learners. Also there are institutional barriers like scarce resources and inflexible curriculums that further contribute to the barriers to implementation of inclusive strategies. It has also been shown that the students with disabilities face special difficulties in certain learning situations. As an illustration, the approach to entrepreneurial motivation of students with disabilities should be more specific since it involves the cognitive, as well as socio-emotional, barriers. One of the systematic reviews points out that inclusive learning environments have to take into account these factors to be capable of aiding student engagement and motivation (Lestari et al., 2024). In addition, the disconnect of the inclusive education policies and their practice is also a major issue of concern. Although institutions can come up with policies that inclusiveness should be embraced, the implementation is not always systematic and coordinated. This gap needs to be filled using a holistic approach which incorporates pedagogy, technology and institutional support systems.

C. Role of Technology in Inclusive Education

Inclusive education is now anchored on technology, which is providing new ideas on how to make it more accessible and engaging. As an example, learning analytics can help educators understand the behavior and performance of a student and offer valuable insights related to learning issues to offer specific interventions. Such data-driven strategies promote inclusiveness because the educators are able to customize teaching according to the needs (Khalil et al., 2024). Inclusive education and its

challenge in a diverse setting, like in India, have shown to be a promising prospect of AI-based technology. These technologies provide possibilities of individualized learning, adaptive testing and real time feedback thus enhancing learning outcomes among students with disabilities. Nevertheless, there are certain issues like infrastructure, ethical aspects, and the necessity to educate teachers, which should be considered to embody their potential to the fullest (Gupta and Kaul, 2024).

Helping students with hearing impairment Assistive technologies, especially those that target a communication aspect, are critical in assisting them. Sign language recognition systems have received a lot of attention as a system of increasing accessibility. Different research has been conducted to understand how machine learning and deep learning technologies can be used to create automated sign language recognition systems. As an example, recognition models based on images can be trained to recognise alphabets of the Bengali sign language, and it is a way to entertain the deaf community (Rafi et al., 2019). In the same manner, Arabic sign language recognition systems based on deep convolutional neural networks (CNNs) have been created, which allow providing real-time translation and communication services (Latif et al., 2020). In India, the Indian context has seen depth-based recognition systems based on gadgets like Microsoft Kinect be offered to enhance the accuracy and efficiency of the interpretation of sign language (Raghuveera et al., 2020). Also, random forest classifiers and other machine learning techniques have been used to identify the gestures of the Indian sign language, which also makes it more accessible (Ajay et al., 2021). Continuous sign language recognition, using advanced methods, such as reinforcement learning, has also been used, allowing gestures to be more dynamically interpreted, with a stronger sense of context (Zhang et al., 2019). These technological developments bring out the possibility behind AI-powered assistive systems helping to overcome communication barriers and inclusive education. In linguistic terms, the fact that sign language is the accepted and sophisticated language system allows emphasizing the necessity to include it in educational activities. The historical linguistic

studies focus on the heterogeneity and organisation of sign languages and support their use in the way of inclusive communication and education (G., M et al., 2026).

D. Innovative Pedagogical Practices

New approaches to teaching are needed to promote the inclusive learning classes. Collaborative learning, blended learning and flipped classroom are some of the approaches that offer flexibility and promote active participation. These are strategies that enable the students to approach the content in a variety of ways, to suit a variety of learning styles and abilities. The additional introduction of AI and digital technology into the learning process also contributes to inclusivity through the possibility of the personalization and interaction of the learning process. As an example adaptive learning sites may vary the level of difficulty of their material according to the student achievement and interactive tools may be used to enable students to interact and collaborate with one another. Constant evaluation and feedback is also a key component of an inclusive pedagogy. Formative assessments help teachers to keep track of students and implement the necessary support in time so that learning gaps could be tackled successfully. The ability to provide various types of evaluation (assessment) enables students to show their knowledge in different ways that suits their capabilities, hence equity in assessment.

E. Research Gaps and Future Directions

Although there has been an achievement with regard to inclusive education, there are a number of research gaps. Among them, the necessity of empirical research that would compare the effectiveness of inclusive pedagogical practices in higher education in the long-term is one of them. Although numerous studies have been found that outline the possible advantages of technology and new teaching techniques, few of such studies have found evidence concerning the long-term effects on student performance. The other gap is interdisciplinary approaches which are a combination of pedagogy, technology and policy. An inclusive education needs a holistic approach

whereby the multifaceted issues can be dealt with in an appropriate manner. Moreover, the experiences and views of students with disabilities could be better addressed since their experience can be used to create more responsive and effective teaching methods.

III. Methodology for Model Design

This part presents the research design, data gathering processes and data analysis techniques embraced to explore and come up with modified teaching processes of the learners with disabilities in the university classrooms. The research utilizes a structured and systematic methodology to make sure that the findings can be reliable, valid and applicable in contexts of higher learning institutions.

The research design is a mixed-method study, a combination of qualitative and quantitative design, to give an in-depth insight into inclusive pedagogical practices. The justification of adopting the mixed-method approach is that it will endeavor to define both quantifiable results and experience. Quantitative data can be used to assess trends, effectiveness and interrelationship among variables whereas qualitative data will give in-depth insights into the experience of students and educators. It is a qualitative study that is exploratory and descriptive. It examines the issues that are currently present, analyzes the current teaching methods, and suggest a well-developed model of the inclusive teaching. The design also has the elements of evaluative research to determine the effectiveness of adapted strategies to improve the learning outcomes and student engagement of students with disabilities.

The participants of the study include those who are in the institutions of higher learning, the Students with disabilities (main focus group), Faculty members, teaching undergraduate and postgraduate courses, Academic administrators and support staff working in disability services. Purposive sampling method is used and the samples will be people who have direct experience of inclusive education. This makes the data collected to be relevant and meaningful. The sample encompasses students

having varied disabilities, like visual, hearing, mobility and learning impairment to ensure maximum experiences are covered.

The sample will be designed in the following way:

- 80–120 students with disabilities
- 30–50 faculty members
- 10–15 administrative/support staff

This distribution gives even distribution and can undergo thorough analysis based on various perspectives.

C. Data Collection Methods

The study has utilized several data gathering techniques to strengthen the study:

a. Surveys and Questionnaires

Both the students and the faculty members are completed with structured questionnaires. These questionnaires will contain Likert scale questions and closed ended questions that will be measuring:

Teaching methods made available- accessibility.

- Effectiveness of assistive technologies

Level of student engagement is one of these factors.

- Faculty readiness to teaching inclusive.

The survey tool will be tested by clarifying it with the help of experts and testing it on a pilot basis to guarantee readability and trustworthiness.

b. Interviews

The participants that will be selected are interviewed semi-structured to get a better understanding of their experiences. Students are questioned regarding the issues that they experience in classroom, and the faculty members give their insights on teaching methods and support at the institutional level. Interviews enable a discussion of subtle issues, which might be missed when using surveys.

c. Classroom Observations

The selected classrooms in universities are the sites of observational studies which are carried out to observe teaching in real-time. These observations are in terms of Instructional methods of faculty, Student participation and interaction, Use of

assistive technologies and Accessibility of learning materials. Consistency and objectivity are assured, with the help of an observation checklist.

4. Comparative Analysis

The policies on accessibility, instructional goals, curriculum plans and related documents used in the institution are examined to realize how inclusive the policies are on a policy level. This assists in the recognition of lack of agreement between the policy and practice.

D. Data Analysis Techniques

Data gathered is analyzed by means of both quantitative and qualitative analysis:

1. Quantitative Analysis

The analysis of survey data is done with the help of statistical analysis (Descriptive statistics (mean, percentage, standard deviation), Comparative analysis to determine the differences between traditional and adapted pedagogical approaches, Correlation analysis to determine the relationships between variables (use of technology and engagement of students) and Graphical representations (bar charts, line graphs, etc) are utilized to show trends and patterns.

2. Qualitative Analysis

Thematic analysis is used in the analysis of interview data and observational data. These steps include Coding of responses, Recurring themes and Categorization of challenges, strategies and outcomes. This methodology will allow drawing valuable insights, and can help create a holistic pedagogical model.

E. Development of the Proposed Framework

The systematic plan of adapted pedagogical strategies is built basing on the results of data analysis. The framework involves Framework incorporates Inclusive teaching practices (UDL, differentiated instruction), Technology integration (AI tools, assistive technologies), Continuous assessment and feedback systems and Institutional and faculty support systems. The framework will be practical, scaling and flexible to various contexts in higher education.

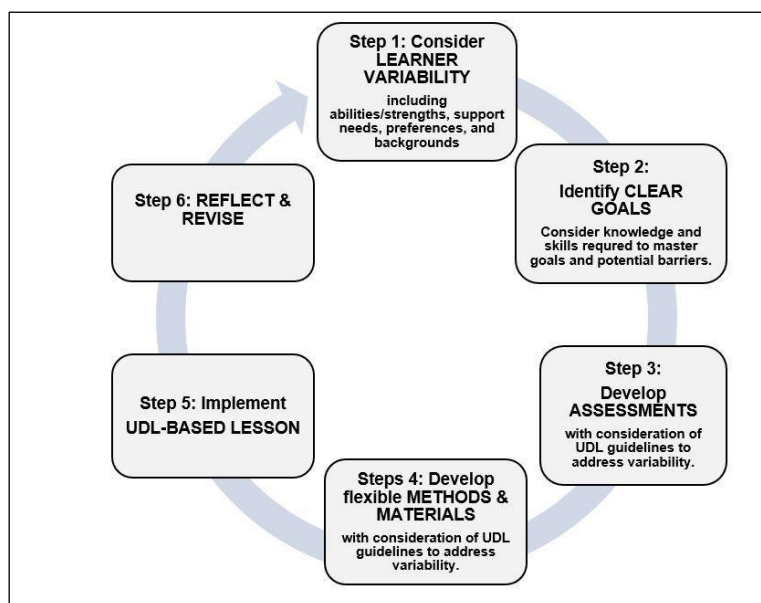


Figure 1. Proposed Framework

Figure 1 shows an organized workflow that starts with research design (mixed-method approach), then proceeds to the selection of the participants, and various data collecting methods (surveys, interviews, observations, document analysis). The data gathered will be consequently analyzed by quantitative and qualitative method and the adapted pedagogical framework will be developed. The ethical considerations contribute to the process and the results interpretation and validation finalize the process.

IV. Adapted Pedagogical Strategies Framework

This part outlines a detailed design of changing the pedagogical approach to accommodate the disabled students in colleges. The framework is constructed through the knowledge gained on the basis of the literature review and related methodology and incorporates the principles of inclusive teaching, technological interventions and institutional support mechanisms. The main aim of this framework is to design a dynamic, open and student focused learning environment that can support the

needs of various learners and increase academic engagement and performance.

A. Conceptual Overview of the Framework

The framework proposed is based on the concept of inclusivity, accessibility, flexibility, and improving. It is holistic since it integrates pedagogical strategies, assistive technologies and institutional practices, into a single model. The framework underlines the proactive design where the learning environments are designed in such a manner that they reduce the barriers instead of responding to them when they occur. The fundamental basis of the framework is that students with disabilities need various avenues to reach the content, learn using learning materials and be able to demonstrate their comprehension. Thus, it incorporates the components of Universal Design of Learning (UDL) and differentiated instruction to make sure that instructional practices are flexible and attentive. The framework also includes a feedback system which enables constant monitoring and also improvement of the teaching strategies.

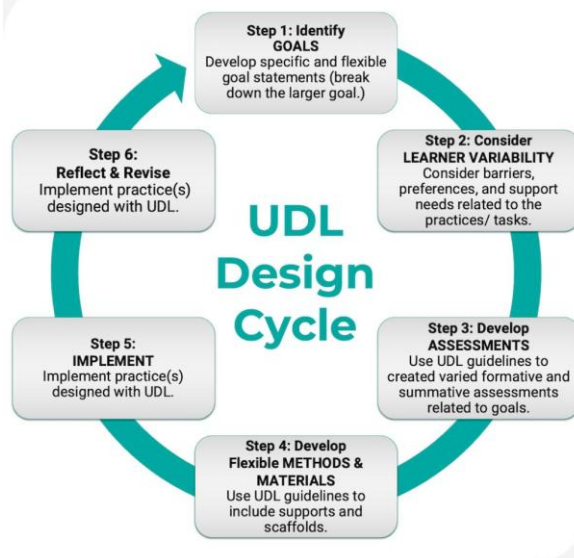


Figure 2. Framework for adapting pedagogical strategies

The figure 2 is comprised of four central interrelated elements such as Inclusive Instructional Design, Assistive Technologies, Differentiated Assessment and Institutional Support, which are in a cyclic workflow to maintain the ongoing improvement of inclusive teaching practices.

B. Core Components of the Framework

The framework consists of four key components that work in an interconnected manner:

1. Inclusive Instructional Design

This aspect aims at coming up with course content and teaching approaches that are inclusive to all students. It involves a Providing in a variety of forms of learning material (text, audio, video, interactive content) , Organizing the content in a coherent and systematic way, Utilizing the accessible digital platforms, which can work with assistive technologies. With Inclusion design in the teaching, students are able to access and actively participate in the process of teaching no matter their abilities or learning styles with the use of flexible teaching techniques, including blended and flipped learning.

2. Assistive and Adaptive Technologies

The use of technology in facilitating inclusive education is very important. This element is the incorporation of Screen readers and text-to-speech solutions to support visually impaired students,

Speech -to-text solutions to support students with writing challenges, aptioning and transcription solutions to support hearing-impaired students, adaptive solutions that deliver content to students personally provided by AI. Such technologies not only improve accessibility, but also enable students to learn on their own and to learn well.

3. Differentiated Assessment and Evaluation

The different strategies of assessment are designed to be inclusive of the different needs of the learners. This involves providing a variety of options to assess (written exams, presentations, projects) as well as Providing a longer time to be assessed or other forms of assessment in cases where necessary and Flexible grading criteria based on individual capabilities differentiated assessment to ensure that students are fairly assessed and have the same chances to showcase their knowledge and abilities.

4. Faculty and Institutional Support

Inclusive pedagogy can be successfully implemented with the help of good institution. This element consists of Faculty education on inclusive teaching methods, Cooperation with disability services, Institutional policies to enhance accessibility, Provisions of the required infrastructure and technology. The enabling environment through institutional support helps to ensure educators are able to establish inclusive strategies.

C. Workflow of the Proposed Framework

A flow of the work of the framework is based on the cycle and continuous improvement:

1. Planning and Design

Teachers create high-quality inclusive programs and choose suitable teaching methods and technologies.

2. Implementation

Practices and classroom tools are utilized in the classroom, making them accessible and engaging.

3. Monitoring and Feedback

The performance and involvement of students is continuously evaluated in terms of assessments and feedback.

4. Evaluation and Adaptation

The evaluation basis of teaching strategies is in terms of outcomes and adjustments are taken to enhance effectiveness.

It is a dynamic process, which makes sure that the framework is dynamic and keeps up with the changing needs of students.

D. Integration of Technology and Pedagogy

One of the main advantages of the framework suggested is inclusive nature of technology and pedagogy. Technology is not seen as an addition to the teaching process, but is incorporated into the teaching process to promote learning experiences. AI-solutions provide personalized learning, whereas assistive technologies are helpful to make it accessible. This integration enhances the creation of inclusive classrooms in which all students are able to participate in the classroom and achieve success. In addition, it is possible to implement data-driven strategies like learning analytics and monitor the progress of students and when the intervention is needed. This will enable teachers to make the right decisions, and offer specific assistance to students with disabilities.

However, although the framework offers a systematic approach, to be effective, it must be carefully implemented keeping into consideration a number of factors:

- Availability of technological infrastructure.
- Faculty willingness and preparedness to use new teaching techniques.
- Organizational dedication towards inclusion.
- Lifelong learning and training.

It is necessary to address these aspects in order to guarantee the real life applicability and the success of the framework in the long-term. The outcome and discussion in terms of the implementation and assessment of this framework.

V. Results and Discussion

This part features the results of the applied and assessed implementation of the suggested adapted framework of the strategies in pedagogical procedures at universities. The outcomes are measured in regard to student engagement, academic performance, accessibility and effectiveness in inclusive teaching practices overall. The discussion also explains the interpretation of these findings with the traditional teaching methods and brings out important insights.

A. Impact on Student Engagement and Participation

The use of the proposed framework showed that there was a significant change in the engagement of the students especially those who have disabilities. The inclusion instructional design and assistive technologies allowed the students to be more able to access learning resources and be engaged in classroom activities. The use of interactive methods in teaching e.g. blended learning and collaborative task facilitated more participation and less obstacles to participation.

Students found they felt more confident sharing their ideas and most importantly when they had a variety of formats to share and assess. The framework provided the learners with flexibility in studying, which, in turn, resulted in the increased motivation levels and maintained interest in studying activities.

B. Improvement in Academic Performance

Academic performance analysis revealed that there was a great improvement in the learning outcomes

after implementation of adapted pedagogical strategies. The assessment scores indicated that the students with disabilities had a better understanding and comprehension and retention of course material. Access to alternative assessment proved to be more effective as the students could show their knowledge in a more effective way, minimizing the constraints of the traditional methods of evaluation.

It was also evident in terms of consistency and progression of student performance that the integrated framework was superior to the conventional teaching methods in comparison. Formative assessments and the mechanism of constant feedback were also used and helped to identify the learning gaps in time and provide people with the targeted intervention.

C. Role of Technology in Enhancing Accessibility

Inclusion of assistive and adaptive technologies was very critical towards enhancing access and inclusiveness. Screen readers, captioning, and AI-based learning platforms helped students to break the physical and cognitive barriers. These technologies helped not only to access the content but also independent learning.

Also, the data-driven tools helped teachers to track the progress of students and implement improvements on the instructional approach. Individual needs of learning were met because of the personalized learning paths, which were made possible by the implementation of technology into learning. This underlines the need to incorporate technology in pedagogical practice as opposed to considering it as a support feature.

D. Faculty Adaptation and Institutional Support

Those faculty members who had been trained on inclusive teaching practices were in a better position to be able to apply the framework effectively. Their design skills on how to create content that can be accessed and assistive technologies help in the overall success of the initiative.

The provision of resources and cooperation with disability services, among other possibilities, improved the implementation process.

Nevertheless, certain issues were noticed, including the necessity to continuously develop professionally and access high-tech infrastructure.

E. Challenges and Limitations

Although positive outcomes were realized, some challenges were noted when the framework was being implemented. These included:

- Inaccessibility of the state of access to high-level assistive technologies in certain environments.
- Faculty expertise and desire to learn to use new approaches varies.

Time limits of redesigning course materials. Need continue training and support.

Also, the framework proved to be more effective within the condition of one or another kind of disability and the extent of institutional preparedness. These constraints underscore the importance of taking an inclusive education context.

F. Discussion

The results indicate that applying pedagogical strategies within a framework of structured and integrated approach can contribute greatly towards the inclusivity and effectiveness of university classrooms. This is due to the combination of flexible instruction, use of technology and the presence of continuous feedback which will provide a dynamic learning environment that aids the learning of diverse learners. The findings support the significance of leaving behind the conventional teaching models and switching to innovative teaching approaches, where the accessibility and personalization are valued. In spite of the challenges, the general effect of the framework has evidenced its prospects as a means to have inclusive higher education that is scalable.

Finally, the framework suggested is not only beneficial in enhancing academic performance of students with disabilities, but also makes the development of a more responsive and equal educational system possible.

VI. Conclusion

This paper has discussed the necessity of modifying the pedagogical methods in order to accommodate

learners with disabilities in the university classrooms and suggested a multifaceted model that incorporates inclusive pedagogical, assistive technologies, differentiated assessment and institutional support. The results reveal that inclusive pedagogies are more effective in increasing accessibility, student engagements and academic achievements compared to conventional pedagogies. The study findings indicate that conventional methodologies of teaching tend to be inadequate in the support of the different needs of the disabled students. The inflexible nature of learning approaches, standardized testing and little use of technology pose obstacles that do not help in proper learning. On the contrary, the suggested modified pedagogical model offers an adaptable and student-oriented model that can ease the individual differences and offer equal chances to learn. The problem of inclusion design has allowed embedding the ideas of access to learning materials in all students at the beginning of the process. Assistive and adaptive technologies are also used, which only increase accessibility, and help students deal with physical and cognitive barriers. Different assessment plans will enable the students to express their knowledge in different forms and hence fair

grading. Inclusion, there should be a powerful faculty and institutional support that are critical towards the success of implementing the inclusive practices. The comparative analysis forwards the fact that the adapted framework results in a regular and fast-tracked enhancement in the performance of the students. The ongoing feedback and evaluation loop incorporated in the framework makes the teaching practices to be dynamic and responsive to the needs of learners. In general, the research confirms that inclusive pedagogy is not only positive to students with disabilities but improves the overall standard of the education process of the students with disabilities as well as other students. Although the study has some valuable insights, some limitations are to be noted. The study is using a small sample of institutions, and it could impact the overall applicability of the results. The institutional resources and technological infrastructure variations can have an impact on the implementation of the proposed framework. The study is based in part on the self-reported data that is prone to bias. Although these are the limitations, the research is a good starting point in developing an inclusive pedagogy further.

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