

“BRIDGING THE GAP: EFFECTIVE TEACHING STRATEGIES FOR SLOW LEARNERS IN HIGHER EDUCATION”

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ABSTRACT:

This research paper delves into the realm of educational inclusivity by focusing on the unique learning needs of slow learners in higher education. Recognizing that diverse cognitive abilities exist among students, the study seeks to identify, support, and empower slow learners through tailored teaching pedagogies. The research conducted a comprehensive assessment of cognitive abilities, including quick learning, critical thinking, problem-solving, analytical and logical skills, and communication aptitude, to identify slow learners. Furthermore, mentors were assigned to provide individualized support, and specific teaching strategies were employed to target the identified weaknesses. The findings reveal that when teaching pedagogies are customized to address the specific needs of slow learners and when individualized mentorship is provided, these students exhibit significant improvements in their academic performance and confidence levels. The research underscores the importance of creating a conducive learning environment that accommodates diverse learning needs and highlights the need for ongoing assessment and tailored interventions to bridge the gap between slow and fast learners. In conclusion, this study offers valuable insights into the enhancement of academic performance and overall confidence among slow learners. It advocates for the implementation of customized teaching strategies, mentorship programs, and continuous assessments in higher education institutions to foster inclusive learning environments where every student can thrive.

KEYWORDS: Effective Teaching, Strategies, Slow Learners.

INTRODUCTION

Students are equipped with many unique attributes. That is the reason why learning capabilities of everyone is different. Some may be comfortable to speak, while others can express themselves well by writing. Some are good at math while others in fine arts. That is the reason, no one teaching methodology works well for all. It has to be blend of different types of teaching pedagogies viz; experiential + lecture method, participative + report writing. It should be designed in such a manner that; all types of students are able to participate and get learning experience and the desired outcome be reached. Researchers, Sheeja S Varghese, Noorul Aneesa (2021) have emphasized the need for tailored pedagogical approaches to accommodate diverse learning needs.

Virtually all psychologists now believe that there is a generalized intelligence factor, “g”, (originally conceptualized by Charles Spearman) that relates to abstract thinking and that includes the abilities to acquire knowledge, to reason abstractly, to adapt to novel situations, and to benefit from instruction and experience (Gottfredson, 1997; Sternberg, 2003). People with higher general intelligence learn faster.

Identifying slow and fast learners is a crucial aspect of effective teaching and learning. It allows educators to provide targeted support and enrichment opportunities, ensuring that every student can reach their full potential. Moreover, recognizing and valuing the diversity in learning pace fosters a more inclusive educational environment that accommodates the individual needs of all students, regardless of their learning speed.

Who are slow learners?

Psychologists use different terms to identify slow learners. Muppudathi (2014) defined a slow learner is a student who has the ability to gain all the necessary academic skills with the exception that her/his depth and rate is below that of an average learner. While Borah (2013), said that slow learners are the ones with slightly below average cognitive abilities. Due to this they may fail to excel in some subjects or classes. This does not necessarily mean that they have any mental disability. They are normal students who cannot study under traditionally accepted educational system (Borah, 2013). There are many reasons for a student to become a slow learner. It can be learning problems due to an alien language (Sparks, Ganschow and Javorsky 1998) or can be reading and writing (Lescano, 1995) or even the surrounding or emotional imbalance (Khan, 2008). To sum up, the characteristics of slow learners can be: Individuals requiring more time and effort to comprehend and apply new information. They exhibit difficulties in grasping complex concepts or skills that their peers find relatively easier. They may also experience lower self-esteem and motivation due to their slower progress, which can affect their overall learning experience. As against this a **fast learner** has few characteristics as students who grasp new information quickly and excel academically. They often display high levels of curiosity, critical thinking, and problem-solving skills. These individuals tend to complete assignments and tasks ahead of schedule and may seek out additional challenges. Fast learners are usually self-motivated and thrive in independent learning environments.

What is Fluid Intelligence?

A very renowned psychologist Raymond Cattell in 1963, conceptualized fluid intelligence as part of the general intelligence matrix. Fluid Intelligence is the ability to think abstractly, reason quickly and problem-solving ability independent of any previously acquired knowledge. In fluid intelligence we can: Solve problems without requiring previous knowledge, use greater abstract thinking to break down issues, puzzles and mental roadblocks to find solutions.

OBJECTIVE OF THE STUDY:

- To evaluate tailored strategies, impact on academic performance and confidence of slow learners in higher education.
- To explore factors affecting slow learner progress in customized teaching methods, including engagement and motivation.
- To offer recommendations for inclusive education and closing the slow-fast learner gap to enhance educational practices.
- To fill research gaps in teaching methods, learner categorization, and pedagogical approaches to enrich slow learners' higher education experience.

LITERATURE REVIEW

Further in-depth literature review in this area shows the need of varied learner centric methods to enrich the learning experience of the students.

1. Small Group Teaching (Sheeja S Varghese, Noorul Aneesa (2021) Teaching Slow Learners and Fast Learners Separately in Small Group Teaching in Dental School- Students Perception, Concern and Impact): This study highlights the importance of small group teaching in dental schools. However, it also reveals a gap in examining the division of students into slow and fast learners based on academic performance. The students show dissatisfaction about the groupism when based on academic performances especially slow learners as it impacted their confidence negatively. However, the study concluded the need for tailored pedagogical approaches to accommodate diverse learning needs.

2. Educational Challenges (Appaji Korikana, 2020, “Slow Learners- A Universal Problem And Providing Educational Opportunities to them to be a Successful Learner”): Addressing the universal challenge of varying learning paces among students, this study draws inspiration from Albert Einstein's philosophy of providing conducive atmosphere to the students to learn. The study highlighted the varying needs and pace of learning among the students. It can be attributed to the various factors like poor memory, lack of conducive atmosphere, and even to some extent psychological factors. It underscores the potential for remarkable progress of slow learners when suitable learning conditions and opportunities are provided.

3. Mixed-Ability Classes (Bilal Zakarneh , Najah Al-Ramahi & Mahmoud Mahmoud ,(2019) Challenges of Teaching English Language Classes of Slow and Fast Learners in the United Arab Emirates Universities): Investigating the complexities faced by educators in mixed-ability English language classes, this research highlights the importance of addressing challenges related to pacing, lesson planning, material adaptation, and motivation among both fast and slow learners. It also highlights the factors to categorize slow learners. According to the authors, slow learners need not necessarily mean they are disabled but they are the ones who cannot study under traditionally accepted educational system.

4. Speaking Skills (Devi Lusiana, Anni Holila Pulungan and Rahmad Husein,(2021) The Recommend Strategy for Slow Learners Difficulties in Learning Speaking at Homeschooling): This study offers recommendations for improving slow learners' speaking skills in an informal learning environment. Their qualitative approach identifies effective strategies like picture describing, role play, and brainstorming.

5. Effective Teaching Strategies (Dr. Rukhshanda Mushtaq, Dr. Majid Jamal Khan, Dr. Tahira Roohi, Uzma Khalid Ghor, 2022. Improving the Academic Performance of Slow Learners through Effective Teaching Strategies): Exploring factors influencing the academic performance of slow learners, this research proposes effective teaching strategies. It highlights the significance of addressing personal, environmental, and emotional factors, emphasizing the role of motivation in student success.

6. Machine Learning (K. Sangeeta, T. PanduRanga Vital, Kalyana Kiran Kumar , 2020 Student Classification Based on Cognitive Abilities and Predicting Learning Performances using Machine Learning Models): This study employs machine learning to categorize students based on cognitive abilities. The authors have agreed here that students' performance is based on their learning ability. Learning ability in terms of their knowledge level, reasoning and their core subject abilities of existing students was mapped for 3 years. Using Machine Learning, the students rate of learning was mapped and new innovative teaching pedagogies were introduced. This innovative approach has the potential to inform personalized learning plans and interventions for slow learners.

7. Technology Integration (Azizeanna Hassan, Murni Mahmud (2018) LEARNING MOTIVATION FOR SLOW LEARNERS WITH TABLET TECHNOLOGY): Focusing on the integration of tablet technology and apps to motivate and engage slow learners, this research suggests that technology can significantly enhance attention, confidence, and enjoyment in learning. However, this paper focused on children with learning disabilities.

RESEARCH QUESTIONS

Based on the above review of literature, researcher felt the need to answer following questions.

1. Can cognitive abilities of slow learners be improved?
2. Can they have engaging learning experiences?

To answer these questions, the researcher felt it apt to carry out a pilot study in which as a first, slow learners were identified by administering a set of students a questionnaire testing their cognitive abilities.

RESEARCH GAP

Segmentation of Slow and Fast Learners: While the literature explores student perceptions of separate classes, there is a need for deeper investigation into the criteria and methods used for categorizing students. Understanding how educators identify slow and fast learners can provide valuable insights.

Effective Teaching Strategies: Despite acknowledging the challenges faced by slow learners, there is a gap in research systematically evaluating the effectiveness of specific teaching strategies for this group. Investigating pedagogical approaches' impact on academic performance and motivation could guide educators.

Mixed-Ability Classes: Although the challenges of mixed-ability classes are explored, further research into innovative teaching methods and classroom management techniques is needed to create an inclusive learning environment for all students.

Technology Integration: The integration of technology in enhancing the learning experience for slow learners is a growing field. Future research should delve deeper into specific technology features and applications that effectively support slow learners and their successful implementation.

Machine Learning in Education: While machine learning models classify students, practical implementation in real educational settings requires exploration. Understanding how machine learning can inform personalized learning plans and interventions for slow learners is promising.

Motivation and Learning: The literature acknowledges motivation's impact on academic performance, but further research into intrinsic and extrinsic motivation and effective cultivation and sustenance of motivation among slow learners is needed.

The researcher decided to concentrate on use of effective teaching strategies to observe the slow learner progression. This research paper aims to contribute valuable insights and recommendations to educational institutions and policymakers, ultimately bridging research gaps and improving the educational experiences of both slow and fast learners.

RESEARCH METHODOLOGY

Variables

The researcher had two set of variables viz; slow and fast learner. The researcher defined slow learner as the one whose overall test score is less than the average of the test scores of all the students who took the test. To calculate the test score, cognitive abilities viz; logic, reasoning, data visualization, decision making and communication skills were considered. Moreover, continuous assessments, observations were used to categorize the students. These students had taken admission for their master's programme in business administration where all these above stated abilities are considered to be extremely essential. A total of 343 students were administered the tests. The objective of this test was to understand whether the idea of categorizing the students into slow and fast helps the identified slow learners improve their cognitive abilities by using teaching pedagogies covering all the said cognitive abilities. This improvement was a continuous process and their scores were monitored 90 days after the original test was administered. This will eventually help the teachers to decide the teaching pedagogy to be used for better learning of the students.

Research Method:

Following process was followed for categorizing the students into slow and fast learner.

1. At the time when the students were admitted, they were given a test to know their cognitive abilities viz; quick learning ability, critical thinking, Problem solving, Analytical, logical ability and communication skills.
2. Their individual scores were determined and then were compared with average score of all the students undertaking the tests.
3. If the scores were more, than the average, then, they were classified as Fast Learners, else, as Slow Learners.
4. Each of the slow learner was assigned a mentor who in turn guided him monitored his progress and guided him for further improvement.
5. At the end of the semester, similar test was administered and the change was observed. The reason for identifying slow learners is to devise a separate teaching pedagogy, taking extra efforts so as to bring them nearer to the average students if not making them a fast learner. This may include tailor made learning plans, additional sessions to name a few. The process also helps in identifying the gaps and helping them fill it up.

Sampling

The process was implemented for 207 students out of the total population of 343 students in the Institute. The students who took the test, did it willingly with no compulsion from the researcher. So, the sample size was around 60%. Of these students, 118 were classified as fast learners and 89 as slow learners. They were evaluated by administering a questionnaire testing their cognitive abilities viz; quick learning ability, critical thinking, Problem solving, Analytical and logical ability.

DATA ANALYSIS

While carrying out data analysis, it was observed that most of the students who participated were following in two major groups. Following were the observations regarding slow learners

Total Number of Students	All criteria are weak	Weak Only in Communication but reasonably good in other parameters
89	50	38

Of the total of 89 slow learners, 50 students (56%) were found weak in all the criteria and remaining (44%) were found weak only in communication. It means these 44% students had average logical reasoning and data visualization but lacked in performance as they were not able to express themselves.

The researchers then focused on these 89 students to see their progression. Many activities were taken to improve their identified weaknesses viz; communication, logical reasoning, problem solving and data visualisation. Rubrics were designed in such a manner that their weaknesses can be targeted and improved. These were made part of normal teaching pedagogy which included presentation and report writing (focussing on verbal and written communication), case study solving, carrying out small research projects, role play (problem solving, creativity and communication). Further each one of them was assigned a mentor who took extra efforts to improve on their communication skills. Various activities to improve on their verbal (writing and listening skills) were also carried out.

After a period of 90 days, the tests were administered again and change was noted. Further these changes were mapped with the participant's individual attendance score during the period.

It was observed that re-test was taken by 67(75%) of original 89 identified slow learners. Of them 42 were with all criteria weak. Of these 42 students, 22 showed improvements in their results while 20 (48%) were seen having status quo.

Similarly, for 25 slow learners who were weak only in communication and who took a re-test, 19 students showed significant improvement in their test scores while 6 had a status quo.

OBSERVATIONS:

Identification of Slow Learners: The research successfully identified slow learners among the student population based on their cognitive abilities, including quick learning ability, critical thinking, problem solving, analytical, logical ability, and communication skills.

Classification of Slow Learners: Among the identified slow learners, the study found that 56% of them were weak in all criteria, while the remaining 44% were specifically weak in communication skills but reasonably good in other parameters. This categorization provided valuable insights into the different needs of slow learners.

Progression of Slow Learners: The study focused on improving the weaknesses of slow learners, especially in communication, logical reasoning, problem solving, and data visualization. Various teaching pedagogies, including presentations, report writing, case studies, small research projects, and role play, were used to target these weaknesses. Additionally, mentors were assigned to provide individualized support.

Improvement in Test Scores: After a period of 90 days, a re-test was administered to assess the progress of slow learners. Among those who retook the test, 75% of the students with all criteria weak showed improvements in their test scores. Similarly, 76% of students weak only in communication demonstrated significant improvement in their test scores.

Effect of Focused Teaching Pedagogies: The study observed that when teaching pedagogies were tailored to address the specific weaknesses of slow learners, it resulted in both academic improvement and increased confidence among the students.

FINDINGS:

Tailored Teaching Pedagogies: The research findings suggest that customizing teaching pedagogies to target the weaknesses of slow learners can lead to significant improvements in their academic performance and overall confidence.

Conducive Learning Environment: Providing a conducive learning environment that addresses the unique needs of slow learners can have a positive impact on their progress.

Mentorship and Individualized Support: The assignment of mentors to slow learners and the provision of individualized support play a crucial role in helping these students overcome their weaknesses and excel academically.

SUGGESTIONS:

Implement Customized Teaching Strategies: Educational institutions should consider implementing customized teaching strategies that focus on addressing the specific weaknesses of slow learners. This may include activities like presentations, report writing, case studies, and role play.

Assign Mentors: Assigning mentors to slow learners can provide them with guidance, support, and motivation to improve their performance. Mentorship programs should be an integral part of the educational system.

Continuous Assessment: Regular assessments and monitoring of slow learners' progress are essential to track their improvement and make necessary adjustments in teaching methods.

Student Engagement: Encourage active participation and engagement of slow learners in targeted learning activities. Motivate them to fully participate and take advantage of the tailored pedagogical approaches.

CONCLUSION:

This research paper highlights the importance of identifying and supporting slow learners in the educational system. It demonstrates that when teaching pedagogies are customized to address their weaknesses and when individualized support is provided, slow learners can make significant academic progress and boost their confidence.

The findings emphasize the need for educational institutions to adopt tailored teaching strategies, assign mentors to slow learners, and create a conducive learning environment that accommodates diverse learning needs. By doing so, institutions can bridge the gap between slow and fast learners, ultimately leading to a more inclusive and effective educational system.

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