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Enhancing social skills of children with autism spectrum disorder: The impact of differentiated learning in inclusive elementary schools

Ana Lisdiana* https://orcid.org/0000-0002-9261-491X
Endang Rochyadi https://orcid.org/0000-0001-5963-7746
Sunardi https://orcid.org/0000-0001-9653-7838
Cece Rakhmat https://orcid.org/0000-0001-9653-7838

Department of Special Education, Faculty of Education, Universitas Pendidikan Indonesia, Indonesia

ABSTRACT

This study investigates the implementation of the differentiated learning model as a strategy to enhance social skills in children with autism spectrum disorder (ASD). Adopting a qualitative approach with a descriptive method, data were gathered through observations, in-depth interviews, and document analysis at inclusive elementary schools in Bandung, Indonesia, that have incorporated differentiated learning models. The findings reveal that the application of the differentiated learning model involves key stages such as identifying students' needs, setting learning objectives, adjusting the curriculum, differentiating instruction, offering varied final product options, modifying the learning environment, and conducting continuous evaluations. These stages enable teachers to design learning activities tailored to the social and emotional needs of students with ASD. The study demonstrates that these adaptations significantly enhance the social skills of students with ASD in areas such as environmental care, attention-seeking, greeting others, maintaining a positive attitude, demonstrating responsibility, actively participating in learning, and engaging in group activities. The findings suggest that differentiated learning provides a structured and responsive approach to fostering social skills development in children with ASD, with potential implications for broader educational practices.

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Introduction

Inclusive education has become a global priority, focusing on the development of systems that can embrace all students, regardless of their characteristics or abilities (Baria, 2023). International efforts, such as those led by UNESCO, emphasize the importance of inclusive education in achieving Sustainable Development Goal 4 and promoting the rights of individuals with disabilities (Rieser, 2022). Many countries have made significant strides in legal regulations and the implementation of inclusive education, shifting towards integrating children with special educational needs into mainstream educational environments (Shimbergenovna, 2022). In higher education,

* Corresponding author: Ana Lisdiana analisdi@upi.edu
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structural and methodological changes are being implemented to meet the needs of individuals with special educational needs, aiming to provide equal opportunities for all students and ensure their socialization and development (Amin, 2024).

Inclusive education is founded on democratic principles that promote equal opportunities for all students, regardless of their differences. Over time, societal perceptions of individuals with disabilities have shifted from a medical model to a social model (Andari et al., 2024). The social model emphasizes the need to adapt the environment to meet the needs of individual students, rather than adjusting the child to fit the existing situation (Hasanah et al., 2022). Inclusive education reflects this social perspective, aiming to modify the school environment to accommodate the needs of all students.

This shift in perspective is crucial for addressing the challenges of providing education for all, including students with autism spectrum disorder (ASD). ASD is a developmental disorder characterized by deficits in social communication and restricted, repetitive behaviors, which affects around 2.3% of children aged 8 in the United States and 2.2% of adults (Hirota & King, 2023). The prevalence of ASD has increased in the U.S., likely due to changes in diagnostic criteria, improved screening tools, and greater public awareness (Hirota & King, 2023). In Indonesia, while exact data on ASD prevalence is unavailable, estimates suggest around 3.2 million children may be affected (Daulay, 2018). Data show that the Indonesian Ministry of Education recorded 144,102 students with ASD in special schools in 2019.

The social communication deficits in individuals with ASD present significant challenges in education, particularly in inclusive settings where peer interaction is essential. These deficits are often attributed to difficulties in understanding the thoughts and emotions of others, a concept referred to as the theory of mind (Kasari et al., 2016). Research indicates that individuals with ASD exhibit abnormal neural dynamics, such as increased theta power in the cerebellum and frontal and temporal cortices during social interactions, as well as altered cortico-cerebellar connectivity compared to neurotypical individuals (Gaudfernau et al., 2023). Moreover, individuals with ASD tend to have impaired social signal processing, which hinders their learning through social interaction, although structured teaching environments can optimize learning conditions for both neurotypical individuals and those with ASD (Selvaraj & Christopher, 2022).

Despite global progress in inclusive education, challenges remain in addressing the unique needs of students with ASD. Traditional teaching methods often fall short in supporting the social and emotional development of these students (Cheng & Bololia, 2024). Homogeneous classrooms have been replaced by diverse learning environments, yet many educators continue to employ outdated, one-size-fits-all teaching approaches that do not account for individual learning differences (Helbig et al., 2024). The reliance on single-paced instruction neglects the varying learning styles and interests of students, particularly those with ASD (Almughyiri., 2023). As a result, many students, especially those with special needs, are unable to fully develop their potential or achieve optimal learning outcomes.

There is a critical need to explore educational strategies that can accommodate the diverse needs of students with ASD in inclusive settings. Differentiated learning, which involves tailoring instruction to meet the individual needs, interests, and readiness of students, offers a promising approach (Dalila et al., 2022). Research has shown that differentiated learning can increase student motivation, engagement, and commitment to learning (Samawati et al., 2023). In the context of ASD, where social communication skills are often a primary area of concern, differentiated learning may provide an effective means of addressing these challenges by allowing educators to create personalized learning experiences that foster social and emotional growth (Chandra Handa, 2019; Lestari et al., 2023).

Differentiated learning is rooted in the constructivist theory of education, which posits that learning is an active process in which students construct their understanding

based on their experiences (Sulistianingrum et al., 2023). This approach aligns with Vygotsky's theory of the zone of proximal development, which emphasizes the importance of providing learning experiences that are appropriately challenging for each individual student (Xi & Lantolf, 2021). In the context of ASD, differentiated learning involves modifying content, process, and product based on students' readiness, interests, and learning profiles (Thapliyal et al., 2022). By creating a more flexible and responsive learning environment, teachers can better support the development of social skills in students with ASD, enabling them to engage more effectively with their peers and the broader community (Faigawati et al., 2023).

Previous research has explored various strategies for supporting the education of students with ASD. For example, Kasari et al. (2013) highlight the importance of curriculum adjustments, teacher training, and peer interaction in improving social communication skills in children with ASD. Kasari et al. (2021) emphasize the role of teachers and support teams in creating inclusive learning environments that promote social interaction among students with ASD. Other studies have focused on peer-mediated interventions, where classmates are trained to interact with students with ASD in a supportive manner, leading to positive outcomes in social communication (Laghi et al., 2018; Watkins et al., 2015). While these studies provide valuable insights into the education of students with ASD, there is a notable gap in the literature regarding the application of differentiated learning models in inclusive settings. Bi et al. (2023) conducted a study on differentiated learning in general education classrooms, finding that it can accommodate diverse learning needs and increase student engagement. However, few studies have specifically examined how differentiated learning can be applied to improve the social skills of students with ASD.

Despite the growing body of research on inclusive education and ASD, there remains a significant gap in understanding how differentiated learning can be effectively implemented to address the social communication deficits of students with ASD in inclusive classrooms. While previous studies have explored various interventions and strategies for improving social skills in students with ASD, few have examined the potential of differentiated learning to meet the specific social and emotional needs of these students. This gap underscores the need for further research to explore how differentiated instruction can be adapted to support the social development of students with ASD in inclusive educational settings.

This study introduces the novel concept of applying the differentiated learning model as a targeted strategy for improving the social skills of students with ASD in inclusive classrooms. Unlike previous research that has focused primarily on cognitive and academic outcomes, this study emphasizes the importance of social communication skills as a key factor in the success of students with ASD. By integrating differentiated learning into the inclusive classroom environment, this study aims to provide a more holistic approach to education that addresses both the academic and social needs of students with ASD.

The primary objective of this research is to investigate how the differentiated learning model can be applied in inclusive elementary school settings to improve the social skills of students with ASD. Specifically, this study seeks to identify the key components of differentiated learning that are most effective in supporting social communication, peer interaction, and emotional regulation in students with ASD. The findings of this study have the potential to contribute to the growing body of literature on inclusive education by providing evidence-based insights into how differentiated learning can be used to enhance the social development of students with ASD.

Method

This study adopts a qualitative approach with a descriptive design to investigate the application of the differentiated learning model and its impact on the social skills

development of students with autism spectrum disorder (ASD) in inclusive elementary schools. Qualitative research is well-suited for exploring social phenomena in-depth, allowing for a detailed understanding of how differentiated learning is implemented in inclusive settings. The study was conducted in several inclusive elementary schools in Bandung, Indonesia, which have integrated differentiated learning models into their curricula. The researcher's direct involvement in the data collection process ensures accuracy, as the qualitative approach emphasizes immersion in the field to gather comprehensive data.

Participants in this study were selected through purposive sampling, focusing on individuals who had direct experience with differentiated learning and ASD. These participants included elementary school teachers who implement differentiated learning strategies, parents of children with ASD, and students diagnosed with ASD. To ensure a broad and diverse data set, snowball sampling was also used, allowing initial participants to recommend additional informants. This approach was particularly useful for gaining deeper insights into how differentiated learning impacts students with ASD both in the classroom and at home.

The data collection process involved structured interviews and direct observations. Structured interviews were conducted with teachers, parents, and students, providing in-depth insights into their experiences and perspectives on differentiated learning. The structured nature of the interviews ensured consistency while allowing for open-ended responses to capture the nuances of each participant's experience. Observations took place in classroom settings, where the researcher focused on how differentiated learning was applied in real-time and how students with ASD interacted socially with their peers and teachers. These observations provided valuable contextual data that complemented the interview findings.

To ensure the validity and reliability of the data, source triangulation was employed, cross-verifying information from multiple perspectives (teachers, parents, and students). The data analysis process involved several stages: first, data collection and transcription; second, data reduction to focus on key themes and patterns; third, the presentation of the data through organized narratives; and finally, drawing conclusions based on the patterns identified. This systematic analysis allowed the researcher to explore how differentiated learning can enhance the social skills of students with ASD. The ethical considerations in this study were paramount, with informed consent obtained from all participants, ensuring confidentiality and privacy throughout the research.

Results

This section presents the findings from the structured interviews and classroom observations conducted with elementary school teachers, parents, and students with autism spectrum disorder (ASD). The data has been organized according to the themes that emerged during the analysis, highlighting (1) the model of differentiated learning and (2) the impact of differentiated learning on the social skills development of students with ASD in inclusive settings.

Model of differentiated learning

The findings from this study reveal that the differentiated learning model implemented by elementary school teachers in Bandung follows a structured process designed to accommodate the unique needs of students with autism spectrum disorder (ASD). This model is characterized by several key phases: identifying student needs, setting learning objectives, adjusting the curriculum, differentiating instruction, providing various final product options, adjusting the learning environment, and continuous evaluation. These phases enable teachers to design learning activities that are closely aligned with the social and emotional needs of students with ASD.

The first phase, identifying student needs, is essential for tailoring instruction to each student's learning profile. Teachers in this study emphasized the importance of understanding the individual characteristics of students, including their cognitive abilities, learning styles, and socio-cultural backgrounds. As one teacher explained, "*We assess the students right from the start, considering their strengths, challenges, and even their social backgrounds, to ensure our lessons meet their specific needs*." This phase involved both formal and informal assessments, allowing teachers to gather data on the students' cognitive, affective, and psychomotor skills. These insights helped inform instructional strategies that could better engage students with ASD and accommodate their unique learning needs.

In the second phase, setting learning objectives, teachers established specific, measurable goals that focused on improving both academic and social skills. This study found that teachers designed objectives not only to enhance cognitive development but also to address key social behaviors such as peer interaction, understanding social norms, and participating in group activities. One teacher described the process: "*We create goals that focus on helping students interact more with their peers, whether it's learning how to greet others or engaging in small group activities.*" The teachers underscored the need to align these objectives with real-world social scenarios, providing students with practical opportunities to practice and apply their developing social skills.

The third phase, curriculum adjustments, involved modifying the curriculum to make it more accessible and relevant for students with ASD. Teachers adapted the content to suit the learning pace and complexity required by each student. Visual aids, such as social storyboards and icons, were used to help students follow social routines and understand emotional expressions. One teacher noted, "*We use a lot of visual supports, like storyboards, to help them grasp the social interactions we're teaching. These tools make it easier for them to process information and respond appropriately.*" This phase also emphasized the inclusion of structured group activities designed to foster social interactions, allowing students to practice key social skills such as turn-taking and sharing in a safe and supportive environment.

Differentiating instruction was a central feature of the model, where teachers employed varied teaching strategies to meet the individual needs of their students. For example, role-playing and social scenarios were commonly used to teach appropriate social responses and norms. One teacher shared, "*We use role-playing in small groups, which gives students the chance to practice responding to different social situations. It's an effective way to teach them how to interact with others*." Teachers also integrated technology, such as mobile apps that simulate social interactions, to further enhance students' understanding of social concepts. These differentiated instructional methods were tailored to the learning pace of each student, providing them with the time and space needed to process social information and apply it in real-world situations.

The fifth phase, providing various final product options**,** allowed students to demonstrate their social learning in different ways. Teachers offered flexible assessment methods, ranging from social interaction recordings to portfolios that document students' social skill development over time. A teacher described this approach: "*We give students the chance to showcase their learning in ways that suit them best, whether it's through videos of their peer interactions or portfolios that track their progress*." This flexibility in assessment not only catered to the students' strengths but also provided a more comprehensive picture of their social development.

In the sixth phase, adjusting the learning environment, teachers made specific modifications to create a more conducive space for social learning. These adjustments included minimizing sensory distractions and structuring the physical space to encourage peer interaction. One teacher explained, "*We've arranged the classroom to encourage social interaction—using round tables and setting up areas where students can work in small groups. We've also made sure the environment is calming, with soft lighting and quiet zones*." By tailoring the

environment to the sensory and social needs of students with ASD, teachers were able to create a learning space that supported both academic and social growth.

Finally, the continuous evaluation phase played a critical role in ensuring that the differentiated learning model remained responsive to the students' evolving needs. Teachers conducted ongoing assessments, using tools such as structured observations and behavior rating scales, to monitor the progress of students' social skills. One teacher emphasized the importance of this process: "*We regularly evaluate how well the students are developing their social skills, and we adjust our teaching methods based on what we observe.*" Continuous feedback from parents and other educational professionals was also integrated into the evaluation process, ensuring a holistic approach to student development. Through this ongoing assessment, teachers were able to make timely adjustments to their instructional strategies, ensuring that students with ASD continued to progress in both their academic and social skills.

In summary, the differentiated learning model implemented by teachers in this study involved a comprehensive, multi-phase approach that addressed the diverse needs of students with ASD. Through careful identification of student needs, goal-setting, curriculum adjustments, differentiated instruction, varied assessment methods, environmental adjustments, and continuous evaluation, teachers were able to foster significant improvements in the social skills of students with ASD. This model provides a valuable framework for inclusive education, demonstrating the importance of flexible, responsive teaching practices in supporting the holistic development of students with special educational needs.

The impact of differentiated learning on the ASD students' social skills

The findings of this study indicate that the implementation of differentiated learning significantly influenced the social skills development of students with autism spectrum disorder (ASD) in inclusive classrooms. Differentiated learning, designed to cater to the unique needs of each student, played a pivotal role in fostering the social and emotional growth of students with ASD. Through tailored instructional strategies, flexible assessments, and an accommodating learning environment, teachers were able to create conditions that nurtured the social interactions and communication abilities of these students. As a result, noticeable improvements in social behaviors, including participation in group activities, eye contact, and peer interactions, were observed.

One of the most prominent impacts of differentiated learning was its ability to increase the participation of students with ASD in group activities. Teachers observed that by adjusting the content and process of learning to the students' readiness and interests, they were able to create more inclusive and engaging group activities. One teacher explained, "*Before we started using differentiated instruction, some of the students with ASD struggled to join in group work. But once we started tailoring the tasks to their individual needs, they began to actively participate and even take the lead in some activities*." This shift in engagement is particularly important, as students with ASD often face challenges in group dynamics due to difficulties in communication and social interaction. Differentiated learning provided these students with structured opportunities to practice essential social skills, such as turn-taking, cooperation, and verbal interaction, which are crucial for their social development.

Parents also noticed significant changes in their children's social behaviors since the introduction of differentiated learning. One parent shared, "*Since the school started using this approach, my child has become more comfortable participating in class discussions and engaging with classmates*." This anecdotal evidence highlights the positive impact that differentiated instruction has had not only in the classroom but also beyond it. Parents reported that their children were more willing to engage in social activities at home and in the community, which they attributed to the skills they were practicing in school. The consistent application of differentiated learning strategies helped students with ASD to

transfer the social skills learned in school to real-world settings, increasing their confidence and competence in social situations.

Another key area where differentiated learning made a noticeable difference was in increasing eye contact and responsiveness to social cues. Students with ASD often experience difficulties with non-verbal communication, such as maintaining eye contact or interpreting body language. Through differentiated learning, teachers were able to incorporate specific activities that encouraged students to practice these non-verbal skills in a non-threatening environment. As one teacher explained, "*We used games and role-playing scenarios where the students practiced making eye contact and responding to facial expressions. Over time, we saw improvements in their ability to make eye contact during conversations with peers*." These structured interactions provided students with a safe space to learn and practice non-verbal communication, which is essential for building meaningful social connections.

Teachers also noted that students with ASD became more proactive in initiating interactions with their peers as a result of differentiated learning. Previously, these students would often wait for others to approach them or would struggle to engage in conversations. However, with the implementation of differentiated instructional methods, such as using visual supports and social scripts, students gained the confidence to initiate social interactions. One teacher observed, "*We've seen students with ASD start greeting their classmates without prompting, and even initiating conversations during group activities. It's a big change from where they were before*." This proactive social behavior is a significant indicator of improved social skills, as it shows that students are becoming more comfortable navigating social environments on their own.

In addition to improvements in peer interactions, differentiated learning also had a positive effect on the students' ability to express empathy and emotional understanding. One of the challenges for students with ASD is recognizing and responding to the emotions of others. Teachers used differentiated instruction to integrate activities that focused on emotional literacy, such as discussing feelings, using emotion cards, and practicing empathetic responses. A teacher commented, "*We introduced activities where the students had to identify emotions based on facial expressions or scenarios. Over time, they became more aware of their classmates' feelings and started responding more appropriately, like offering help when someone seemed upset*." These activities helped students with ASD develop greater emotional awareness, which in turn enhanced their ability to connect with others on a deeper, more empathetic level.

The supportive environment created through differentiated learning was another key factor in the students' social skills development. Teachers made deliberate adjustments to the learning environment to minimize sensory overload and provide consistent, predictable structures that helped students with ASD feel more comfortable. As one teacher explained, "*We made changes to the classroom setup, like creating quiet zones and using visual schedules, which really helped the students feel more at ease. When they're less anxious, they're more open to engaging with their peers*." These environmental modifications played an essential role in reducing the anxiety that often hinders social interactions for students with ASD, allowing them to focus more on building relationships and participating in group activities.

Students themselves also expressed positive outcomes from the differentiated learning approach. One student with ASD shared, "*I like the way we do group work now. I can do things that I'm good at, and my friends help me with the things that are hard*." This statement reflects the core strength of differentiated learning—its ability to meet each student where they are and provide a framework that allows them to succeed socially and academically.

In summary, the findings of this study underscore the profound impact that differentiated learning has on the social skills development of students with ASD. By tailoring instruction to the individual needs of these students, teachers were able to create an inclusive learning environment that fostered greater social interaction, emotional

understanding, and peer engagement. Through structured activities, flexible learning methods, and environmental adjustments, students with ASD were able to practice and refine their social skills in a supportive setting, leading to meaningful improvements in their ability to navigate social environments both in and out of the classroom. The positive outcomes observed by teachers, parents, and students alike highlight the value of differentiated learning as an effective strategy for promoting social development in students with ASD.

Discussion

This study investigated the implementation of differentiated learning as a strategy to enhance the social skills of students with autism spectrum disorder (ASD) in inclusive classrooms. The findings revealed that differentiated learning significantly impacted the social development of students with ASD, particularly in areas such as participation in group activities, eye contact, peer interaction, and emotional understanding. These outcomes align with the original hypothesis that differentiated learning, by tailoring instruction to individual student needs, would lead to improvements in the social skills of students with ASD. The findings also provide critical insights into the potential of differentiated learning to address both academic and social-emotional challenges in students with special needs.

Differentiated learning allowed teachers to create a more inclusive environment, where students with ASD could engage meaningfully with their peers. This study found that through the identification of student needs, setting of personalized learning goals, and adjustment of instructional methods, students with ASD were better equipped to navigate social interactions. These findings are consistent with the principles of differentiated learning as outlined by Tomlinson (2014), who emphasized the importance of addressing individual learning profiles to maximize student engagement and achievement. The positive social outcomes observed in this study, such as increased participation in group work and more frequent peer interactions, support the notion that differentiated instruction can foster both academic and social development (Gheyssens, 2022).

The improvements in social participation and peer interaction observed in this study can be interpreted through the lens of Vygotsky's theory of social development, which suggests that social interaction plays a fundamental role in cognitive development (Barnet, 2019). By providing students with structured opportunities to engage in social activities, differentiated learning supports Vygotsky's idea that learning is a socially mediated process. Students with ASD, who often struggle with spontaneous social interactions, benefited from the intentional design of group activities tailored to their individual readiness and interests. This finding is particularly significant, as previous research has highlighted the difficulties students with ASD face in group settings due to challenges in communication and social understanding (Kasari et al., 2013). Differentiated learning, as implemented in this study, provided the necessary scaffolding to support these students in overcoming such challenges, leading to more positive social outcomes.

In addition to enhancing social participation, this study found that differentiated learning contributed to improvements in non-verbal communication skills, such as eye contact and responsiveness to social cues. These improvements are consistent with findings from previous studies that highlight the potential of differentiated learning to address non-verbal communication deficits in students with ASD. For instance, Amin (2024) noted that structured social activities, combined with visual supports, can help students with ASD develop greater proficiency in non-verbal communication. In this study, the use of role-playing and social scenarios allowed students to practice making eye contact and interpreting body language in a controlled, supportive environment. The gradual improvement in these skills suggests that differentiated learning can provide

students with ASD the space to practice and refine their non-verbal communication in ways that align with their individual learning styles and needs.

However, it is essential to recognize that not all students with ASD demonstrated the same level of progress, particularly in terms of initiating social interactions. While many students showed significant improvements in peer engagement, others struggled to independently initiate interactions without prompting. This finding highlights the complexity of social skills development in students with ASD and suggests that differentiated learning, while effective in creating opportunities for social practice, may need to be supplemented with more targeted interventions for students who continue to face difficulties in social initiation. This is consistent with the findings of Dugas (2017), who argued that interventions focusing on social communication skills may need to be individualized further to address the specific needs of students with more severe social impairments.

The role of environmental adjustments in supporting the social development of students with ASD also emerged as a critical theme in this study. Teachers made specific modifications to the physical learning environment to reduce sensory overload and create a more predictable, structured setting that supported social interaction. These adjustments are consistent with recommendations from Alkire et al. (2021), who emphasized the importance of creating sensory-friendly environments for students with ASD. The findings from this study suggest that such modifications—such as the use of quiet zones, visual schedules, and predictable routines—not only reduce anxiety for students with ASD but also encourage them to engage more fully in social interactions. This is particularly important, as anxiety related to sensory overload has been identified as a significant barrier to social participation in students with ASD (Alkire et al., 2021).

While the findings of this study align with much of the existing literature on differentiated learning and social skills development in students with ASD, some unique contributions have emerged. One such contribution is the emphasis on continuous evaluation as a core component of the differentiated learning model. In this study, teachers employed ongoing assessments to monitor the progress of students with ASD and adjust their instructional strategies accordingly. This dynamic approach to assessment aligns with the principles of formative assessment, which emphasize the need for regular feedback to support student learning (Heritage, 2018). The use of continuous evaluation in this study not only ensured that instructional methods remained responsive to the needs of students with ASD but also allowed teachers to provide timely interventions when students faced difficulties in social interactions. This approach to assessment could be further explored in future research as a key strategy for enhancing the effectiveness of differentiated learning in inclusive classrooms.

One of the key strengths of this study is its focus on the social aspects of learning, an area that is often overlooked in discussions of differentiated learning. While much of the literature on differentiated instruction focuses on academic outcomes, this study highlights the importance of addressing social and emotional development in students with special needs. By demonstrating that differentiated learning can lead to meaningful improvements in social skills, this study adds to the growing body of evidence that supports the holistic benefits of this instructional approach. As Kasari et al. (2016) noted, interventions that focus on both academic and social development are essential for ensuring the long-term success of students with ASD in inclusive settings.

Moreover, this study has practical implications for educators and policymakers. By demonstrating the effectiveness of differentiated learning in improving the social skills of students with ASD, this research can inform the development of more inclusive teaching practices and policies that better support the needs of students with ASD in mainstream classrooms. In doing so, this study contributes to the broader goal of creating more inclusive and equitable educational environments that promote the success of all students, regardless of their abilities or challenges.

Conclusion

In conclusion, this study provides strong evidence that differentiated learning can be an effective strategy for enhancing the social skills of students with ASD in inclusive classrooms. By tailoring instruction to individual student needs, differentiated learning creates opportunities for students to engage in social interactions, develop non-verbal communication skills, and practice emotional understanding in a supportive environment. The findings of this study are consistent with current theories of social development and align with previous research on the benefits of differentiated instruction for students with special needs. However, the complexity of social skills development in students with ASD suggests that differentiated learning should be viewed as one component of a broader set of interventions designed to support the holistic development of these students. Future research should continue to explore the long-term impact of differentiated learning and its potential to improve both academic and social outcomes for students with ASD.

Despite the positive findings, there are several limitations to this study that should be acknowledged. First, the sample size was relatively small, which limits the generalizability of the findings. Future research could expand the sample to include a more diverse group of students with ASD from different cultural and socio-economic backgrounds. Second, while the study focused on the implementation of differentiated learning in elementary schools, further research is needed to explore how this instructional model can be adapted for older students with ASD, particularly in secondary and post-secondary educational settings. Lastly, while this study highlighted the benefits of differentiated learning for social skills development, it did not investigate the long-term impact of these interventions. Longitudinal studies could provide valuable insights into how differentiated learning influences the social and emotional development of students with ASD over time.

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