

Enhancing Teachers' Development for Special Needs Students

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of the requirements for the degree of
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Declaration

It is hereby declared that

1. The thesis submitted is my own original work while completing a degree at Brac University.
2. The thesis does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.
3. The thesis does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution.
4. I have acknowledged all main sources of help.

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Ethics Statement

As the study's researcher, I'm dedicated to maintaining the highest ethical standards at all times. Respect, dignity, and secrecy will be accorded to all study participants, including teachers and other participants. All participants will be asked for their informed permission, guaranteeing that they are aware of the study's objectives, their role, and their freedom to discontinue participation at any moment without facing any repercussions. The identity of participants will be protected by anonymizing and securely storing the data. In order to improve teacher development for students with special needs in a way that is advantageous and considerate of all parties, the results will be presented in a responsible and impartial manner.

Abstract

This study investigates how professional development programs prepare general and special education teachers to address the challenges created by speech delays and cognitive difficulties in inclusive early elementary classrooms. The research seeks to highlight evidence-based practices that would enhance teaching practices and create a supportive learning environment for students with special needs. This qualitative research methodology utilizes data from semi-structured interviews, focus group discussions, and classroom observations at an urban school system. Key findings point to considerable barriers in communication, the need for differentiated teaching methodologies, shortcomings in professional development programs, and the influence of inclusive classroom dynamics on teaching effectiveness. The research underlines that collaboration among educators, parents, and specialists is paramount in the design and implementation of tailored interventions. It also contributes to the inclusive education literature by providing practical insights into how professional development can be enhanced to foster academic and social success for students with developmental delays.

Keywords: Inclusive education; speech delays; cognitive difficulties; professional development; early elementary; teaching strategies.

Dedication

This thesis is affectionately dedicated to my family, whose prayers and unconditional belief in my potential served as a wellspring of strength and guidance for me throughout the academic sojourn. Your unconditional love, support, and encouragement have been my foundation for striving for excellence and surmounting setbacks.

I am highly grateful to Sanjida, who encouraged me to take this journey of a master's degree. Her belief in my capabilities and continuous motivation helped me through all those jargons of higher education and kept me committed to this achievement.

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This is a work to remind each one of you just how you have influenced my life, and I shall always be grateful for what your roles have played to give me this path. Your prayers, encouragement, and firm belief in my dreams would always make it impossible to reach such heights.

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List of Acronyms

Acronym	Full Form
PD	Professional Development
IEP	Individual Education Plan
UDL	Universal Design for Learning
FGD	Focus Group Discussion
Med	Masters in Education
ASD	Autism Spectrum Disorder

Chapter 1

Introduction and Background

1.1 Introduction

As a pillar of modern educational theory, inclusive education emphasizes the need to integrate students with diverse learning needs into regular classroom settings. This study takes place in the ever-changing context of early elementary schooling, where the building blocks for success and lifetime learning are socialization, and cognitive skills. According to the article of Garcia, Rodriguez, and Martinez's (2019) *A Comprehensive Analysis of Professional Development Initiatives for Special Educators: Strategies for Supporting Students with Speech Delay and Cognitive Issues in Inclusive Classrooms*. In-depth analysis of the form and content of professional development initiatives is provided, with a focus on how these programs are intended to improve teachers' confidence, knowledge, and ability to fulfill the various needs of students who have cognitive difficulties and speech delays. Effective approaches include strategies like assistive technology integration, individualized instruction, and working with related specialists. In addition, the research discusses how cooperation and continuous support networks might optimize the results of Parkinson's disease activities. The realistic insights on the implementation and sustainability of professional development initiatives are derived from interviews conducted with educators and administrators.

Overall, by providing insightful information about the planning, carrying out, and assessing professional development programs meant to assist special educators in fulfilling the requirements of kids with cognitive disabilities and speech delays, the paper advances the area of inclusive education. In their work that has appeared in the *Journal of Special Education Professional Development*, Smith, Johnson, and Williams (2020) examine the topic of inclusive education. The study's main objective is to assess the effectiveness of professional development (PD) initiatives designed to help children with cognitive difficulties and speech delays. The impact of professional development initiatives in improving inclusive education practices is evaluated by the study using a strict evaluation framework. Important conclusions from the research show how professional development programs improve teachers' knowledge, attitudes, and methods of instruction for helping students with cognitive difficulties and speech delays. The impact of professional development programs on student learning results, classroom dynamics, and school culture is also examined by the writers. In order to maximize the impact of PD programs, the paper also covers ways for optimizing program

design and delivery. To guide future initiatives in supporting inclusive education practices, case studies and insights from effective professional development models are provided. All things considered, the paper adds to the expanding corpus of research on PD in special education by offering evidence-based suggestions for strengthening inclusive education and raising the achievement levels of students who struggle with cognitive disabilities and speech delay.

1.2 Research Topic

Enhancing Teachers' Development for Supporting Special Needs Students with Developmental Delays.

In order to provide special needs students in early elementary school settings with better support, this project aims to investigate strategies for improving teachers' professional development. Focusing on areas such as socialization, and cognitive abilities where developmental delays occur, the study intends to provide educators with useful tools and ways to support inclusive learning environments. A few particular resources and methods that teachers can use to promote inclusive learning environments for students who are experiencing socialization and cognitive developmental delays such as, to design adaptable learning environments that meet the demands of a wide range of learners, apply Universal Design for Learning (UDL) concepts. In order to accommodate different cognitive capacities and learning styles, this may include offering a variety of representation, interaction, and expression methods. Include social skills training and practice in the curriculum with clarity. Social skills including sharing, taking turns, and cooperative play should be taught and modeled. Opportunities for practice under supervision and feedback should also be provided. Collaborate with occupational therapists, speech therapists, and other support specialists to personalize services to the unique needs of people with developmental delays. Across disciplines, coordinate tactics and treatments to offer all-encompassing support.

The study explores the complexities of managing the various requirements of kids with special needs, emphasizing the value of individualized methods to support and instruction. The goal of the research is to discover best practices for supporting the cognitive and social development of special needs kids and gain insights into the difficulties experienced by educators via the analysis of the study.

1.3 Statement of the Problem

Special Education Professional Development Programs in Managing Speech Delay and Cognitive Difficulties in Students in Inclusive Classroom Environments.

In early elementary education settings, instructors have considerable problems in addressing the developmental needs of special needs learners, even in the face of initiatives to promote inclusive education. This complex issue shows up in a number of ways, one of which is the limited ability of educators to address the particular developmental delays that special needs students encounter. The impact of inclusive early childhood education settings in promoting the development of children with special needs was examined by Kanellopoulos and Giavrimis in a 2017 study that was published in the *Journal of Education and Training Studies*. The investigators investigated diverse approaches with the intention of tackling the cognitive and socialization difficulties encountered by these kids. By exploring inclusive education, they highlighted the value of individualized learning strategies and the establishment of nurturing learning environments. The study emphasizes the role that educators play in putting into practice efficient teaching practices to assist the cognitive and social development of children with special needs, underscoring the significance of inclusive education in providing opportunities for all aspects of their growth. This issue has a ripple effect across the whole educational system, making it more difficult to provide inclusive learning environments where every student can succeed. Howells and St. Peter (2018) examined the effectiveness of early intervention programs in enhancing sociability and communication skills in children with developmental delays. Their findings were published in *Early Child Development and Care*. The study explored a range of tactics and methods designed to assist young students' social and cognitive development in inclusive learning environments. The study offered important insights into practical methods for meeting the needs of students with developmental delays by offering professional development sessions, class observations, and collecting data through interviews. The results of the study highlighted the value of early intervention programs in helping this demographic improve their sociability and communication skills and the relevance of taking relevant action to support favorable developmental outcomes. Special needs kids frequently have obstacles to engaging fully in school activities because of issues with socialization and the development of cognitive skills, among other things. As a result, their educational opportunities are frequently hindered, which may result in academic and social, emotional, difficulties. Additionally, this issue presents serious obstacles to the instructional efficacy of teachers, as they struggle to meet the various demands of kids with special needs

while preserving an inclusive learning environment. Teachers may find it difficult to engage and instruct special needs students if they do not receive the necessary support and tactics that are designed to address developmental delays. This could have a negative impact on the quality of education that is given. Moreover, this issue is so widespread that it affects not only the classroom but also the entire educational process and results. It is true that there may be unfavorable effects from expanding the field of teacher professional development without providing enough depth or attention. Studies indicate that insufficient specificity and coherence in professional development may result in negligible or adverse impacts on teacher practice and student results (Fishman et al., 2013). Furthermore, this problem is so pervasive that it affects not just certain classes but the entire educational process and results (Desimone, 2009). Empirical evidence indicates that the attitudes of educators play a critical role in facilitating the successful integration of students with cognitive and speech development delays. The study set out to figure out if instructors' views on inclusive education and the social adjustment of students with challenges were related. The results of the study demonstrated a relationship between the social adaptation of students with cognitive and speech delays in a mainstream classroom and the teacher's willingness to change the physical environment, his communication style, and the methods of evaluation with regard to the requirements and skills of the students. (Karolina Mudlo-Glagoska, 2021). The overall quality of education can be negatively impacted by professional development activities that need to be more specific and address the varied needs of educators and students. This can result in less-than-ideal outcomes in the classroom and across the system. Therefore, it is crucial to make sure that professional development programs are precisely crafted to meet certain needs and objectives, promoting significant advancements in the caliber of instruction and learning outcomes for students. Insufficient attention to developmental delays throughout the early elementary school years can lead to long-term consequences for the academic performance, social integration, and general welfare of students. Considering these difficulties, it is critical to investigate and put into practice efficient case study techniques meant to support educators in negotiating the developmental delays of students with special needs. We may endeavor to create inclusive learning environments that support the overall growth and success of all children by tackling this urgent issue in education.

1.4 Research Questions

Research Topic: Overcoming the Obstacle of Handling the Developmental Delays of Special Needs Students in Early Elementary Education.

Key Question 1:

What challenges do teachers face in supporting students with speech delays and cognitive difficulties in inclusive early elementary classrooms?

Key Question 2:

How do professional development programs equip teachers to work with children with speech delays and cognitive difficulties in an inclusive classroom setting?

Key Question 3:

What barriers hinder the implementation of effective professional development programs designed to support teachers in managing developmental delays?

1.5 Purpose of the Study

Featuring an emphasis on socialization and cognitive abilities, this study aims to explore the effectiveness of case study approaches in supporting teachers as they navigate the developmental delays that special needs students face in early elementary education settings. By means of an extensive examination of extant literature, empirical investigations, and primary observations from educators and stakeholders, the present study aims to accomplish the subsequent goals:

To define the particular difficulties and obstacles educators encounter when identifying and addressing developmental delays in early elementary special needs students. To investigate evidence-based strategies and interventions that have been demonstrated to enhance the teaching abilities of early elementary schools in addressing developmental delays. To investigate the challenges and resources needed to implement professional development programs that improve teachers' capacity to assist students with students with developmental delays. To look into the views and firsthand experiences of parents and other caregivers on the support early elementary school teachers gave to students with developmental delays who had special needs. To offer suggestions and analysis to decision-makers, experts in education, and interested parties so they can better manage developmental delays and enhance the educational results of students with special needs.

By tackling these research goals, the project hopes to add to the current conversation about special needs education and offer useful advice and insights for improving special needs children' inclusion and support in early elementary school environments.

1.6 Significance of the Study

Aiming for efficient support systems for special needs children who are experiencing developmental delays in early elementary school is something that this study will hopefully help solve.

Evidence on the effectiveness of case study techniques in helping early primary school teachers deal with developmental delays in special needs students is noticeably lacking. By offering practical insights into the efficacy of these strategies, this study seeks to close this knowledge gap and further the field of special needs education.

Teachers, and other stakeholders involved in the delivery of special education services should anticipate practical ramifications from the study's findings. Through the identification of evidence-based strategies and equipment, together with the challenges and materials required

For professional development initiatives, this study will contribute to the creation of focused interventions and support systems that will improve teaching abilities and support systems of special needs.

The results of this research could have an impact on the formulation of policies in the educational system at different levels. Policymakers can improve the educational outcomes of this vulnerable population by allocating resources wisely and focusing on professional development initiatives, curriculum development, and the challenges faced by educators in meeting the needs of students with special needs.

This study helps close current gaps in our understanding of special needs education, especially as it relates to early primary education. Through an examination of the efficacy of case study techniques and a focus on the unique requirements of children with special needs, this research produces fresh knowledge and insights that can guide future investigations and instructional strategies.

In the end, it is anticipated that this study's conclusions would enhance the educational environment for special needs children enrolled in early elementary school. This research could have a positive effect on the educational landscape as a whole by improving teachers' capacity to identify and manage developmental delays, creating inclusive learning settings, and encouraging positive outcomes for students with special needs.

Chapter 2

Literature Review and Conceptual Framework

The effectiveness of the special education professional development course represents one of the crucial features of the contemporary educational framework, most specifically in respect to its involvement in dealing with cognitive disturbances and speech development delays, which become prominent within the inclusive class settings. A class on this course should consequently equip teachers with the knowledge and methods of working with a diverse array of students, including those with particular speech and cognitive disorders. Most importantly, these professional development opportunities should be assessed for how well they equip teachers with conducting successful interventions and support systems as classrooms become increasingly inclusive. This paper therefore undertakes a systematic assessment of such programs through their impacts on instructional strategies and student results. The present study aims at providing some insights on how program content and practical relevance for practicing educators are matched in order to enhance the learning environment to make it equitable for all students with special needs.

2.1 Inclusive Education and its Importance

In inclusive classrooms, there are students with special needs such as speech delay and cognitive disorder which offer considerable difficulties which require special teaching approaches. Speech delays can create an impediment to communication skills which affect the child's ability to ask for help and socialize, thereby creating a barrier to learn and to integrate with other peers. Cognitive difficulties on the other hand could have an effect on a student's capacity to understand and be able to learn things, hence adding to their education challenges. The goal for placing such a type of students into regular classes is to encourage them to be involved in social exchange and enhance academic performance. Johnson (2024) highlights that more often children from marginalized groups do not get all the necessary attention and are further likely to become socially isolated with decreased performance. To this end, the relevance of professional growth processes cannot be overemphasized if it comes to equipping teachers with tools to cope with such challenges. Such training also leads to the comprehension of being able to understand or apply differentiated methods of teaching and team work which makes the school a better place for great and all the individual characteristics that every student has.

2.1.2 Inclusive Education and its Challenges

Inclusive education is an approach that serves as a means to help all students, including those with disabilities, gain equal access to quality education in the general education setting (Salend & Duhaney, 1999). Although inclusion can provide potential benefits for children with, and without, disabilities (Salend & Duhaney, 1999), there can also be challenges associated with inclusion especially with respect to teachers attempting to meet individual learning needs. These challenges include:

Collaboration among special educators, general education teachers, speech-language pathologists, and other professionals is essential for successful inclusion. However, various barriers impede effective collaboration, such as differing views on student needs and a lack of opportunities for joint professional development (Haider et al., 2022).

Teachers in inclusive classrooms need specific knowledge and skills to effectively meet the varied learning needs of their students. This encompasses strategies for differentiating instruction, adapting the curriculum, and implementing individualized education programs (Tristani & Bassett-Gunter, 2019).

Despite this, many teachers express feeling unprepared to tackle these challenges. Some studies show that students with disabilities are affected positively in some ways by inclusive settings, and other studies have yielded mixed conclusions, Salend & Duhaney, 1999. Students' success within an inclusive environment depends on the quality of instruction during its provision, type of support given, and the disability itself-in other words, it is determined by individual characteristics.

The scope of specific learning disabilities is narrow: Understandably, the existing literature on inclusive education has primarily dealt with specific learning disabilities such as dyslexia and dyspraxia, while, I must confess, other areas such as speech delay or cognitive delays have received less attention, (King & Ryan, 2019). This gap in the literature does limit our knowledge on effective practices of inclusion for these populations.

2.1.3 The Main Purpose of Programs for Professional Development

Disability-specific professional development programs are designed to acquire skills and competencies needed to participate more effectively in the education of students with, for example, speech delay or cognitive delay in an inclusive classroom. These programs not only deepen the teachers perspectives of a range of disabilities but also assist in developing

instructional strategies appropriate to the wide range of learning needs. Current projects on the subject of special education assert that professional development programs that aim at joint efforts among educators including parents and specialists are necessary in building the needed inclusion culture for all learners (West C et al,2016).

In addition, when teachers are trained about inclusiveness, they can do more to alleviate the problems that children with autism spectrum disorder (ASD) are likely to face when trying to integrate into a classroom as their social dysfunctions may exclude them from the classroom (Johnson & Semmelroth, 2014).

Thus, professional development is important because it advances the practice of particular teaching methods aimed at the holistic growth of students, which in the long term will lead to higher academic achievements and social skills within an integrated framework.

2.1.4 The significance of training educators in the special education strategies

Training of educators in special education strategies is crucial so as to accommodate the different students with a speech delay and cognitive difficulties in one classroom. The momentum for an embraced practice of inclusion continues to grow, but this growth cannot be realized fully without educators who have a firm understanding and are skilled in handling such students. Evidence Based techniques may incorporate professional development programs which not only empower teachers in their area of competence, but foster a team effort of teaching involving teachers, parents and specialists (West C et al, 2016). Additionally, It has been noted in the literature that children with social dysfunction such as those with speech and cognitive delay cannot be ignored in terms of inclusion, thus different strategies must be employed for different learners (Johnson et al, 1992.). Due to this, it can be argued that prioritizing training on special education methodologies empowers schools to create a learning environment that promotes achievement of all students academically and socially, as all barriers to participation have been eliminated. Thus, its clear that the preparation of educators is one of the aspects in achieving the objectives of inclusive education.

2.1.5 Assessing the Effect of Professional Development on Student Learning

This is particularly important in the context of special education, as it can provide valuable insights into the effectiveness of professional development programs aimed at improving outcomes for students with specific learning challenges, such as speech delays and cognitive difficulties. Underpinning this is research findings that suggest that with adequate training, teachers are better positioned to implement evidence-based pedagogues in reducing-impact environments that promote growth for all students (West C et al, 2016). For one, the specialized training broadens the skill set at the instructional level of the educators whilst at the same time broadening their understanding of diverse learner needs, therefore increasing collaboration between all parties involved in education including parents and specialists (Acar et al,2021). These co-actions are critical, for they support the development of students' social and emotional skills, which are fundamental for academic improvement. Therefore, evaluating the direct impact of targeted professional development on teaching practices in turn affects student engagement and learning outcomes, underscoring further the continued need for investment in educator training that equips teachers to meet the needs of all students in inclusive classrooms.

2.1.6 Progress of students in speech and general thinking abilities

Research studies showing progress among students in their speech and cognitive skills are vital signs of whether special education professional development programs work. For example, a study focusing on speech language impairment on the confidence of early childhood professionals found that early childhood educators reported they felt unprepared to communication delays and developmental disabilities based on limited education on speech challenges and developmental delays (Davis et al, 2016).

Moreover, the use of focused methods, including the Text Talk vocabulary acquisition model, demonstrated a stronger growth in vocabulary use among pre-kindergarten learners of diverse exceptions (Batchelder,2002.). These findings emphasize the need for structured training that improves educators' theoretical understanding and enhances their skills for implementing effective intervention. Special education professionals in continuous collaboration becomes one of the most relevant aspects to correlate with student progress; seen through the lens of ongoing professional development to help provide the best practices.

2.3 Conceptual framework

This thesis's conceptual framework focuses on analyzing how well professional development programs function for teachers who work with students who have cognitive and speech difficulties in inclusive classrooms. This framework offers an organized method for addressing the research issues by integrating many aspects of professional development, inclusive education, instructional practices, and student outcomes. Establishing fair educational environments that can accommodate students of all abilities is the main goal of inclusive education. It places special emphasis on tackling the difficulties of integrating students with cognitive disabilities and speech impediments, including removing obstacles to communication, encouraging involvement, and reducing the likelihood of social isolation. In order to work on the tools, they need to identify, meet, and support the many needs of students with developmental delays, professional development is essential. These initiatives promote approaches designed for inclusive environments, encourage teacher cooperation, and highlight evidence-based teaching practices. Lastly, student outcomes is important of this research since they assess the influence of professional development on students' advancement in social, cognitive, and speech-related domains.

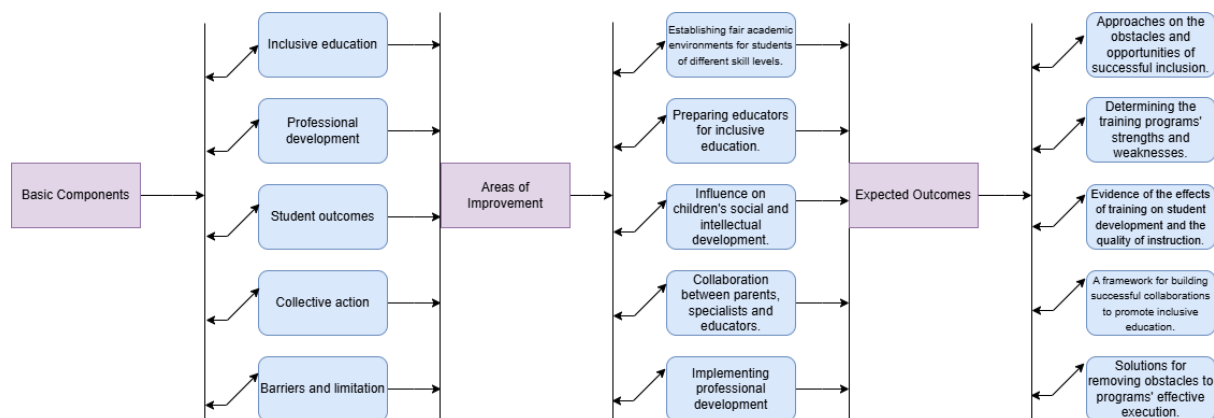


Figure 1: *The conceptual framework*

In Figure 1 it shows a well-organized diagram that lists the fundamental elements, areas of emphasis, and anticipated results associated with inclusive education. It is divided into five main sections: Student Outcomes, Collective Action, Professional Development, Inclusive Education, and Barriers and Limitations.

The framework is an example of an interdependent system in which every element impacts and supports the others to form a coherent whole with the goal of attaining inclusive education and better results. The framework is based on the Basic Components, which include inclusive

education, professional development (PD), student outcomes, group action, and barriers and constraints. By addressing important facets of the educational process, these elements propel the Areas of Improvement. In order to create a fair academic atmosphere and encourage intellectual and social development, inclusive education, for example, guarantees equal access to learning opportunities. In a similar vein, professional development gives teachers the abilities and information required to use inclusive practices, which is closely related to the objectives of teacher preparation and systemic problem solving.

Student outcomes, which show the observable effects of inclusive policies and well-executed professional development programs, serve as a gauge of success and a catalyst for continuous growth. Conversely, collective action promotes cooperation amongst stakeholders, including administrators, teachers, and parents, guaranteeing that duties are distributed and inclusive practices are constantly implemented. The Barriers and Limitations component identifies the issues that need to be resolved, such as a lack of training, bias, or resource limitations. These issues are crucial to address through professional growth and teamwork.

As we go on to the Areas of Improvement, the framework outlines important goals including creating an equitable learning environment, training teachers, boosting intellectual and social development, encouraging parent-teacher cooperation, and successfully carrying out professional development programs. The Expected Outcomes—which include establishing chances for successful inclusion, assessing professional development's advantages and disadvantages, advocating for inclusive education, encouraging student growth, and coming up with workable answers to problems—are directly impacted by these domains. For instance, creating a fair academic environment guarantees that all students, irrespective of their background or skill level, can take advantage of equal learning opportunities, which promotes successful inclusion and better student growth.

These elements interact in a dynamic and iterative manner. Professional development program implementation, for example, influences the evaluation of PD strengths and flaws, which in turn influences future PD tactics. In a similar vein, parent-teacher collaboration makes it easier to identify obstacles so that group efforts can be made to remove them and enhance inclusive practices.

The results obtained, such as answers to problems or understandings of the efficacy of PD, offer input that improves the framework and starts a never-ending cycle of development. In the

end, this linked framework highlights that effective inclusion and student growth necessitate a comprehensive strategy in which each element and area for development is in line with common objectives.

Chapter 3

Methodology

3.1 Research Approach

Qualitative research has been chosen as the research methodology to analyze case studies methodologies in order to help instructors navigate the developmental delays of early elementary school pupils with special needs. Qualitative research is chosen because it can thoroughly study the topic and provide a thorough grasp of the viewpoints and experiences of educators, students, and other relevant stakeholders.

The selection of qualitative research was justified by its appropriateness for examining the complex issues and tactics associated with assisting students with special needs who are experiencing developmental delays. Researchers can explore the complexities of teachers' practices, perspectives, and experiences in managing developmental delays in domains including socialization, and cognitive abilities through qualitative approaches like observations, interviews, and document analysis.

The research method will help gather real life experiences through interviews, focus group discussions, and class observations, which helps researchers gather rich, contextualized data that can guide the creation of successful teacher support systems and interventions, which is in line with the goal of the study.

3.2 Research Site

This study's research location is an urban school system with a diverse student body that is situated in a metropolitan area. The district has multiple primary schools that cater to a broad student body from pre-kindergarten to grade two, with varying socioeconomic backgrounds.

Having been in operation for a number of years, these schools together serve a sizable population of learners with a range of developmental needs, including those who are behind in their sociability and cognitive development.

The chosen research location, which focuses on early childhood education, provides an appropriate framework for analyzing how case study techniques are used to help instructors deal with developmental delays in students with special needs. An excellent environment for investigating the difficulties and methods associated with addressing developmental delays in the early elementary years is created by the presence of experienced instructors and a varied student body. Moreover, the study issue is strongly aligned with the school district's commitment to professional development activities and inclusive education. The study intends

to produce insights and recommendations that help guide the design and implementation of successful interventions to promote the development of special needs students in early elementary school by working with educators and administrators within this environment.

3.3 Research Participants

The study was carried out among those who work directly with children from pre-kindergarten through second grade, especially among children suffering from delays in cognitive and social development. Both special educators and regular teachers have been sought as participants. The level of education, age, gender and experience of the participating group differed among them.

Inclusion Criteria:

Experience: Minimum of two years of direct experience working with students with special needs. Special educators had specific training in the field or experienced mentors in special education.

Knowledge: The participants had training or knowledge of behavior management, differentiated instruction, and inclusive practices applicable to developmental delays.

Diversity: The sample represented a variable combination of male and female, age, and experience level of participants, and educational background to allow the range of perspectives to be represented.

Special needs teachers and regular teachers in elementary schools who have direct contact with children in prekindergarten through grade two are the research participants for this study. Those who work with students who have cognitive and social developmental delays are particularly interesting. The participants exhibit a range of demographic characteristics, including age, gender, and professional experience.

The participants in this study consist of educators who are male and female and have varied degrees of expertise teaching children this age. Furthermore, it is possible that the participants have received specific training in fields like differentiated instruction, inclusive practices, and special education.

Due to their direct engagement in addressing developmental delays among special needs students in early elementary school settings, these individuals were selected. Awareness of the

effectiveness of case study approaches in supporting teachers in effectively navigating these issues requires an awareness of their viewpoints and experiences.

Through interaction with these research subjects, the study hopes to have a thorough grasp of the challenges associated with assisting early elementary school-aged special needs students with their developmental delays. Their opinions will be taken into consideration when developing suggestions and actions meant to improve teacher support systems and raise the performance of special needs kids in the age group in question.

3.4 Sampling Procedure

This study employed purposive sampling to select participants on the basis of certain predetermined criteria, to ensure that they had the requisite qualification and experience.

Efforts to Ensure Diversity:

The sampling process considered multiple criteria, including years of experience, gender, and level of education, to account for a large perspective among participants. Involving special education professionals along with the regular teacher brought about a comprehensive understanding of the challenges and strategies of support for developmental delays.

The respondents consists of elementary regular teachers and instructors who work with special needs students who have delayed socialization and cognitive development in prekindergarten through grade 2 classrooms.

Purposive sampling is a method of sampling whereby participants are chosen according to predetermined standards in order to guarantee that they have the necessary knowledge and experience about the subject of the study. The following are the selection criteria for samples:

Experience: It would be ideal for participants to have firsthand knowledge of dealing with early elementary special needs students in positions related to student services, special education, or instructional assistance. The special educators will be having at least two years of experience to deal with special need students, and had training in special need schools or got training under experienced special need educators.

Diversity: In order to capture a wide range of viewpoints and experiences, the sampling selection attempts to include a diverse range of participants in terms of gender, age, years of

experience, and educational background. Participants will be the special educators ,regular teachers.

Participant information are following:

2 Special education professionals (At least 2 years experience, age 30-50 years)

2 regular teachers (At least 2 years experience, age 25-35 years)

Accessibility: To facilitate data collection and cooperation, study participants should be reachable and eager to take part.

The study guarantees that participants have the expertise and perspectives needed to make a significant contribution to the investigation of case study techniques for assisting developmental delays in special wants pupils by utilizing deliberate sampling. The researcher is able to collect rich, detailed data from participants who are actively involved in resolving the difficulties experienced by special needs learners in early elementary education contexts because of this focused method.

3.5 Data Collection Methods

In this study, semi-structured interviews, FGD (Focus Group Discussion), and classroom observations were used as data-gathering methods. These techniques were chosen to compile thorough information about the experiences and strategies of educators dealing with the developmental delays of special needs children in the early elementary years.

Interview Guides: The interview guides served to elicit detailed accounts from participants about their experiences and tactics about developmental delays. Questions had already been pilot-tested in a small group of educators to test for clarity, relevance, and appropriateness. Feedback from the pilot testing was incorporated into a final arbitrary review for refinement.

Observation Protocols: Observation protocols were developed in order to capture teacher-student interaction and the case study techniques being used in a classroom setting. The protocols underwent review by experts in the educational field to ensure that they successfully captured the intended data and that they supported the goals of the study.

3.5.1 Anonymity of Participants and Confidentiality of Information:

The data collected were kept on a secure basis in encrypted virtual and locked physical storage to have unauthorized access. Identifying characteristics were removed from the written work during the analysis to protect participants' confidentiality. The participants were informed of their rights, e.g., they had the right to withdraw from the study at any time without suffering any penalty.

Informed Consent: Before participation, each of the members of the research had been informed about the study's nature, objective, and methods of data collection. Written consent was sought ensuring understanding, protection of rights, etc.

3.5.2 Interview method

Since semi-structured interviews enable a thorough examination of participants' viewpoints, experiences, and methods of special needs student care, they were used for the study. We conducted one-on-one interviews with about four to four teachers, who were two regular teachers and two special needs teachers. The duration of each interview ranged from 10 to 15 minutes, providing ample opportunity for in-depth conversations about issues like the difficulties encountered, tactics utilized, and the efficiency of case study approaches in addressing developmental delays. Questions were asked to the interviewer (Special needs teachers, and regular teachers):

3.5.3 Focus group discussion

Focus Group Discussion is a systematic approach necessary to ensure rich and relevant data gathering while conducting a Focus Group Discussion (FGD) to assess the effectiveness of Special Education Professional Development (PD) programs in managing speech delay and cognitive challenges in inclusive classrooms. There were two special needs teachers, and two regular teachers in the discussion.

A few tools to keep the record were used such as audio recorder and notebook.

Questions that were asked to the focused group:

- i) What are the common challenges you have faced to manage the students in your class who have speech and cognitive difficulties?
- ii) Did you receive any training from your school to guide or help improve the students?

iii) Did you face any challenges in implementing the strategies you learned from the PD? And how did you overcome those?

iv) Do you see any improvement in implementing the strategies?

v) Which strategy you find is the most effective you learned from PD and why?

vi) Do you have any suggestions to add to PD sessions?

3.5.4 Class observation

Apart from that, in-class observations were carried out to gain personal insight into how educators engage with students with special needs and execute intervention techniques. Teachers who have participated in the Focus Group Discussion in their classes were observed. Four classes were observed from Prek to Grade 2, however the same classes were observed two times to get in depth information and changes in patterns of teaching and students behavior. These observations enabled the documentation of instructional strategies and student interactions while also offering insightful information about the application of case study approaches in actual classroom environments.

3.6 Role of the Researcher

Transparency and a knowledge of how my viewpoints, interactions, and experiences may have impacted the data collection process are possible contributions in the study.

First off, my perspective on the study is shaped by my experience and training in qualitative research methods and education. As the researcher, I also have to build rapport and trust with participants in order to encourage candid and open communication during observations and interviews. Sensitive to the experiences and viewpoints of participants, I work to foster a nonjudgmental, encouraging environment where people feel comfortable sharing their problems and ideas. My capacity to really listen, delve deeper, and feel what participants are going through improves the caliber and breadth of the information gathered.

In addition, I analyzed the data in my capacity as a researcher. I critically analyze my own biases, assumptions, and prejudices that might affect how results are interpreted by means of reflective analysis and ongoing reflexivity by peer discussions, seeking critical feedback and alternative perspectives. I want to reduce subjectivity as much as possible and increase the reliability of the research findings by practicing reflexivity.

It's important to recognize, though, that as the researcher, I could bring biases or restrictions to the study. For example, the choice of study topics, data gathering techniques, and findings interpretation may be influenced by my personal experiences and beliefs.

In conclusion, I have a wide range of responsibilities as the researcher in this qualitative study, from study design to data collecting and analysis. Despite the fact that my experience and background add to the caliber and breadth of the study, I try to maintain objectivity and rigor throughout the process by being aware of the potential biases and limits that come with my job.

3.7 Data Analysis

The data analysis procedure in this study comprised a mix of qualitative techniques, such as pattern recognition and thematic analysis. In order to find recurrent themes, sub-themes, and patterns in the qualitative information gathered from semi-structured interviews, focus group discussion (FGD) and classroom observations, thematic analysis was employed. To find broad trends and connections throughout the data set, pattern recognition techniques were also used.

Data Analysis Steps:

The collected data is transcribed and organized for analysis.

In this step of coding this study, the researchers assigned a code to these themes as the starting point for identifying the themes and patterns within the data. The codes could have some inductive origins just taken as they developed through the process, while some others relied on a deductive basis tied to the purpose of the research.

Therefore a hybrid approach was used to ensure flexibility and allow new insights while also maintaining alignment with the study's goal.

Consolidation: These codes are grouped into larger themes, and they encapsulate the key findings identified through the process of answering the research questions.

Intercoder Reliability: Several investigators applied the codes independently to a few passages of transcript data and compared their results to confirm the agreement between the coders.

Member Checking: Participants were asked to check preliminary findings to validate their own accuracy and representation.

Restraining Bias: To further constrain any biases in their research, the following procedure was followed:

Reflexivity: Researchers have also kept reflexive journals of their work noting their perspectives and how they designed the research, aimed towards the lessening of personal biases.

Debriefing: Regular informal discussion with peers provided anxious observations on the data analysis process.

The qualitative data, which included observational notes and interview transcripts, were carefully examined and categorized to identify important concepts and ideas in order to do a thematic analysis. The data naturally produced themes and sub-themes through an iterative coding and categorizing process.

Subsequently, these themes were arranged and combined to form a cohesive story that encompassed the viewpoints and experiences of the participants concerning the application of case study techniques to manage developmental delays in adolescents with special needs.

Additionally, in order to discover broad patterns and trends, pattern identification approaches involve determining the similarities and contrasts among individuals and environments. In order to identify new patterns and linkages, this required contrasting and comparing the results from various observations and interviews. After then, patterns were combined and examined to get insightful findings pertinent to the study's goals.

Rigor and reliability were maintained throughout the data analysis process by using strategies including peer debriefing, ongoing comparative analysis, and member verification. Member verification ensured that the interpretations were accurate and credible by sending the results back to the participants for approval and comments. In order to improve the accuracy and dependability of the analysis, peer debriefing entailed getting opinions and comments from peers and coworkers.

Overall, the rigorous and methodical examination of the qualitative data made possible by the data analysis process used in this study resulted in the identification of important findings and insights about the function of case study methods in assisting teachers in tackling developmental delays among special needs students in early elementary education.

3.8 Ethical Issues and Concerns

When conducting research for the case study "Analyzing Case Study Methods to Assist Teachers in Navigating Special Needs Students' Developmental Delays in Early Elementary Education," ethical concerns could come up.

a) Respecting Human Subjects' Rights: Preserving moral precepts like independence, kindness, impartiality, and equity entails respecting human subjects' rights. Throughout the research process, researchers need to make sure that participants are treated with respect and decency. This entails getting willing, informed consent, maintaining privacy, lowering risks, optimizing rewards, and making sure everyone has equal access to research opportunities.

b) Consent from Research Participants/Informants: It is essential to obtain informed consent from participants or informants prior to beginning any data collection. To do this, people must be given comprehensive information about the goals, methods, possible hazards, and rewards of the research, and they must be given the option to volunteer voluntarily. Getting permission from parents or legal guardians is crucial while researching developmental delays in special needs pupils because of the participants' possible vulnerability. In cases where participants are unable to give informed permission, researchers should make sure that authorized individuals provide proxy consent.

c) Preserving Confidentiality: In order to safeguard study subjects' privacy and avert possible harm, it is critical to maintain their confidentiality. Researchers in this case study need to put precautions in place to protect sensitive data that participants provided. This could entail anonymizing data, giving participants pseudonyms, securely storing data, and limiting access to just those who are permitted. Furthermore, participants should be made aware of the degree of confidentiality that will be maintained for their information as well as any exceptions to that policy (such as the requirement to report child abuse).

d) Handling Bias: Bias has the potential to seriously influence research findings and jeopardize the study's validity and reliability. I needed to use strict methodological techniques by studying the topic at all times when doing the research in order to reduce bias. Also by maintaining the data record, using a diverse sampling method tried to handle the biasedness.

This entails laying out the goals of the study in detail, choosing a qualitative research approach, utilizing proven evaluation instruments, reducing researcher bias in the gathering and processing of data, and cross-referencing data from several sources to increase credibility. In

addition, researchers must be aware of their own prejudices and take action to lessen their impact on the investigation process.

In conclusion, treating ethical problems in research necessitates rigorous thought and commitment to moral standards and directives. Through the ethical and responsible prioritization of informed consent, confidentiality, bias reduction, and respect for human rights, researchers can conduct studies that improve the integrity and credibility of their research findings.

3.9 Credibility and Rigor

The following combination of experience, education, and skills, as the researcher working on the study "Analyzing Case Study Methods to Assist Teachers in Navigating Special Needs Students' Developmental Delays in Early Elementary Education," supports the validity and rigor of the research:

My experience working with young students who have developmental impairments provide me with a solid basis on which to undertake this study. My previously worked experience with special needs students which has given me invaluable insight into their particular requirements, difficulties, and successful teaching techniques.

This study's development involved a methodical approach to planning and designing the research. In the beginning of going through a thorough analysis of the body of research on case study techniques, special needs education, and efficient teaching approaches for treating developmental delays. Then created a research matrix that included the main factors, research topics, and methodological issues. The next step involved creating a thorough research proposal and outline, which was then revised several times in response to input from stakeholders, the vice principal, and coworkers.

My experience in dealing with special needs students in my school as a coordinator highlights the study's validity and thoroughness. My expertise, knowledge, and methodological skills enable me to perform an in-depth and perceptive analysis of case study approaches that will help teachers access the developmental delays of early elementary students with special needs.

3.10 Limitations of the study

The validity of findings may be compromised by data bias resulting from participants providing socially acceptable replies. One school was chosen for the study. To minimize this, building

trust, keeping information private, and using triangulation with several data sources can all aid in validating answers. However, there is still another issue that affects the study's comprehensiveness: time limits for data gathering and processing. It took at least one month to collect data as for observing and taking interviews took time to cross check and make sure the originality of the research.

Setting priorities for data gathering methods, simplifying processes, and allocating resources as efficiently as possible are necessary to overcome this constraint. Along with that, as I am collecting data as a qualitative method where I will have no chance of emerging new information to my research. The training cost and budget can be an issue, as well the school management might not support the idea, and provide funds for the necessary resources and expert teachers will not be there to conduct the Professional Development (PD) to ensure the quality of the classes for both regular and special need teachers.

Chapter 4

Results

4.1 Introduction

This section shows results from analysis of different forms and strategies of special education PD programs that intend to enhance teachers' learning about how to handle students with speech delay and cognitive problems in an inclusive classroom. A variety of methods were employed in the collection of data, namely, semi-structured interviews of teachers, focus groups, and direct observation of classroom activities. The findings are structured in accordance with major ideas, namely the experiences of the participants, the issues encountered, and the results of the practices of teaching. To protect anonymity, pseudonyms are provided, and in-text citations provide details of the interviews, focus groups, or observations. Communication problems were often present with respect to students with speech and cognitive challenges. The students' achievement was directly proportional with the use of differentiation and variety of techniques. More often than not there is a gap in training in CPD programs. The collaborative work in the inclusive classroom settings had its advantages as well as disadvantages on the learning experiences. Co-teaching practices between teachers usually solved most of the challenges.

4.2 Table

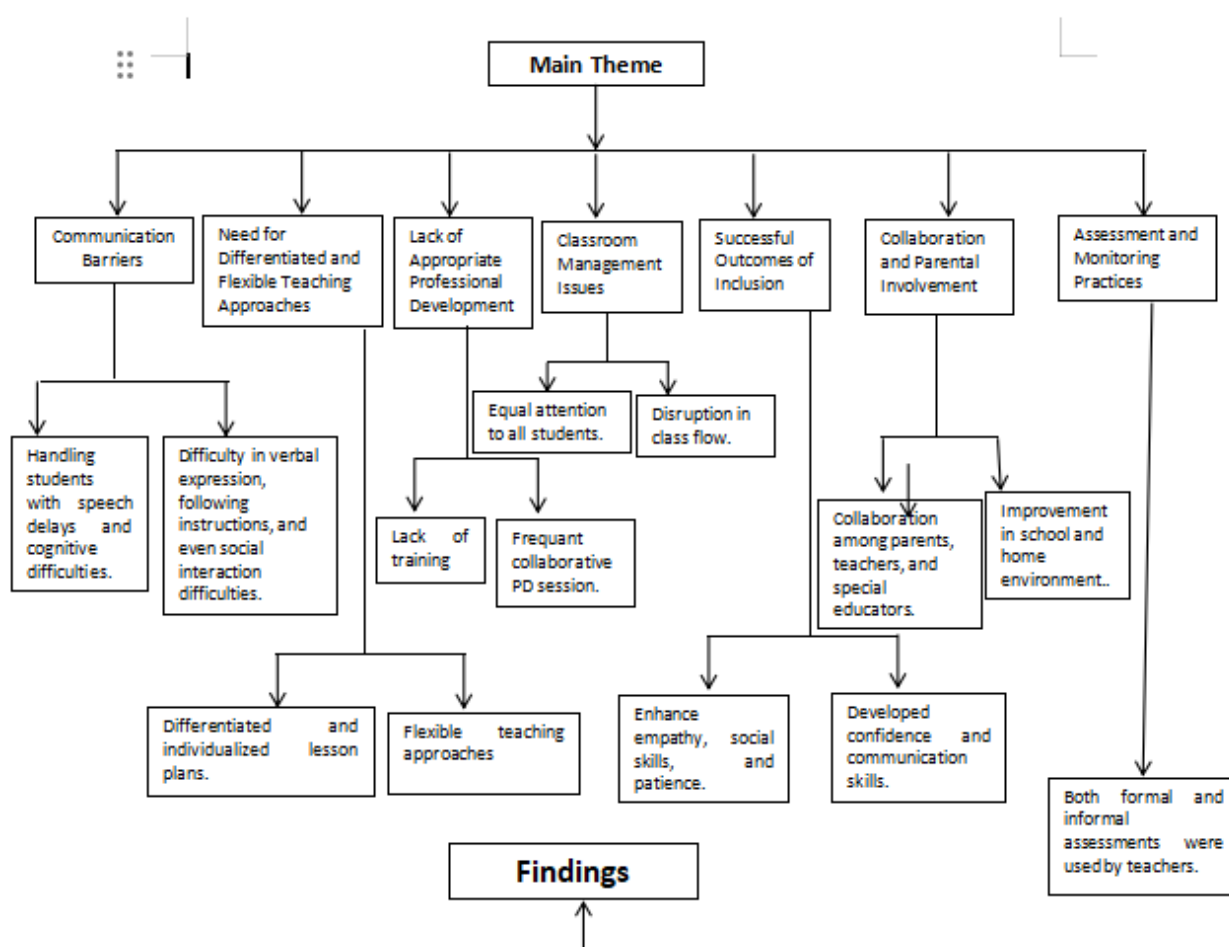


Figure 2: Main theme and Findings.

4.3 Elaboration of Key Themes and Findings:

4.3.1 - Theme 1: Communication Barriers

Description: The inability of students with speech and cognitive impairments to communicate and comprehend instructions is one of the biggest obstacles they must overcome. These communication problems impact the teaching and learning process as a whole by erecting obstacles to involvement and learning.

Findings: According to teachers, students who have trouble following directions verbally often end up with unclear or unfinished assignments. This calls for the application of additional communication techniques. Visual aids like charts, images, and props were commonly used by teachers to fill in these knowledge gaps and aid students in understanding the subject matter. Another popular strategy to improve comprehension was to repeat instructions in simpler language.

Sub Themes and Examples:

Physical Supports: To improve comprehension and successfully communicate information, gestures and visual aids were essential. These techniques were especially helpful in classrooms with little opportunity for verbal communication.

Human Resources: Teachers occasionally used peer volunteers to help with classroom assignments in order to accommodate the special requirements of non-verbal learners, fostering an inclusive and collaborative learning environment.

“The greatest problem is communication. Performing tasks without reacting to specific instructions is impossible.” (Focus Group #1: 2024-03-15)

“For students who are delayed in speech, I attempt to utilize such techniques as gestures and visual aids in the form of props.” (Personal Communication: Interview #2, 2024-03-12)

4.3.2- Theme 2: Need for Provision for Differentiated and Flexible Strategies

Description: Instructors stressed how important it is to modify lesson plans and intervention strategies to meet the individual needs of every student. Effective learning outcomes depend on identifying a range of skills and modifying tactics accordingly.

Findings: Interactive exercises and sensory-based teaching strategies were shown to be successful in maintaining student interest and promoting understanding. Another way to lessen cognitive stress was to divide work into smaller, more manageable pieces. Teachers emphasized how crucial it is to establish reasonable goals in order to deal with behavioral issues. Due to their inexperience, novice teachers frequently struggled to put these ideas into practice, whereas more seasoned educators demonstrated better confidence and proficiency in accommodating a range of requirements. However, there were several difficulties because of the restricted availability of suitable visual and sensory resources.

Sub Themes and Examples:

Novice vs Experienced Teachers- Novice teachers almost always found themselves grappling with effective differentiation, while the more experienced ones exhibited a higher degree of confidence. Limitations in Materials-colleagues pointed at limited availability of visual and sensory materials.

“Informal lesson plans are important in tackling different weaknesses of students in a classroom but realistic expectations are important to manage since some learners may have behavioral troubles.” (Personal Communication: Interview #1, 2024-03-10)

“Students were able to stay engaged and interested in the classroom because of pair work and hands-on activities.” (Focus group #1: 2024-03-15)

4.3.3-Theme 3: Need for Improved Professional Development Program.

Description: Professional development (PD) programs have inadequacies, especially when it comes to specialized training for working with students who have special needs, according to general and special education instructors.

Findings: Many educators expressed that they lacked the official training necessary to handle the difficulties presented by pupils with special needs. Although some had participated in occasional workshops, the material was frequently inadequate or out of step with the realities of the classroom. Teachers demanded more hands-on, real-world application-focused in-service training. It was also recommended that parents be included in the training process to guarantee that home and school strategies are in line, giving pupils a reliable support network.

Subthemes:

Mismatched Training: Teachers were unprepared due to the lack of organized, thorough training. It took more than sporadic sessions to provide them the skills they needed to handle a variety of classroom issues.

Parent Participation: Teachers stressed the need for compatible goals between home and school activities.

"I was informed about special needs students in my class but did not receive any training on how to address their challenges." (Personal communication: Interview #3, 2024-03-11)

"Frequent sessions with parents' involvement could help us align goals and strategies." (Focus group #1: 2024-03-15)

4.3.4-Theme 4: Inclusive Classroom Dynamics

Description: Teachers' experiences in inclusive classrooms were not all the same. They created difficulties with classroom management and course flow, but they also helped pupils develop empathy and cooperation.

Findings: Peer relationships were positively impacted by inclusion, as students showed a willingness to help their peers with assignments, encouraging collaboration and a feeling of belonging. Teachers pointed out that handling behavioral problems in inclusive environments could cause disruptions in the classroom, necessitating more time and work to keep everyone engaged and in order. A persistent issue was finding a balance between attending to the needs of the entire class and helping students with special needs.

"It's an opportunity to foster inclusivity, but their behavioral patterns sometimes hinder class flow." (Personal communication: Interview #3, 2024-03-11)

"Other students assisted peers with tasks, encouraging group work and inclusion." Observation #2: 2024-03-13

4.3.5- Theme 5: Collaboration and Monitoring Progress

Description: It was determined that regular progress monitoring and cooperation between educators, parents, and other stakeholders were essential to obtaining significant results.

Findings: Teachers tracked student achievement and modified their teaching methods based on daily logs, checklists, and Individualized Education Programs (IEPs). Consistency between home and school activities was established by regular communication with parents, which strengthened behavioral and learning techniques.

The classroom environment was further improved by general and special educators working together, which allowed teachers to approach problems in a dynamic way.

"I keep track of progress through checklists and IEP goals, in collaboration with the parents to keep things consistent." (Personal communication: Interview #1, 2024-03-10)

"Teamwork between special educators and regular teachers helps us in catching up with dynamic classroom challenges". (Focus group #1: 2024-03-15)

Chapter 5

Discussion and Conclusion

5.1 Discussion

The usefulness of professional development (PD) programs in preparing educators to assist students with cognitive difficulties and speech delays in inclusive classrooms was investigated

in this study. The results showed important themes that are consistent with previous research while also offering fresh perspectives unique to the study's setting.

Barriers to Communication

According to the study, one of the biggest obstacles teachers have when working with students who have cognitive and linguistic disabilities is communication difficulties. To overcome these obstacles, educators used techniques including gestures, visual aids, and condensed instructions. Studies by Howells and St. Peter (2018), which highlight the use of assistive technologies and adaptive communication techniques, report similar results. However, this study suggests an unexplored path by highlighting the relevance of peer support as a supplemental method.

Differentiated and adaptable strategies are required

In line with the findings of Tristani and Bassett-Gunter (2019), who contend that differentiated instruction is crucial in inclusive contexts, teachers underlined the value of tailored instruction. However, this study adds to the conversation by pointing out differences in the effectiveness of differentiation implementation between inexperienced and seasoned teachers. The implementation of adaptable solutions was also found to be hampered by material limitations, indicating a resource shortage that has received less attention in the literature to date.

Programs for Professional Development Are Deficient

Participants pointed out serious flaws in the current professional development programs, such as uneven training opportunities and little attention to special education needs. These results support those of Giavrimis and Kanellopoulos (2017), who found comparable deficiencies in teachers' readiness for inclusive education. The study's distinctive contribution is its emphasis on the necessity of parent participation in professional development initiatives to guarantee coherence between tactics used at home and at school. Another crucial area for development was the absence of follow-up procedures to guarantee the application of training insights.

Classroom Dynamics That Are Inclusive

Although they encourage empathy and teamwork, inclusive classrooms can sometimes provide difficulties like interruptions. This dichotomy is consistent with the findings of Salend and Duhaney (1999) regarding the advantages and difficulties of inclusive education. By examining how behavioral issues disproportionately affect new teachers, this study provides insight and raises the possibility that they require focused care.

Cooperation and Progress Tracking

In order to monitor and assist students' growth, cooperation among educators, parents, and experts has become essential. Daily records and Individualized Education Plans (IEPs) were common tools used. This result is consistent with that of Acar et al. (2019), who support cooperative methods in inclusive education. To address differences in progress tracking between schools, the study does, however, emphasize the use of uniform monitoring instruments.

Differences in the Data

Although the majority of participants recognized the advantages of teamwork and adaptable tactics, there were differences in their answers about the efficacy of PD. For example, some educators said they had received a lot of training, while others said they had not had any official instruction. These discrepancies highlight the need for a more consistent approach to professional development and may be caused by variations in school policy, resource availability, or individual experiences.

5.2 Conclusion

This study looked into the difficulties and methods teachers use to help students with speech delays and cognitive impairments in inclusive classrooms. The results fill in gaps in the research, present useful implications for future educational policies and procedures, and offer important insights into current practices. Although they need sufficient resources and training, differentiated and adaptable techniques are crucial. More focused and regular training opportunities are required because the current professional development programs are inadequate. There are benefits and drawbacks to inclusive classroom dynamics, with behavioral problems being especially difficult for inexperienced educators. Maintaining constant support for children requires efficient teamwork and progress tracking.

By offering useful insights into the complex opportunities and challenges in inclusive education, our findings add to the body of previous work. The report emphasizes the value of focused professional development programs, resource allocation, and collaborative practices in fostering inclusive learning environments.

Although earlier research has emphasized the value of communication aids and individualized instruction in inclusive education, such as that conducted by Howells and St. Peter (2018) and Tristani and Bassett-Gunter (2019), this study presents fresh viewpoints. In particular, it highlights how important peer support is for breaking down barriers to communication—a tactic that hasn't received enough attention in earlier studies. The results also highlight differences in how diversified instruction is implemented, with more seasoned teachers

exhibiting better adaptability than their less experienced peers. This study reveals systemic inadequacies that have been missed in previous research by pointing out resource constraints and irregularities in professional development possibilities.

Realistic Consequences for Practices and Policies: Improved Professional Development Programs: The results highlight how urgently comprehensive and ongoing professional development programs are needed. These programs ought to concentrate on encouraging cooperation with parents in addition to providing educators with techniques for handling behavioral and communication issues. In order to create a consistent and encouraging learning environment for students, parent-inclusive professional development sessions can assist in coordinating home and school strategies. **Resource Allocation:** The absence of sufficient resources, especially visual and sensory aids, which are essential for successful differentiated instruction, was a recurrent topic. To guarantee that all schools are prepared to accommodate a range of learning requirements, policymakers should place a high priority on the equal distribution of resources.

Support for Novice Teachers: Mentorship programs and other targeted support systems are crucial for assisting new teachers in developing their self-assurance and classroom management abilities in inclusive settings. These programs help improve classroom dynamics and student achievement by lessening the disproportionate influence that behavioral issues have on less experienced teachers. **Standardized development-Monitoring methods:** The study emphasizes the necessity of consistent frameworks and methods for efficiently tracking student development. By encouraging uniformity among schools, standardized systems can help teachers carry out interventions more effectively and fairly.

Impacting Future Policies: These results may help guide modifications to laws intended to enhance inclusive educational frameworks. To guarantee that all teachers are prepared to manage a variety of classroom demands from the beginning of their careers, for example, specialist training might be incorporated into teacher certification programs. In a similar vein, providing resources and training for inclusive education explicitly would fill important gaps found in this study. A comprehensive approach to student development can also be promoted by supporting cooperative behaviors, such as frequent communication with parents and joint planning between general and special educators. **Impacting Future Policies:** These results may help guide modifications to laws intended to enhance inclusive educational frameworks.

The results highlight how critical it is to eliminate structural gaps in collaborative processes, resource allocation, and professional growth. By closing these disparities, educators and legislators can establish more effective and equitable learning environments, guaranteeing that students with speech delays and cognitive impairments receive the assistance they require to succeed.

Apart from its practical consequences, this study provides opportunities for further research, such as investigating the efficiency of standardized progress-monitoring instruments and the long-term effects of parent-inclusive professional development. All students will eventually gain from these initiatives, which are essential for developing an inclusive, empathetic, and equitable educational atmosphere.

5.3 Recommendations

In light of the results, the following suggestions are put forth:

For Teachers and Schools:

- i) Create thorough professional development programs that emphasize speech and cognitive impairments while making sure the material is applicable and useful.
- ii) To harmonize home and school efforts, including parent engagement sessions in professional development programs.
- iii) Give new teachers the chance to get mentorship so they can gain more self-assurance and competence in leading inclusive classrooms.
- iv) Set aside funds for sensory and visual aids to complement customized instruction.

For those in charge of policy:

- i) To guarantee uniformity among schools, establish common rules for professional development programs.
- ii) Invest in the creation of resources, such as monitoring equipment and assistive technology.
- iii) Require follow-up procedures to assess the effectiveness and implementation of PD initiatives.

For Upcoming Studies:

- i) Examine how professional development programs affect student outcomes and teacher effectiveness over the long run in inclusive classrooms.
- ii) Examine how peer assistance can help students with speech difficulties overcome communication obstacles.

- iii) Analyze the unique difficulties new teachers encounter in inclusive environments and create specialized treatments.
- iv) Stakeholders can endeavor to create a more welcoming and encouraging learning environment for all children, including those with special needs, by implementing these suggestions.

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Appendices

Class observation checklist:

■ · Social Communication:

- ❖ How do the special needs students interact with their teammates during group tasks?
- ❖ Do you see any pattern on how they communicate?
- ❖ How do the special needs students take turns?
- ❖ How do they share their resources?

■ Proficiency in Communication:

- ❖ How language has been used effectively as communication via with teachers and peers?
- ❖ How do the other gestures use (such as: non-verbal cues, facial expressions) for communication?

■ Participation in Education:

- ❖ How actively are they engaged in class activities?
- ❖ What strategies are used to keep them focused?
- ❖ Do they show enthusiasm to complete their task in the class?

■ Relationships with peers and inclusion:

- ❖ How do the special needs students do in classroom activities? Do they seek help when needed?

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- ❖ What is the rapport between the students and special needs students?

■ · Comprehensive Classroom Setting:

- ❖ Do the teachers create a supportive environment for all the students?
- ❖ How do the teachers follow their lesson plans?
- ❖ What is the effect of the lesson plans on the students' participation and class dynamic?

Appendix A. Consent Letter

Sample Consent Letter

Dear Concern,

I am a student at Brac University. My thesis, which is centered on “Enhancing Teachers' Development for Special Needs Students”, is still in progress. I respectfully ask for your permission to carry out the following tasks at your school as part of my research:

Interviews with chosen educators to learn about their methods for encouraging student participation and learning. Teachers participate in focus group discussions (FGDs) to examine

opinions and thoughts on the study issue. To learn more about how teachers and students interact and how intervention techniques are used during instruction, observe classes.

I guarantee that all participants' identities—teachers, and students, will be kept completely private by using fake names in all reports and presentations. All information gathered will be safely kept and used only for educational reasons. The study is entirely voluntary, and participants are free to leave at any moment without facing any repercussions.

The following will be part of the research activities:
Four one- to one-and-a-half-hour interviews with the participating instructors were conducted.
Focus group talks that lasted roughly an hour. Observations of classrooms made four times throughout a month twice some classes.

I think this study will provide insightful information about how to improve student involvement and teaching methods.

You can reach me at rifatennoor25@gmail.com or my academic supervisor Hridita Islam, at hridita.islam@bracu.ac.bd if you need more information or have any questions.

I appreciate you taking a look at my request. I sincerely appreciate your help and I am excited about the prospect of working with your school to carry out this research.

Thank you

Rifat E Noor

Appendix B. Interview Guide

Interview session of Special Need teachers: (Transcribed in Intelligent Verbatim Transcription)

Question 1: For how long have you been working with special needs students?

Question 2: Why do you choose to help and work with special needs students?

Question 3: Can you share your experience with the special needs students?

Question 4: What challenges have you faced in dealing with special needs students?

Question 5: What resources do you find are essential to work with special needs students?

Question 6: How do you implement your lesson on special needs students?

Question 7: Can you explain to me what a flexible lesson means?

Question 8: How do you keep track of the progress of your students?

Interview session of Regular teachers:

Question 1: How many years of teaching experience do you have?

Question 2: Do you have special needs student/s in your class?

Question 3: How do you feel when these students are in your class?

Question 4: What challenges have you faced in dealing with special needs students?

Question 5: Does your class get affected by having special needs students in your classes?

Question 6: Is there anything else you want to share about your work experience?

Question 7: Do you have any suggestion how to make sure these students are getting the best benefit?