

School-related Factors Associated with the Academic Achievement of Students with Special Educational Needs (SEN): A Literature Review

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Abstract: This study reviews the previous literature regarding school-related factors associated with the academic achievement of students with special educational needs (SEN), focusing on four main aspects: types of educational setting, classroom-related factors, teacher-related factors, and peer-related factors. Based on this review, this study identifies a research gap that needs further investigation in the existing literature: few studies distinguish between specific categories of special educational needs (SEN) and explore different types of SEN, when examining the associations between school-related factors and the academic achievement of students with SEN.

Keywords: Special Educational Needs (SEN), School-related Factors, Academic Achievement.

1. Introduction

This study focuses on school-related factors that are associated with the academic achievement of students with special educational needs (SEN). This study aims to review the existing literature regarding this topic in order to identify the limitations in previous research and highlight the research gaps.

Department for Education [6] shows that the number of students with special educational needs (SEN) has increased in recent years. Research indicates that the academic outcomes of students with special educational needs (SEN) are lower than their typically developing peers [5]. Furthermore, students with special educational needs (SEN) tend to make slower and less academic progress throughout their schooling than their typically developing peers [15]. These findings indicate that it is necessary to provide effective support for the academic learning of students with special educational needs (SEN) in order to improve their academic achievement.

This study includes seven sections: introduction, types of educational setting, classroom-related factors, teacher-related factors, peer-related factors, research gap, and conclusion. First, the introduction section provides an overview of this study, illustrating the aim of this study, the background of academic learning situation among students with special educational needs (SEN), and the structure of this article. Second, this study divides the school-related factors associated with the academic achievement of students with special educational needs (SEN) into four main aspects: types of educational setting, classroom-related factors, teacher-related factors, and peer-related factors. Each school-related factor is addressed in a separate section. Each section provides a detailed review of the existing literature on one of these factors. Third, based on the literature reviewed in the preceding sections, this study identifies the limitations in the existing literature and highlights the research gap in Section 6. Fourth, the final section is the conclusion. The conclusion section provides a brief summary of this study and highlights its theoretical and practical significance.

2. Types of Educational Settings

A number of studies have investigated the relationship between different types of educational settings- inclusive and segregated educational settings- and SEN students' academic achievement. "Inclusive education is an approach that looks into how to transform education system and other learning environments in order to respond to the diversity of learners" [20] (p.15). However, the findings remain inconsistent. Dalgaard, Bondebjerg, Viinholt and Filges [3] find no clear evidence that inclusive educational settings have a significantly effect on SEN students' academic achievement. In contrast, Ruijs and Peetsma [17] argue that inclusive educational settings have a neutral to positive impact compared with segregated settings. More recently, Holzer and Moser Opitz [10] further support this perspective, reporting that SEN students achieve higher academic outcomes in inclusive educational settings.

These inconsistent findings may be attributed to differences in research design, sample characteristics, and specific SEN categories across studies, suggesting that the impact of educational setting is likely context-dependent rather than uniform. Specific category of SEN may be an important contextual factor that influencing these outcomes. However, few studies have distinguished between specific categories of special educational needs (SEN) and explore different types of SEN when investigating the associations between different types of educational settings and the academic achievement of students with SEN.

3. Classroom-related Factors

Different studies have examined various classroom-related factors that associated with SEN students' academic achievement. Russ, Chiang, Rylance and Bongers [18] suggest that smaller class sizes are associated with better math and reading achievement among SEN students. While their study focusses specifically on academic achievement in mathematics and reading, Bondebjerg, Dalgaard, Filges and Viinholt [1] extend the scope to overall academic achievement. They report that although SEN students tend to

prefer smaller class sizes, there is a lack of evidence to conclude that smaller class sizes improve their academic outcomes [1].

In addition to class size, other classroom-related factors have been investigated. Mitchell and Sutherland [13] believe that effective classroom management is positively associated with SEN students' academic outcomes. While Mitchell and Sutherland [13] focus on classroom management, Hunter and Meyers [11] pay attention to classroom climate. Research shows that SEN students tend to achieve better academic achievement in classroom with a positive climate [11].

Numerous studies have investigated the association between different classroom-related factors and academic achievement of students with special educational needs (SEN), often treating SEN as a homogeneous category. However, few studies have distinguished between specific categories of special educational needs (SEN) and explore different types of SEN when investigating the associations between classroom-related factors and the academic achievement of students with SEN.

4. Teacher-related Factors

Previous studies have explored teacher-related factors in relation to SEN students' academic achievement from diverse perspectives. Research indicates that students with disabilities whose teachers have received relevant training tend to achieve higher academic outcomes than those taught by untrained teachers [8]. While Feng and Sass [8] highlight the importance of teacher training, Theobald, Goldhaber, Holden and Stein [19] further emphasize the significance of high-quality training and the consistency between training and teaching practices. Research shows that high-quality teacher training, as well as alignment between teacher training and teacher practices enhance the learning outcomes of students with disabilities [19]. Both Feng and Sass [8] and Theobald, Goldhaber, Holden and Stein [19] focus on students with disabilities, which represent only one category within the broader SEN population, rather than other SEN categories.

In contrast to studies focusing on teacher training, García Terceño and Greca [9] and Damyanov [4] pay attention to teacher instruction. García Terceño and Greca [9] believe that teacher instruction is associated with improved SEN students' academic achievement, whereas Damyanov [4] further emphasizes the importance of appropriateness of teacher instruction. Damyanov [4] argues that only appropriate teacher instruction has a positive impact on academic outcomes of SEN students.

In addition to teacher training and teacher instruction, teacher expectation and attitude have also been explored. Research suggests that teachers' expectation and attitude are positively associated with SEN students' academic achievement [2]. This may be explained by the fact that teachers' higher expectation and more positive attitude influence their concrete teaching behaviors, which may subsequently be related to improved academic performance and outcomes among SEN students.

Existing studies have explored teacher-related factors that associated with SEN students' academic achievement from various perspectives, typically focusing either on a single category of SEN or on SEN as a whole. However, few studies have distinguished between specific categories of special educational needs (SEN) and explore different types of SEN when investigating the associations between teacher-related factors and the academic achievement of students with SEN.

5. Peer-related Factors

A number of studies have investigated the relationship between various peer-related factors and academic achievement of students with SEN. Research shows that the more meaningful peer interactions SEN students have, the more their academic achievement tends to improve [16]. While Pinto, Baines and Bakopoulou [16] focus on peer interactions, Okilwa and Shelby [14] put emphasis on peer tutoring, McMaster and Fuchs [12] pay attention to cooperative learning. Okilwa and Shelby [14] believe that peer tutoring is associated with improved academic achievement among students with disabilities. McMaster and Fuchs [12] suggest that cooperative learning have a positive impact on academic achievement among students with learning disabilities. Both students with disabilities and students with learning disabilities are distinct subcategories within the broader SEN population, rather than representing the SEN as a whole.

Different studies have examined association between peer-related factors and SEN students' academic achievement from diverse aspect, including peer interaction, peer tutoring and cooperative learning. These studies typically focus on either on a single category of SEN or on SEN as a whole. However, few studies have distinguished between specific categories of special educational needs (SEN) and explore different types of SEN when investigating the associations between peer-related factors and the academic achievement of students with SEN.

6. Research Gap

It is significant to distinguish between specific categories of special educational needs (SEN) and to explore different types of SEN, rather than focusing on a single category or treating SEN as a homogeneous group when investigating the relationships between school-related factors and the academic achievement of students with SEN. This allows for a more precise understanding of different types of SEN students' needs, which in turn enables more effective and targeted support for different groups of learners. Special educational needs (SEN) refer to "a child or young person has SEN if they have a learning difficulty or disability which calls for special educational provision to be made for him or her" [7] (p.15). Special educational needs can be divided into multiple categories, each requiring distinct forms of support due to their different characteristics and needs. According to Department for Education and Department of Health [7] (p.85), SEN includes four broad areas of need: "communication and interaction", "cognition and learning", "social, emotional and mental health", and "sensory and/or physical needs". Schools should provide appropriate interventions based on the individual needs of students with different types of special educational needs [7]. Providing appropriate and individualized support can help enhance the academic learning of students with different types of special educational needs, as it meets their distinct needs, which in turn helps address their specific leaning difficulties and reducing barriers to participation in learning. Research indicates that individualized support tailored to different categories of SEN students is associated with their learning progress [21].

Based on the previous literature, studies have examined the associations between school-related factors and academic achievement among students with special educational needs

from various perspectives, including types of educational settings, classroom-related factors, teacher-related factors, and peer-related factors [1, 3, 16, 19]. However, these studies have either focus on a single category or treating SEN as a homogeneous group, rather than distinguish between specific categories of special educational needs (SEN) and to explore different types of SEN when investigating the relationships between school-related factors and the academic achievement of students with SEN. This highlights a research gap that needs further investigation in the existing literature: few studies distinguish between specific categories of special educational needs (SEN) and explore different types of SEN, when examining the associations between school-related factors and the academic achievement of students with SEN.

7. Conclusion

This study identifies a research gap regarding school-related factors that are associated with the academic achievement of students with special educational needs (SEN) by reviewing the previous literature, with a particular focus on four main aspects: types of educational settings, classroom-related factors, teacher-related factors, and peer-related factors. Based on the existing literature, a large number of studies have either focused on a single category or treated SEN as a homogeneous group, when investigating the relationships between school-related factors and the academic achievement of students with SEN. However, limited attention has been paid on distinguishing between specific categories of special educational needs (SEN) and exploring different types of SEN, when investigating the relationships between school-related factors and the academic achievement of students with SEN. This highlights a research gap in the existing literature.

The theoretical significance of this study is as follows. First, this study puts emphasis on the specific classification of different SEN categories, highlighting that distinct categories of special educational needs require different support. This contributes to the development of research on special educational needs by shifting the focus from the holistic perspective to a differentiated perspective. This promotes a more nuanced and precise understanding of special educational needs, therefore enriches the theoretical framework within the field of special education. Second, this study suggests that future research should further explore whether there are differences in school-related factors that are associated with the academic achievement when students with special educational needs (SEN) are analyzed as distinct categories, rather than being treated as a homogenous group or focusing on only one type of SEN. This helps gain a deeper insight into school-related factors associated with the academic achievement of students with special educational needs (SEN), thereby contributing to the development of a more comprehensive theoretical model. Third, this study emphasize that distinct forms of support needed to be provided to different types of special educational needs (SEN) students, highlighting the importance of inclusive education, which in turn contributes to the development of the educational principle “individualized support”. Inclusive education provides an opportunity for the diverse needs of SEN students to be met equally within the learning environment. Fourth, this study identifies a research gap by reviewing the existing literature systematically. This helps clarify potential directions for future research, as well as provides a theoretical foundation and research framework for

future research.

The practical significance of this study is as follows. First, this study promotes further investigation into differences in academic achievement across students with different types of special educational needs (SEN) in relation to various school settings, thereby enhancing understanding of how educational settings may be associated with academic outcomes for different SEN subgroups. This, in turn, contributes to schools facilitating the development of appropriate policies for students with special educational needs (SEN). Second, this study highlights the need for further investigation into the relationship between classroom-related factors, teacher-related factor and the academic achievement of students with different types of special educational needs (SEN), thereby providing deeper insights into how these factors may influence academic outcomes across different SEN subgroups. This contributes to teachers adopting targeted strategies for instructional support and creating a more positive classroom environment, thereby enhancing the effectiveness of educational interventions. Third, this study encourages further research on school-related factors associated with academic achievement of students with different categories of special educational needs (SEN), thereby advancing understanding of how to support the learning of different SEN subgroups from various aspects of the school environment. This may contribute to establishing more supportive educational environments and practices that promote academic learning and achievement of students with different types of special educational needs (SEN).

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