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Pre-service teachers' pedagogical knowledge and attitudes towards slow learner students

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ABSTRACT

The pedagogical knowledge and acceptance of pre-service teachers towards slow learner students contribute to the implementation of inclusive education in regular schools. This study investigates the level of knowledge and acceptance pre-service teachers have in applying effective teaching strategies for students with slower learning needs. The participants of this study were 187 students at a private university in. This research is ex-post facto research. The research instrument used was a pedagogical knowledge test and attitude questionnaire. The data obtained were analyzed using correlation analysis, and t-test, to determine the relationship between pedagogical knowledge and attitudes towards slow learner students. The finding reveals that there was a positive relationship between pedagogical knowledge and attitudes towards slow learners, but the correlation between the two is not strong, in the medium category. Pre-service teachers gain pedagogical knowledge from inclusive education courses. Pre-service teachers also form a positive attitude towards slow learner students because of their experience interacting with slow learner students. A strong correlation between the variables in this study suggests that pre-service teachers' pedagogical knowledge has a limited impact on their attitudes toward slow learners. This highlights the need for improved training in effective teaching strategies for slow learners.

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1. INTRODUCTION

Universal access to education is a fundamental human right, enshrined in international agreements like the 1989 convention on the rights of the child. This right extends to children with special needs, yet segregated education in specialized schools in Indonesia creates barriers to social interaction, potentially hindering their inclusion in society. In response to the need for social inclusion, the Indonesian government has embraced an inclusive education system, offering children with special needs the opportunity to attend regular schools alongside their peers [1]. This initiative aims to foster community acceptance and understanding of children with diverse abilities.

According to UNESCO [2], addresses the varied needs of all learners by actively involving them in learning, cultural experiences, and wider society. It aims to minimize exclusion both within and outside the educational system. This approach builds upon the existing concept of integrated education. To ensure every child thrives, inclusive education personalizes the learning experience. This means adapting the curriculum, facilities, teachers, teaching methods, and even assessment systems to individual needs [3]. In pursuit of universal education, advancements in educational technology have revealed promising evidence. Children with diverse physical and intellectual needs can now access regular schools if teachers, resources, curriculum, and learning methods are tailored to their individual requirements. This ensures everyone receives personalized education that caters to their specific abilities and maximizes their potential [4]. Inclusive education goes beyond just providing services; it's a core belief and an active approach to create welcoming and nurturing spaces in both society and education. In such environments, each child receives tailored learning based on their unique needs. Through professional assessments, adapted curriculum and learning, a fair assessment system, as well as adapted media and infrastructure, every child will be able to attend a proper and quality education in an inclusive education setting [5].

Regular schools often include children with learning difficulties, who may face challenges that are not immediately apparent [6]. Compared to students with intellectual disabilities, children categorized as "slow learners" typically score higher on intelligence tests but still fall below the average for their age group. They are sometimes referred to as "borderline" students [7]. The term "borderline" often refers to abilities or performance falling just below the average range. In the context of learning, being "borderline" might suggest potential for success in practical fields, where different learning styles and strengths can be valuable. The good potential is more appropriate to the field of practical learning, not to the field of high-level academic subjects [8]. Children identified as slow learners may experience challenges with attention, memory, or abstract reasoning compared to their peers. However, individual differences and strengths are highly varied [9]. The characteristics of slow learning are the special characteristics of slow learners, especially slow learners for fields that require symbols and abstraction power. For this reason, slow learners are often more successful in non-academic fields than school subjects. Research suggests that slow learners benefit from practical, hands-on learning that engages multiple senses [10]. This approach leverages concrete experiences to mediate abstract concepts and cater to their unique learning needs. In general elementary school settings, providing multiple presentations and varied learning methods can be crucial for supporting their success.

In the city of Yogyakarta, one of the first cities to implement inclusive education in Indonesia, there are 64.02% slow learner students from six elementary schools who are pilot projects for inclusive education providers. The rising number of students with slow learners in regular schools necessitates increased teacher competence [11]. Inclusive education demands diverse skills, as teachers must cater to a wider range of learning styles and needs. Mastering inclusive pedagogical approaches is crucial for successful implementation [12].

The challenge of pedagogical competence in learning in inclusive classes is to develop learning that accommodates students with special needs. This competency is a skill to make it easier for slow learners to learn abstract concepts through the creation of various codes and behavioural adaptation strategies. These skills can be used or transferred to accommodate learning skills to other types of students with special needs [13]. Many teachers in regular schools feel unprepared to teach students with diverse needs, often due to limited training in their educational background [14]. This can lead to reluctance, as they perceive themselves lacking the necessary skills. Imposing policies requiring them to accept these students without addressing their training needs can negatively impact their acceptance and treatment of them, ultimately affecting the inclusivity of the classroom environment. In addition, the attitude of the teacher is also very influential in the success of inclusive education [15].

The importance of pedagogical knowledge and teacher attitudes in the implementation of inclusive education must be prepared since the teacher is still a student. Effective preparation for primary school teachers should encompass not only teaching regular students but also catering to diverse needs of students with special needs. Currently, several universities have provided inclusive education curricula for pre-service elementary school teachers. One of them is a private university in Yogyakarta. The purpose of giving this inclusive education course is so that pre-service teachers have inclusive pedagogical knowledge that has an impact on the attitude of acceptance of pre-service teachers to students with special needs. This study investigated the impact of such training on pre-service teachers' pedagogical knowledge and attitudes towards "slow learners" within the context of elementary school inclusion.

2. METHOD

This research investigates the impact of an inclusive education course on students using a quantitative, ex-post facto design. In this type of study, the researcher analyzes existing data without

manipulating the independent variables. The participants were students at Ahmad Dahlan University who had previously taken the inclusive education course. The population of this study was 350 students with the number of samples determined using the Slovin formula with an error of 5%, and the random sampling technique obtained 187 respondents.

The data collection procedure was carried out online using a google form. Data were collected during April-May 2023. The instruments used for data collection were pedagogical knowledge tests and attitude questionnaires towards slow learner students. Both instruments were developed based on theory and tested on 30 students. The results of the trial data are used for the validity and reliability of the instrument. To assess the validity of the instrument, a correlation test was conducted using SPSS 21. The results, with a significance level of 5%, are presented in Table 1.

Table 1. Data validity test result

Test/questionnaire	Number of questions	Invalid	Valid and used
Pedagogical knowledge	20	3	18
Attitudes towards slow learner students	20	5	15

Out of the 21 items on the pedagogical knowledge instrument, 18 were found to be valid, while 3 were not. Similarly, out of the 20 items on the attitude towards slow learner students instrument, 15 were found to be valid, while 5 were not. In other words, most of the items in the research instrument were found to be valid and can be used to measure what they are intended to measure. However, some items need to be removed as they did not show valid results. Following the assessment of validity, the reliability of the pedagogical knowledge instrument was investigated. Table 2 presents the resulting data. The Cronbach's Alpha coefficient for the pedagogical knowledge instrument exceeded 0.40, indicating sufficient reliability. The reliability results for the attitudes towards slow learner students instrument are presented in Table 3.

Table 2. Pedagogical knowledge reliability test result

Test/questionnaire	Cronbach's Alpha
Pedagogical knowledge	0.667

Table 3. Attitude's reliability test result

Test/questionnaire	Cronbach's Alpha
Attitudes towards slow learner students	0.721

The instrument measuring attitudes towards slow learner students demonstrated sufficient reliability, with Cronbach's Alpha exceeding 0.40. Having established both validity and reliability, the instrument was then used to collect data from 187 participants. Following data collection, descriptive statistics were employed to analyze the respondents' background characteristics. Subsequently, the average scores for pedagogical knowledge and attitudes were compared to a normal distribution to categorize the results. Table 4 presents the established optimal assessment categories for both aspects.

Table 4. Score range pedagogical knowledge and attitude

Interval	Pedagogical knowledge	Attitude	Description
MI –3 SDI ≤ X ≤ MI -1.5 SDI	0 ≤ X ≤ 25	0 ≤ X ≤ 25	Very low
MI -1.5 SDI < X ≤ MI -0.5 SDI	25 < X ≤ 41.67	25 < X ≤ 41.67	Low
MI -0.5 SDI < X ≤ MI +0.5 SDI	41.67 < X ≤ 58.33	41.67 < X ≤ 58.33	Medium
MI +0.5 SDI < X ≤ M +1.5 SDI	58.33 < X ≤ 75	58.33 <X ≤ 75	High
MI +1.5 SDI < X ≤ M +3 SDI	75 < X ≤ 100	75 < X ≤ 100	Very high

Correlation analysis is used to see the relationship between pedagogical knowledge and attitudes towards slow learner students. T-test analysis was conducted to compare the pedagogy knowledge and student attitudes towards slow learner students. Prior to conducting correlation and t-tests, the normality and linearity of the data were assessed using SPSS 21. The results of these assumption tests are presented in Table 5.

Table 5. Normality and linearity test result

Test	Asymp. Sig. (2-tailed)
Normality test	0.211
Linearity test	0.003

Both the normality and linearity tests confirm that the data used in the analysis meet the necessary assumptions for further statistical procedures. The one-sample Kolmogorov-Smirnov test for normality, presented in Table 3, yielded a value of 0.211, indicating that the data meets the assumption of normality. Additionally, the linearity test using the test of linearity method resulted in a value of 0.003, confirming that the assumption of linearity is also met.

3. RESULTS AND DISCUSSION

The number of participants is 187 pre-service teachers. Participants consisted of 32 men and 155 women. The results of descriptive statistics from data on pedagogical knowledge and attitudes towards slow learner students are presented in Table 6.

Table 6. Descriptive Statistics of pedagogy knowledge and attitudes based on gender

	Gender	Mean	Standard deviation
Pedagogical knowledge	Female	75.04	4.72
	Male	74.54	4.34
Attitudes towards slow learner students	Female	49.04	4.30
	Male	47.78	4.52

Pre-service teachers scored an average of 74.79 on the pedagogical knowledge test (maximum of 100), indicating high ability according to Table 4. This suggests general knowledge of slow learner characteristics and ability to identify students needing assessment, as well as awareness of available services. Figure 1 further details the distribution of knowledge levels among pre-service teachers. Figure 1 shows that 25% of pre-service teachers, or 43 people, already have very high pedagogical knowledge. 52% of pre-service teachers, or 97 people, already have high pedagogical knowledge, while 23% require further improvement. Table 7 also includes the averages and classifications for each component of pedagogical knowledge.

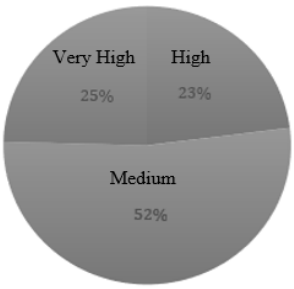

Figure 1. Distribution of pedagogical knowledge categories

Table 7. The mean score pedagogical knowledge test

Indicator	Mean
Knowledge of inclusive education	77.65
Knowledge of learning theory for slow learner students	75.4
Knowledge of media and teaching aids in learning	73.4
Knowledge of instruments to assess learning outcomes	72.5
Knowledge to improve the quality of learning	75.01

Table 7 highlights strong performance in areas related to inclusive education knowledge and slow learners, suggesting pre-service teachers understand Indonesian implementation of inclusive education and can identify slow learner characteristics. Their familiarity with slow learner class models and services underscores their preparedness. Additionally, high averages in learning theories (Piaget, Vygotsky, Montessori), learning approaches (e.g., Montessori), and media/aids demonstrate a solid foundation in various educational methods. Notably, pre-service teachers recognize the importance of concrete learning tools for slow learners in mathematics.

The average attitude towards slow learner students is 48.41 from a range of values from 18 to 60. Figure 2 shows the percentage of pre-service teacher attitudes that are in the very high, high, and medium

categories. Figure 2 shows that 20% of pre-service teachers, or 38 people, have a very positive attitude toward slow learners. They recognize that students who are slow learners have the right to an education in regular schools. 25% of pre-service teachers still need to be educated about the educational rights of slow learners.

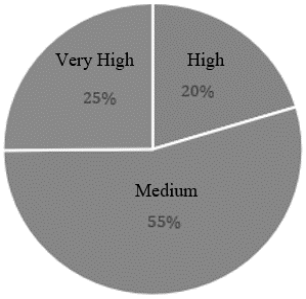

Figure 2. Distribution of attitudes categories

Table 8 is the distribution of the average score of the pre-service teacher's attitude towards slow learner students. Table 8 shows that pre-service teachers understand the importance of mastering knowledge about slow learners. Afective aspect show that slow learner students are not denied the opportunity to study in regular schools by pre-service teachers. Conative aspect show that pre-service teachers are also aware of continuing to learn about inclusive education through various seminars and trainings.

Table 8. The mean score attitudes

Aspect	Mean
Cognitive	49.23
Afective	45.23
Conactive	47.78

In general, male, and female teacher candidates have an attitude that is quite accepting of slow learner students studying in regular schools. They also realize that slow learners are entitled to services like regular students. This average value indicates that pre-service teachers have sufficient pedagogical knowledge and attitudes towards slow learner students, but if we look at individual scores, there are still some pre-service teachers who have low pedagogical knowledge and do not accept slow learner students studying in regular classes. Some pre-service teachers still think that slow learner students should attend special schools. Therefore, pre-service teachers still need additional knowledge or training about slow learner students. Supporting the position of Blândul and Bradea [16], this study highlights the necessity of training pre-service regular school teachers in inclusive pedagogy to achieve proficiency. Pre-service training programs that focus on inclusive learning aim to equip future regular school teachers with the necessary skills and knowledge to effectively implement inclusive education practices in their classrooms [17].

Slow learner students are to follow learning in public schools because they are still possible to learn by using the curriculum imposed in public schools. Implementing curriculum for slow learners in public schools necessitates adjustments in multiple facets of the learning program. Teachers, playing a crucial role in these adaptations, require specific pedagogical knowledge to effectively teach slow learners within regular classrooms [18]. This pedagogical knowledge encompasses understanding student characteristics, diverse learning strategies, instructional materials and aids, various assessment methods, and the use of reflection to enhance learning quality [19]. Mastering this knowledge is essential for teachers to accurately identify and address the unique learning needs of slow learners [20].

Effective implementation of inclusive education hinges on teachers mastering specific pedagogical competencies [21]. hese competencies, termed "inclusive pedagogical competence," equip teachers to deliver learning experiences tailored to diverse student needs, particularly those with disabilities [22]. Key aspects include recognizing suitable instructional strategies, embracing and preparing to teach students with special needs, actively seeking professional development in this area, and fostering collaboration between regular and special education teachers.

Besides teacher pedagogical competence, teacher attitudes towards slow learner students also play a role in the success of inclusive education. The teacher's perspective on inclusion acts as a window into how

readily they embrace their responsibility towards developing all students, including those with special needs, and shapes the level of acceptance these students experience within the school community [23]. Positive teacher attitudes are crucial for children with special needs to thrive in inclusive classrooms. Such attitudes create more learning opportunities with peers and maximize educational benefits [24]. Conversely, negative teacher attitudes reflect low expectations and hinder inclusion [25].

From Table 4, the average pedagogical knowledge scores and attitudes of male and female teacher candidates are not too different. The results of the independent sample t-test calculation show that there is no difference in pedagogical knowledge and attitudes towards slow learner students between male and female teacher candidates. The full results are presented in Table 9.

Table 9. Analysis of differences between pedagogical knowledge and attitudes

		Levene's test for equality of variances Sig.	T-test for equality of means Sig.(2-tailed)
Pedagogical knowledge	Equal variances assumed	0.572	0.367
	Equal variances not assumed		0.412
	N		
Attitudes towards slow learner students	Equal variances assumed	0.972	0.942
	Equal variances not assumed		0.942
	N		

The results of inferential analysis using correlation analysis to see the relationship between pedagogical knowledge and attitudes towards slow learner students are shown in Table 10. Based on Table 10, a significance value of 0.00 is obtained, so it can be concluded that pedagogical knowledge has a relationship with attitudes towards slow learner students, because the significance value of 0.00 is smaller than 0.05. The Pearson correlation value is positive 0.403. This positive value indicates a positive relationship. The correlation value of 0.403 shows that the pedagogical knowledge of attitudes towards slow learner students is moderately correlated. This means that pre-service teachers have sufficient knowledge of pedagogy but must be improved.

Table 10. Result of correlation analysis

		Pedagogical knowledge	Attitudes towards slow learner students
Pedagogical knowledge	Pearson correlation	1	0.403**
	Sig.(2-tailed)		0.000
	N	187	187
Attitudes towards slow learner students	Pearson correlation	0.403**	1
	Sig.(2-tailed)	0.000	
	N	187	187

**Correlation is significant at the 0.01 level (2-tailed)

The results of this study which show that there is a relationship between pedagogical knowledge and teacher attitudes are in line with the theory of Boer *et al.* [26] describe that there are three aspects of teacher attitudes towards inclusive education described in three aspects, namely cognitive, affective, and behavioral. The cognitive aspect expresses the teacher's knowledge of students with special needs. The affective aspect is the emotion felt by the teacher towards students with special needs. The behavior aspect is the action or attention that the teacher takes. Positive scores across these components suggest pre-service teachers possess the necessary knowledge, positive feelings, and a willingness to take action in support of such students. The survey results reveal that most pre-service teachers believe students with learning difficulties deserve placement in regular classrooms and interaction with their peers, indicating a positive overall attitude.

This study confirms a positive attitude towards slow learner students among pre-service teachers. Prior research suggests that frequent contact with students with special needs fosters positive attitudes in teachers [27]. This aligns with our findings, suggesting that pre-service teachers' positive attitudes likely stem from their observation assignments in regular schools, where they interacted with slow learner students.

4. CONCLUSION

This study shows that there is a positive relationship between pedagogical knowledge and teacher candidates' attitudes towards slow learner students. Pre-service teachers have sufficient pedagogical knowledge and positive attitudes towards slow learner students. However, the knowledge of the pre-service teacher must be increased to have a more positive attitude towards slow learner students.

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REFERENCES

[1] Ministry of National Education of the Republic of Indonesia, "Permendiknas 70 Year 2009 on Inclusive Education," 2009.
[2] UNESCO, *Policy guidelines on inclusion in education in all*. Paris: UNESCO, 2009.
[3] E. Setiawan and N. Cipta Apsari, "Inclusive education: efforts to achieve equality and non-discrimination in education for children with disabilities (ADD), *[in Indonesian: pendidikan inklusif: upaya mewujudkan kesetaraan dan non diskriminatif di bidang pendidikan bagi anak dengan disabilitas (ADD)]*," *Sosio Informa*, vol. 5, no. 3, pp. 188–198, 2019, doi: 10.33007/inf.v5i3.1776.
[4] M. P. B. Francisco, M. Hartman, and Y. Wang, "Inclusion and special education," *Education Sciences*, vol. 10, no. 9, 2020, doi: 10.3390/educsci10090238.
[5] M. Yusuf, S. Choiri, and M. Supratiwi, "Evaluation of inclusive education policies at the level of primary and secondary education in Indonesia," *Jurnal Penelitian dan Pengembangan Pendidikan Luar Biasa*, vol. 4, no. 2, pp. 147–154, 2017.
[6] N. A. Putri, I. D. K. Putri, A. Anggraini, and V. N. Romandhoni, "Educators' efforts in identifying children with special needs in elementary schools providing inclusive education (in Indonesian: *Upaya pendidik dalam melakukan identifikasi anak berkebutuhan khusus di sekolah dasar penyelenggara pendidikan inklusi*)," *Jurnal Pendidikan Inklusi Citra Bakti*, vol. 1, no. 1, pp. 122–126, Aug. 2023, doi: 10.38048/jpicb.v1i1.2203.
[7] M. Peltopuro, T. Ahonen, J. Kaartinen, H. Seppälä, and V. Närhi, "Borderline intellectual functioning: A systematic literature review," *Intellectual and Developmental Disabilities*, vol. 52, no. 6, pp. 419–430, 2014, doi: 10.1352/1934-9556-52.6.419.
[8] M. Oliver and C. Barnes, "Disability studies, disabled people and the struggle for inclusion," *British Journal of Sociology of Education*, vol. 31, no. 5, pp. 547–560, 2010, doi: 10.1080/01425692.2010.500088.
[9] P. Albert, "Digital games - A magical learning tool for Slow learners," *International Journal of Research -Granthaalayah*, vol. 6, no. 5, pp. 407–412, 2018, doi: 10.29121/granthaalayah.v6.i5.2018.1468.
[10] S. Saswita, C. Octavia, A. P. Hermandi, and O. Andriani, "Classification of children with special needs based on mental, emotional and academic (in Indonesian: *Penggolongan anak berkebutuhan khusus berdasarkan mental emosional dan akademik*)," *Morfologi: Jurnal Ilmu Pendidikan, Bahasa, Sastra dan Budaya*, vol. 2, no. 1, pp. 105–112, Jan. 2024, doi: 10.61132/morfologi.v2i1.295.
[11] L. V. Kozibroda, O. P. Kruhlyk, L. S. Zhuravlova, S. V. Chupakhina, and O. M. Verzhihovska, "Practice and innovations of inclusive education at school," *International Journal of Higher Education*, vol. 9, no. 7, pp. 176–186, Aug. 2020, doi: 10.5430/ijhe.v9n7p176.
[12] N. Pantić and L. Florian, "Developing teachers as agents of inclusion and social justice," *Education Inquiry*, vol. 6, no. 3, Jan. 2015, doi: 10.3402/edui.v6.27311.
[13] M. Mumpuniarti, R. R. Handoyo, D. T. Pinrupitanza, and D. Barotuttaqiyah, "Teacher's pedagogy competence and challenges in implementing inclusive learning in slow learner," *Cakrawala Pendidikan*, vol. 39, no. 1, pp. 217–229, 2020, doi: 10.21831/cp.v39i1.28807.
[14] Y. Putri and S. R. Hamdan, "Attitudes and competencies of teachers in inclusive education in primary schools (in Indonesian: *Sikap dan kompetensi guru pada pendidikan inklusi di sekolah dasar*)," *JPI (Jurnal Pendidikan Inklusi)*, vol. 4, no. 2, p. 138, Jun. 2021, doi: 10.26740/inklusi.v4n2.p138-152.
[15] C. Forlin, C. Earle, T. Loreman, and U. Sharma, "The sentiments, attitudes, and concerns about inclusive education revised (SACIE-R) scale for measuring pre-service teachers' perceptions about inclusion," *Exceptionality Education International*, vol. 21, no. 3, pp. 50–65, Sep. 2011, doi: 10.5206/eei.v21i3.7682.
[16] V. C. Blândul and A. Bradea, "Developing psychopedagogical and methodical competences in special/inclusive education teachers," *Problems of Education in the 21st Century*, vol. 75, no. 4, pp. 335–344, Aug. 2017, doi: 10.33225/pec/17.75.335.
[17] C. Sleeter, "An invitation to support diverse students through teacher education," *Journal of Teacher Education*, vol. 59, no. 3, pp. 212–219, 2008, doi: 10.1177/0022487108317019.
[18] Z. M. Yan, C. S. Chai, and H. J. So, "Creating tools for inquiry-based mathematics learning from technological pedagogical content knowledge perspectives: Collaborative design approach," *Australasian Journal of Educational Technology*, vol. 34, no. 4, pp. 57–71, 2018, doi: 10.14742/ajet.3755.
[19] Nursiah, Mailizar, and S. Munzir, "Technological pedagogical and content knowledge (TPACK) of in-position teacher profession education (TPE) students of mathematics education," in *The 2nd Science And Mathematics International Conference (SMIC 2020): Transforming Research and Education of Science and Mathematics in the Digital Age*, 2021, pp. 81–90, doi: 10.1063/5.0041686.
[20] Yasiralsamiri, "How learning disabilities teachers in the kingdom of Saudi Arabia define students with giftedness and learning disabilities," *Cakrawala Pendidikan*, vol. 37, no. 3, pp. 356–365, 2018, doi: 10.21831/cp.v38i3.21566.
[21] A. Kudarinova, A. Autaeva, Z. Paylozyan, and A. Rymkhanova, "Readiness of Pre-Service Teachers to Implement Inclusive Education," *WISDOM*, vol. 25, no. 1, pp. 145–155, Mar. 2023, doi: 10.24234/wisdom.v25i1.967.
[22] A. Meltz, C. Herman, and V. Pillay, "Inclusive education: A case of beliefs competing for implementation," *South African Journal of Education*, vol. 34, no. 3, pp. 1–8, 2014, doi: 10.15700/201409161049.
[23] T. Saloviita, "Attitudes of teachers towards inclusive education in Finland," *Scandinavian Journal of Educational Research*, vol. 64, no. 2, pp. 270–282, Feb. 2020, doi: 10.1080/00313831.2018.1541819.
[24] D. A. Hernandez, S. Hueck, and C. Charley, "General education and special education teachers' attitudes towards inclusion," *Journal of the American Academy of Special Education Professionals*, vol. 3, no. 1, pp. 79–93, 2016.
[25] S. Elliott, "The effect of teachers' attitude toward inclusion on the practice and success levels of children with and without disabilities in physical education," *International Journal of Special Education*, vol. 23, no. 3, pp. 48–55, 2008.
[26] A. de Boer, S. J. Pijl, and A. Minnaert, "Students' attitudes towards peers with disabilities: A review of the literature," *International Journal of Disability, Development and Education*, vol. 59, no. 4, pp. 379–392, Dec. 2012, doi: 10.1080/1034912X.2012.723944.
[27] E. Avramidis and B. Norwich, "Teachers' attitudes towards integration/inclusion: A review of the literature," *European Journal of Special Needs Education*, vol. 17, no. 2, pp. 129–147, 2002, doi: 10.1080/08856250210129056.

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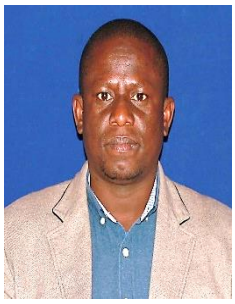

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