

Inclusive Education Practices and Their Impact on Academic Achievement of Students with Special Needs at Secondary Level in Howrah District

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Abstract. *Inclusive Education has emerged as a crucial approach aimed at ensuring equal educational opportunities for students with special needs at the secondary level. The present review-based study focuses on The Practice of Inclusive Education and its Impact on the Academic Achievement of Students with Special Needs at the Secondary Level in the Howrah District. The study analysis of existing literature review reveals that previous studies have primarily focused on areas such as student enrollment, academic outcomes, attitude, and related factors, but there is least gap is observed in research that integrates the interrelationship between inclusive educational practices, assistive technologies, and the role of teachers within the context of academic achievement particularly within the specific context of the Howrah district in West Bengal. The aim of the study is to synthesise existing research and understand how these factors influence academic achievements. The findings are expected to assist in the development of more effective inclusive education strategies for diverse learners, thereby enhancing the quality of their educational outcomes.*

Key words: *Inclusion Education; Students Special Needs; Academic Achievement; Secondary level; Assistive Technology, Howrah District.*

Introduction

The NPE (1986) brought the fundamental issue of equality centre stage. Section 4.9 of the policy clearly focuses on the needs of children with disabilities. The NPE was followed by a programme of action (POA, 1992). The POA suggested a pragmatic placement principle for children with special needs. It postulated that a child with disability can be educated in a general school only and not in a special school. Even those children who are initially admitted to special schools for training in plus curriculum skills should be transferred to general schools once they acquire daily living skills, communication skills, and basic academic skills.

Learning of any child in general and learning of students with disabilities in particular nowadays largely depends on technology. Technology enables and empowers persons with disabilities because it holds the promise of greater participation in meaningful educational experiences. Therefore, technological innovations, especially ICT based innovations, are also essential for providing an adequate academic environment to children with special needs and for meeting their learning requirements (NCERT, 2025). According to Sah (2013) “technology is playing a greater role in people’s lives either directly or indirectly” People feel that their lives become easier through the use of technology, and they are able to perform much more due to the use of technology. They also felt that the use of technology increases their knowledge, understanding and participation in the education

process. Ludlow (2001) wrote that “integration of new technologies in school education, teacher education and in-service training programme is a weapon for bringing quality in teaching and learning.” This sped up the research and development work in this area. Various engineers started to work for the development of technological devices suitable for general education as well as special education. So it is the time to raise awareness and attitude of teachers/educators towards assistive technology and usage of assistive technology by them. According to 2025-2026, in West Bengal, the number of junior high and high schools is approximately 11,000, whereas in Howrah District, there is 158 secondary schools. Present study will measure mainly some dimensions such as, to assess the level of academic achievement of students with special needs, examine the availability and accessibility of assistive technologies provided to secondary school students with special needs, identify and analysis the major constraints faced by secondary school students with special needs in their academic learning, and the role, and practices of teachers in supporting the academic learning and inclusion of students with special needs in secondary school. Cooper and special (2007) showed that there is a common acceptance among students that the lives of children with special needs are positively affected by assistive technology. Wiazowski (2009) mentioned that training in assistive technology is an essential component of the curriculum for children with special needs.

Conceptual Framework of the study

Inclusion is seen as a process of addressing and responding to the diversity of needs of all learners through increasing participation in learning, cultures and communities, and reducing exclusion within and from education.(UNESCO, 2005). Education is one of the most important subsystems of a society. This sub-system is strategically very important because it generates both finite and infinite power. The quality of power helps in shaking the pattern of society, where educational institutions turn out capable, intelligent, mentally alert and self sufficient pupils, society becomes strong and productive. A healthy system of education would be one which ensures development and increases the sensitivity of the students.

Education provides a wealth of knowledge to all. Education opens the door to all for a successful life. All learners have the right to receive quality education, including students with special needs. In recent days, the terms special needs, “disabilities and physically challenged”(Manghani Anita M,2023) are interchangeably used by all, but there is little difference in the meaning or those terms.

Education is considered as an essence of human culture and civilization, it helps in bridging the gap between different sections of society. Through education, students gain knowledge, skills, and information that prepare them to contribute to the nation and make them good citizens of the nation. Thus, we can say that “education is not for some but for all”(Singh punam,2025). The most challenging task for the schools is to accommodate students with diverse back grounds and abilities.

There are a lot of factors affecting the educational achievement of a student. It is influenced by a number of personal, institutional, social and economic factors. Students perform best when the teacher encourages a dynamic classroom experience. Students' participation in the teaching-learning process gives them a deeper understanding of the subject material, resulting in better academic performance.

The teacher is the pivot of the teaching-learning process. The teacher's attitude and performance of various functions in teaching and training of the children with special needs in the secondary school (inclusive education), and the class situation is crucial. It is natural that these teachers may come across several problems in performing their roles. School improvement trends and reforms should aim for inclusive and student-friendly environments for all (UNESCO, 2009).

Significance of the study

RTE Act(2009) mandates free, compulsory education for children with special needs. It ensures admission to neighborhood school, barrier free access to special learning materials and non-discrimination. Also, NPE (1986) advocated education for equality, integrated education, and initiatives for children with special needs. The world is constantly changing, to adopt this change, it is necessary to use assistive technologies in inclusive education, at the same time, the teachers role is crucial in academic achievement for students with special needs, which will help special students

progress in their future life just like other students. Therefore, the researcher is willing to study the “Inclusive education at the secondary level: Academic Achievement ,Assistive technologies for students with special needs and role of the teachers in secondary schools of Howrah District, West Bengal” Considering some specific objectives. This study is relevant and significant in the context of the Right of children to free and compulsory Education act,2009. Such studies are very important from the point of view of National Development.

Review of related Literatures

Singh ,Punam(2025), in this study, self-efficacy and emotion regulation were strong predictors of educational achievement and adjustment. The obtained results showed that female adolescent children scored higher in self-efficacy and emotion regulation and exhibited higher educational achievement than their male counterparts. Manghani, Anita M.(2023). In this study, self-concept, perceived ideal discrepancy,and academic achievement of children are examined. At various ability levels,differential needs affected perceived and ideal self-concept,perceived ideal discrepancy and academic achievement of children. Differential needs vary in children according to their ability level. Except for home problems, other problems do not differ among children of various ability levels.

Equbal,Sarfaraz. (2023). This research study revealed that a large number of AT devices available (either adequately or inadequately) at inclusive schools for children with special needs were of the low-tech category of AT, whereas the number of items under the mid -tech and high-tech categories of AT were unavailable in inclusive schools. The major barriers in the use of AT, as identified lack of training in the use of AT devices,insufficient availability of devices, Non-availability of funds of purchasing high -tech AT devices. Pyari,Preetam (2021), The study found that there is a significant effect of multimedia learning on visual attention, academic achievement and positive attitude towards science of upper primary classes. Thus, these students scored high marks in post-tests as compared to their pre-test scores. Gender was found to have no influence on visual attention,academic achievement and positive attitude towards science of learning impaired students of upper primary classes.

Rath(2020), in this study, teacher attitudes clearly affects their thoughts, feelings, and what they do . An attitude is basically a readiness to respond in a particular kind of way. Buy attitudes are also very emotional,because they reflect the ways we re-evaluate people and things. They guide us in deciding whether we should approach or avoid that person or things. Shakuntala, N.D.(2019), This study revealed that majorities(58.33%) have low availability of Assistive technology, and 41.67% of the hearing impaired schools have high availability of assistive technology100% Of the schools possess personal amplification devices, irrespective of the type of schools. However, schools managed by NGOS and private aided schools were found to possess a variety of personal amplification devices. The majority of the schools irrespective of the types, were found to make use of personal amplification devices and any one type of alerting devices always.

Venkotesha (2018), the study has also focused on the awarness of various facilities and provisions extend by the Government for the visually challenged students, especially regarding copyright issues, printing and distribution of braille books and writing examinations using assistive technology. The important aspect is that of efficiency in handling assistive technology among the visually challenged students ,as well as the staff in- charge of the learning resources centers is also taken into account in this study. The study also projected the training requirements of the visually challenged students. So that they are familiar with the use of assistive technology. Balasundaram (2014). In this study, over all theme identified in the research programme is closely related to teachers’ attitude there role in teaching and the problems they face in inclusive schools,inclusion is happening with insufficient understanding of the implications for teachers. Adequate education and continuous training create increased motivision and capacity to self-actualise the teachers meeting their professional needs. Vakkit, M.(2014), in this study, 75% of the teachers felt the need to require the competency in the area of the nature of learning difficulties in students. Only one aspect, which is reading, writing and spelling difficulties, around 45% of the teachers felt the need for enrichment,showing a vast scope for organisation of orientation/in-service training programme to the teachers working at the high level

and need to incorporate and deal with the concept of learning difficulties in initial/pre-service teacher training programme.

Research Gap

The research area is Howrah District, where the researcher will conduct his research work. Past literature review of contemporary research has revealed that many studies were conducted on the area of enrollment, stagnation, and financial inputs promoting secondary education. Besides these, some valuable studies were available in the area of personality traits, Academic outcomes, parents' attitude, Teacher attitude, peers' role, job and life satisfaction of teacher etc. But the researcher was not able to find any research study which directly addresses this topic (Inclusive education at the secondary level: Academic Achievement, Assistive technologies for students with special needs and role of the teachers in Howrah District, West Bengal) and specially combining variable conducted. So, the above part helped the researcher to find out the research gap.

Statement of the study

Education eliminates the gap between every societal segment. Programs and practices in education are designed for kids who are disabled, need specialised methods of instruction, specialised tools, and specialised care in regular classrooms. If the amenities are offered, they might have improved social interactions and a better learning environment. However, the continuous engagement of teachers determined improvements as well as goal achievement of those students. Therefore, the statement of the study is entitled "Inclusive education at the secondary level: Academic Achievement, Assistive technologies for students with special needs and role of the teachers in secondary schools of Howrah District, West Bengal".

Objectives of the study

The research will have the following specific objectives:

1. To assess the level of academic achievement of secondary school students with special needs in Howrah District, West Bengal
2. To examine the availability and accessibility of assistive technologies provided to secondary school students with special needs in Howrah District, West Bengal
3. To identify and analyse the major constraints faced by secondary school students with special needs in their academic learning in Howrah District, West Bengal
4. To study the role and practices of teachers in supporting the academic learning and inclusion of students with special needs in secondary schools of Howrah District, West Bengal

Research Methodology

The present study conducted a descriptive review approach to analyse existing literature on Inclusive Education Practices and Their Impact on Academic Achievement of Students with Special Needs at Secondary Level in Howrah District. This method has been considered suitable due to the interdisciplinary character of the study and the limited availability of regional integrated research. For this review of study, a systematic secondary data was collected from peer-reviewed journals, Scholarly books, government publications etc.

Results and Discussion

1. To assess the level of academic achievement of secondary school students with special needs in Howrah District, West Bengal

Fareo (2011) conducted 'A study of self-perception and academic performance of students with special needs in mainstreamed public secondary school in Nigeria'. This study showed exceptionally types of students with special needs had an influence on their self-perception. However, the results revealed that the sex of students with special needs had a significant influence on their self-perception. Also, there was no significant difference between the academic performance of male and female students with special needs. The study concluded that students with special needs were yet to be

integrated into public secondary schools, and this could affect their self perception and academic performance.

Kathleen Lynne Lane, et al.(2007), in the study ‘Academic Performanc of Students With Emotional Behavioral Disorders Served in a Self -contained Setting’ suggested that behavioral variables (e.g., school adjustment, externalizing, and internalizing) were predictive of broad reading and broad written expression scores, with school adjustment (a protective factor) accounting for the most vari?ance in the three-variable model. Limitations and recommendations for future research are addressed. Tamalika P.La, et. al.(2013) in this study ‘The relationship of the quality to curricular access and academic achievement for students with disabilities’ this study suggest that students’ IEP goals were of variable quality across grade bands. Academic-focused IEP goals were more likely to include sufficient information about links to the curriculum standards and progress monitoring strategies, but less frequently included sufficient information about students’ present levels of performance (PLOP) and the relevance of IEP goals to the students’ educational needs. Additionally, the quality of progress monitoring information in academically focused IEP goals demonstrated a negative association with student achievement. IEP quality demonstrated no significant relationship to inclusion in general education classrooms or two measures of curricular access.

2. To examine the availability and accessibility of assistive technologies provided to secondary school students with special needs in Howrah District, West Bengal

Indah Maysela Azzahra, et. al.(2022), in this study, ‘Learning facilities and infrastructure based on the characteristics of children with special needs in inclusive education’, the study's results found that each characteristic of children with special needs has different needs for facilities and infrastructure. In addition, it was found that several infrastructure facilities could be designated for other types of children with special needs characteristics, such as rooms, equipment, media, and student learning resources. Tal Slemrod (2014) carried out a study on Using Assistive Technology to increase Vocabulary Acquisition and Engagement for students with learning Disabilities in the High school Science Classroom. The findings that using the AT, students’ engagement increased compared to baseline conditions. It was clear that the students had a strong interest in using AT to increase their grades and engagement, but the teachers had little access to and training on using AT to support their students with disabilities.

Claret Chinwe Okoye (2024). In this study, ‘Assistive Technology and inclusion of children with disabilities in Nigeria, ’ the results demonstrate how important assistive technology is in enabling inclusive educational opportunities for children with disabilities by giving them the resources they require to participate in schooling and actively engage in the process of learning. Additionally, it was discovered that learning challenges in math, writing, and reading are addressed by assistive technology. It was finally discovered that children with impairments who use assistive technology (AT) find it much easier to learn independently.

3.To identify and analyse the major constraints faced by secondary school students with special needs in their academic learning in Howrah District, West Bengal

Mr Mrutyunjaya et al.(2025), in the study ‘Perspective of assistive technologies in inclusive education : An explanatory study’ . Findings show that headmasters of the schools noted greater confidence and independence in their children, though concerns about cost, availability, and lack of technical expertise were common. Teachers emphasized that effective use of assistive technologies requires training, institutional support, and policy-level commitment. The study concludes that assistive technologies can significantly strengthen inclusive education, provided there is sustained investment, collaboration between educators and parents, and continuous professional development. The insights generated add to the discourse on equity and innovation in education, offering practical recommendations for policymakers, schools, and stakeholders aiming to build more accessible and inclusive learning environments.

Sudipta Pradhan(2018), in the study ‘Use of Assistive Technology in blind schools of West Bengal: A Comparative Study’, revealed that the study reveals that the institutes meant for the visually challenged should increase access, availability and funding for assistive technology through efforts

and initiatives. Only one institute in the Medinipur division, i.e. Vivekananda Mission Asram (VMA), uses sufficient Braille resources and Assistive technology. Among the institutes in the Burdwan division, Asansol Braille Academy uses sufficient Braille resources and assistive technology. It has been revealed from the study that due to improper information about the assistance from the Government level (both Central and State), these institutes are suffering from a shortage of funds. Also, the shortage of teaching faculty in these institutes is another hindrance to the overall development of the visually challenged students. The school authorities must take initiatives in introducing assistive technologies to visually-challenged students, and they should get proper training in using it. There is a great need of development and implementation of laws, regulations, policies, practices and procedures or organisational structures that promote access to Assistive Technology devices and services because people with disabilities have to stop being underrepresented in libraries.

4.To study the role and practices of teachers in supporting the academic learning and inclusion of students with special needs in secondary schools of Howrah District, West Bengal

Shobha Jadav (2021), in this study, ‘ Teachers’ attitude towards inclusion of students with special educational needs’ researcher showed that, in general, teachers have a positive attitude towards inclusion of students with special educational needs and the provision of adequate resources to inclusive classes is needed. More efforts are needed for teaching students with special educational needs. Shiba Singh (2020), in this study, ‘A study of attitude of teachers towards Inclusive Education’, the result shows that the attitude of teachers towards inclusive education was moderate to a favourable level. Pre-service and urban teachers had a more positive/favourable attitude towards inclusive education than the attitude of In-service and rural teachers, respectively. In contrast, there was no significant difference between the attitudes of male and female teachers towards inclusive education.

Dr A. Kusuma et al.(2013), in the study ‘Inclusive Education-Teacher Competencies’, revealed that Teacher competency is the ability to plan, control and facilitate interaction in the classroom that is appropriate to the activity and which takes into account the different needs and abilities of learners. With more confident and skilled teachers, the inclusive education programme will have a positive impact on the awareness of the community. This would increase the enrolment of disabled children in school in the light of education for all, and more disabled or differently abled children would be working and contributing towards the growth of society.

Madhumita Mukherjee(2022), in the study Teacher’s attitude towards inclusive education in secondary schools of Howrah district, West Bengal, India’ The findings showed that the gender of teachers has a significant impact on the attitude of teachers towards inclusive education, whereas based on locality (rural/urban), it has an insignificant impact. Furthermore, this study confer that the gender of teachers is a vital impact on the various attitude of teachers of secondary schools, whereas locality is not an important factor according to the result of this study.

Sanjukta Ghosh et al (2026), in the study ‘Exploring the teachers’ attitudes towards inclusive education in Howrah District, West Bengal’, the findings reveal that while most teachers demonstrate positive attitudes toward the philosophy of inclusive education, they face practical challenges such as lack of training, limited resources, large class sizes, and insufficient institutional support. The study concludes that strengthening teacher preparation programs and providing continuous professional development are essential for promoting effective inclusive education in schools.

Blessed Mbu Molua Yonge (2022), in a study entitled ‘The use of Assistive technology in the school Based Instruction for children with specific Learning Disorders: The case Cameroon and Canada’ The result of the study reveald that, A available for use in both countries with unmet needs and that there exist laws, policies, and legislations in both countries to control access and provision of AT. However, some differences were found in the availability of assistive devices programs and funding in provision of AT and constantly revising and improving the implementation of the existing laws, policies, and legislations for AT access and provision. Implications for practice and further research also proposed.

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Susan Gately, (2005), in this study ‘An exploratory case study of the preparation of secondary teachers to meet special education needs in the general classroom’ Findings of this small case study revealed that (a) theoretical knowledge in best practices of special education are not adequately addressed in secondary education preparation programs, and (b) both methods faculty and in service secondary teachers need to learn effective content enhancement practices ,principles of strategy instruction, effective curriculum design, and technology skills.

Conclusion

The review study concluded that inclusive education practice significantly impacts the academic achievement of students with special need at the secondary level in Howrah District of West Bengal. The analysis of existing literature reveals that when inclusive strategies are effectively implemented, such as the application of assistive technologies, adaptive teaching methods, and a supportive classroom environment, students with special needs demonstrate remarkable improvement in their learning outcomes. Review also specified certain challenges, including a lack of adequate resources, limited integration of assistive technologies in the classroom and insufficient teacher or expert. Addressing these existing gaps is very crucial for maximizing the benefit of inclusive education. Strengthening these areas may improve the overall quality and quantity of education in the Howrah district of West Bengal.

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