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International Journal of Information Technology and Education (IJITE) 5 (1), (December 2025) 40 - 68

International Journal of Information Technology and Education (IJITE)

http://ijite.jredu.id

Evaluation of Autism Student Learning Program in Special Schools in North Sulawesi Province

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ARTICLE INFO
Article history:
Received: October 20, 2025; Received in revised form: November 21, 2025; Accepted: November 30, 2025;
Available online: December 05, 2025;

ABSTRACT

This study was conducted to evaluate the learning program for students with autism spectrum disorders in Special Needs Schools (SLB) in North Sulawesi Province. The research context is based on the increasing number of children with autism, limited special education services, and the need for adaptive, individualized, and independence-oriented learning models. The research objectives include evaluating the learning program, identifying implementation barriers, and mapping supporting factors in the implementation of learning at the Hizkia Manado Special Needs School for Autism, Efatah Bitung Special Needs School, and Paulus Tomohon Special Needs School. The study used a descriptive qualitative approach through in-depth interviews, observations, and documentation analysis, and involved policymakers, principals, teachers, and parents. The results showed that the learning program has attempted to adhere to the principles of individualization through the IEP, the use of methods such as ABA, TEACCH, and PECS, and the inclusion of supportive therapy. However, implementation is still hampered by the limited number of teachers with special education competencies, the lack of autism-friendly infrastructure, unequal access to therapy services, and low parental involvement. On the other hand, policy support, cross-sector collaboration, and teacher and school commitment are significant supporting factors. The study concluded that improving the quality of learning requires strengthening human resources, developing learning infrastructure tailored to the needs of children with autism, and integrating education and health services. Consequently, local governments and schools need to develop holistic and sustainable service designs to ensure optimal academic, social, and independence development for students with autism.

Keywords: autism, educational evaluation, learning programs, special education, special needs schools

INTRODUCTION

Education is a key pillar in creating a just, prosperous, and sustainable society. In a global context, commitment to the Sustainable Development Goals (SDGs) is a crucial milestone in strengthening education's strategic role in development. One of the key goals directly related to education is SDG 4, which aims to "ensure inclusive and quality education and promote lifelong learning opportunities for all." SDG 4 emphasizes the importance of equitable access to education that is not only quality but also inclusive for all groups in society, including vulnerable and marginalized groups. Quality education is expected to provide a safe learning environment, free from violence, and encourage the active participation of students from various social, economic, and cultural backgrounds. Discussions in special education are not limited to the aspect of students' special needs; there are still many discussions related to the paradigm or perspective of placing children with special needs in special education services. Essentially, the goal of special education is not limited to academic education, but encompasses all aspects of life, such as health, social, and others. Educational services should not discriminate between ordinary students and students with special needs; students need to be given the freedom to discover and develop their potential. So they can live their daily lives and contribute to society.

Countries around the world advocate for every child to have the opportunity to attend mainstream schools, but in reality, many children, especially those with special needs, are denied this opportunity (UNICEF, 2013). This is particularly true in developing countries. For example, in 2005, it was estimated that less than 10% of children with special needs had access to any form of education in Southeast Asian countries (Chapman & Sarvi, 2017). This situation can be attributed to various reasons, such as the involvement of few ministries and non-governmental stakeholders in supporting children with special needs, limited efforts to collect data, and cultural sensitivities regarding the level of recognition of children with special needs (Sharma & Ng, 2014). Despite this, countries around the world continue to progress in developing educational programs for children with special needs.

Special education has become a focus of global education policy. Many countries have developed specific laws and regulations to protect the rights of students with special needs and ensure their access to equal education. For example, the United Nations Convention on the Rights of Persons with Disabilities emphasizes the importance of inclusive and equal education for students with special needs worldwide. However, despite progress in this regard, numerous challenges remain in achieving full inclusion and equitable special education worldwide. Autism Spectrum Disorder (ASD) has become a crucial issue in global mental health and education. The significant increase in autism prevalence over the past decade reflects the urgency of systematic and multidisciplinary treatment. (Zeidan et al., 2022) report that the prevalence of autism has increased 20-fold in the past ten years globally. This finding supports other epidemiological data, which indicates that currently, approximately one in every 68 people worldwide is diagnosed with autism. In developed countries such as the United States, the United Kingdom, and Canada, the prevalence is even higher, with approximately one in 65 children born with ASD (Barghi et al., 2023; Wang et al., 2022). While the exact factors behind this increase remain a matter of scientific debate, some researchers attribute it to increased public awareness, changes in diagnostic criteria, and advances in early detection technology. A US study noted that the

number of individuals diagnosed with the syndrome increased between the 1990s and 2000s (Leblanc et al., 2009). Autism diagnoses have increased dramatically since the 1980s; however, this is thought to be due to changes in diagnostic practices rather than a growing number of autism cases (Newschaffer et al., 2007). A similar trend is observed in Indonesia. According to data from the Ministry of Health, the number of children with ASD increases by approximately 500 cases annually (Sumiwi, 2022). However, significant gaps remain in early detection, accurate data mapping, and the availability of intervention services. This situation is exacerbated by the lack of professionals trained in the diagnosis and treatment of autism, as well as low public literacy regarding the special needs of children with ASD. However, in educational terms, children with autism are classified as Children with Special Needs (ABK), who experience significant developmental delays compared to children their age, thus requiring a specialized, adaptive, and inclusive educational approach (Ministry of National Education, 2004).

Various studies indicate that the current international prevalence of ASD is estimated at 15 to 20 cases per 10,000 children (Mashabi & Tajudin, 2009), and in some developed countries, the figure is as high as 1 in every 65 births (Barghi et al., 2023; Wang et al., 2022). This increase, while partly attributed to more sensitive detection methods, also indicates the need for serious attention to policies, health services, and education that comprehensively address the needs of the autistic population. The situation in Indonesia is not significantly different. National estimates indicate that 1 in 150 children are estimated to have an autism spectrum disorder (Dewi, 2022). Compared to Indonesia's annual birth rate of approximately six million, it is projected that thousands of children are likely born with ASD each year. However, this figure is not fully reflected in official data. For example, data from the Ministry of Women's Empowerment and Child Protection recorded only 889 autistic students enrolled in special schools (SLB) from 2020 to 2021 (Dewi, 2022). This discrepancy between estimates and administrative data suggests that a significant proportion of children with autism in Indonesia may not have been medically identified or accommodated in the formal education system. Data from the Ministry of Social Affairs' Social Welfare Data and Information Center in 2019 recorded that only 1,902 people with autism were registered by name and address out of a total of 127,295 people with disabilities (Data and Information, 2019). This indicates structural issues within the system for recording, detecting, and reaching out to the ASD population in Indonesia. This data inconsistency could seriously impact the effectiveness of policies and intervention services needed by children with autism, particularly in basic education and early intervention, which are crucial for their social and cognitive development (Wahyuni et al., 2024). The discrepancy between epidemiological estimates and actual data demonstrates the importance of improving the capacity of basic service systems, from screening, referral, diagnosis, to providing ongoing interventions. Other challenges such as limited professional staff, limited public literacy about autism, and persistent social stigma contribute to worsening access to services for children with ASD. In this context, policy development based on valid and accurate data is essential, not only to ensure the fulfillment of children's rights, but also to realize the principle of inclusion as stipulated in the national development agenda and the Sustainable Development Goals (SDGs), particularly SDG 4 on quality and inclusive education for all. Students with autism are among those with special needs who require attention in school learning. Education for children with special needs (ABK) is a constitutional mandate that must be realized through a national education system that is inclusive, adaptive, and responsive to the diverse needs of students. Within this framework, Special Needs Schools (SLB) exist as formal educational institutions that provide services according to the type

and level of children's special needs. Based on national data, the total number of special education (SLB) services in Indonesia has reached 7,020 units, covering the TKLB, SDLB, SMPLB, and SMLB levels. The distribution of these services continues to show a high concentration in provinces with dense populations and more developed educational facilities, such as West Java (1,292 units), East Java (1,171 units), and Central Java (556 units). Conversely, several provinces in eastern Indonesia still show relatively limited service numbers, indicating challenges in equalizing access to special education across the archipelago.

North Sulawesi Province is one of the regions that demonstrates its commitment to providing special education by providing 119 SLB service units. These services consist of 2 TKLB, 41 SDLB, 39 SMPLB, and 37 SMLB, spread across various administrative regions. This number places North Sulawesi in the middle category in the national context and reflects the seriousness of the local government in providing appropriate educational services for children with special needs. When compared to surrounding provinces, such as Gorontalo (24 services), Central Sulawesi (93 services), and West Sulawesi (72 services), North Sulawesi has a broader and more representative service coverage. Furthermore, this achievement also demonstrates that North Sulawesi Province has strived to develop special education services sustainably, including at the elementary to secondary levels. The presence of SLB services in North Sulawesi reflects the existence of structural support for fulfilling the educational rights of children with special needs, including children with autism spectrum disorders (ASD), intellectual disabilities, sensory disabilities, motor disabilities, and multiple special needs. The number and availability of these educational units are certain to significantly contribute to providing access to appropriate and targeted education for this vulnerable group.

Therefore, a study of special education services in North Sulawesi Province is relevant for a deeper look at how the special education system is implemented in this region. This research is expected to illustrate the effectiveness of available services and identify supporting factors in achieving equal education for children with special needs, while simultaneously supporting national and international targets. Therefore, evaluating learning programs for students with autism is a crucial part of research, to determine the best ways for education policymakers and educators to help students with autism learn according to their strengths and weaknesses, while capitalizing on future opportunities.

This study focuses on evaluating learning programs for students with autism in special schools in North Sulawesi Province, focusing on special education schools in Manado, Bitung, and Tomohon: 1. Hizkia Special Autism Special School in Manado, 2. Efatah Special School in Bitung, 3. Paulus Special School in Tomohon. The research questions are formulated as follows: 1) How are learning programs for students with autism implemented in special schools in North Sulawesi Province? 2) What are the obstacles to implementing learning programs for students with autism in special schools in North Sulawesi Province? 3) What are the supporting factors in implementing learning programs for students with autism in special schools in North Sulawesi Province?

The objectives of this study are: 1) To evaluate learning programs for students with autism in special schools in North Sulawesi Province. 2) To identify obstacles to implementing learning programs for students with autism in special schools in North Sulawesi Province. 3) To identify supporting factors in implementing learning programs for students with autism in special schools in North Sulawesi Province.

METHOD

Research Type

The research method applied in this study is qualitative descriptive, in which the researcher collects data from various sources to gain an in-depth understanding of the research subject. Qualitative research can reveal community life, history, behavior, organizational function, social movements, and kinship relationships (Ghony & Almanshur, 2012). A qualitative approach allows researchers to explore the complexity and context of the phenomena under study, as well as to understand the perspectives and experiences of the individuals involved. The data sources used include various forms, such as interviews, observations, and document analysis, to obtain a comprehensive perspective. By integrating these methods, this research can produce more holistic and in-depth results, allowing for broader interpretation and a better understanding of the phenomena studied.

Research Location and Time

This research was conducted in three Special Schools (SLB) in three cities in North Sulawesi Province: Manado, Bitung, and Tomohon. The special schools that will be researched are: 1. Hizkia Manado Special Autism Special School, 2. Efatah Bitung Special School, 3. Paulus Tomohon Special School. The research period is 6 months, namely from July to December 2024.

Research Subjects

This study used key informants as research subjects. The research subjects were selected using a non-probability purposive sampling technique, with criteria determined by the researcher based on the research objectives. The informants selected were as follows:

a. Policymakers for semi-structured in-depth interviews: the Provincial Education Office.
b. Policy Implementers at the Operational Level for Focus Group Discussions: 1. Principals and teachers at the Hizkia Special School for Autism in Manado; 2. Principals and teachers at the Efatah Special School for Autism in Bitung; 3. Principals and teachers at the Paulus Special School for Autism in Tomohon;
c. Two parents of children with autism from the Hizkia Special School for Autism in Manado, the Efatah Special School for Autism in Bitung, and the Paulus Special School for Autism in Tomohon for Focus Group Discussions.

Data Collection Techniques

To obtain research data, several data collection techniques were used:

1. Interviews

The author used in-depth interviews. The aim was to collect diverse information, mostly containing opinions, attitudes, and experiences. This in-depth interview used a semi-structured interview, referring to a series of open-ended questions. This method allows new questions to emerge based on the informant's answers, allowing the interviewer to dig deeper into the informant's information. To begin the interview, an interview guideline must be prepared, including: 1. Planning, 2. Preparation and development of the instrument, and 3. Data collection (Rosyada D, 2020).

1. Planning.

2. Preparation and development of the research instrument.
3. Collecting the necessary data.

2. Observation

This data collection technique is used to gather the necessary data to complement the interview data. Observations are conducted to obtain information about the research object by observing and recording events or situations (Basuki, 2006). Observation is an observational activity carried out by the researcher, where the researcher plays an active role in the study location, thus truly observing the activities being studied. In this observation, the researcher is involved in the daily activities of the people being observed or used as data sources for the writing. This observation technique is used to obtain data on the steps taken in thematic learning. Observations are conducted by actively going directly into the field to obtain real-world descriptions and information regarding the attitudes and behaviors of informants or the implementation of the activities being studied (Basuki, 2006). Observations serve to record what is clearly visible and also to understand the meaning behind the actions and interactions that occur in the research location (Sugiyono, 2019). Therefore, researchers need to use observation guidelines as a reference so that the observation process is systematic and in line with the research focus. This observation guideline contains the observed aspects, behavioral indicators, situational context, and field notes relevant to the research objectives (Miles, Huberman, & Saldaña, 2014).

The observation guideline in this study covers several aspects, including:

1) Activities undertaken by teachers and students during the learning process.
2) Steps taken to implement the learning according to the established plan.
3) Interactions between teachers and students during learning activities.
4) Student responses to the learning strategies and media used.
5) Situations and conditions of the learning environment that support or hinder the learning process.

The observation guideline above is useful for ensuring that the collected data is more focused and consistent, allowing for comparisons between situations or informants. The results of these observations are analyzed to identify patterns, themes, and understandings related to the research objectives.

3. Documentation

Documentation is data collection processed through documents. The documentation method is used to collect data from documentary sources that may support or contradict interview results. This technique is used to obtain data in the form of documents or archives. The documentation method was implemented to supplement the data obtained from interviews and observations. The data obtained were in the form of written materials and recordings such as handbooks, official reports, diaries, meeting minutes, and related journals. Documentary data also included statistical data, minutes of meetings, correspondence, images, photographs, and videos (Rosyada, 2020). In qualitative research, the documentation method serves to strengthen and verify data obtained from observations and interviews (Sugiyono, 2019). Documentation helps researchers understand the research context more comprehensively through written and visual evidence that supports the interpretation of research

results. Documentation guidelines are necessary for the document data collection process to be systematic, in-depth, and aligned with the research focus (Miles, Huberman, & Saldaña, 2014).

The documentation guidelines in this study covered several aspects, as follows:

1) Types of documents collected (e.g., school archives, activity reports, learning modules, individual learning, lesson plans, teacher notes, student learning outcomes, activity photos, or learning videos).
2) Document sources.
3) The date and period the document was created or published.
4) The document's relevance to the research focus.
5) The document's credibility and authenticity.
6) The researcher's notes regarding the content, context, and interpretation of the document being studied.

With these documentation guidelines, researchers can analyze documents more systematically to obtain valid, in-depth data that supports the validity of the research data.

Data Analysis Techniques

The data analysis techniques used in this study refer to the concept (Miles et al., 2014), namely the interactive model, which classifies data analysis into three steps:

1. Data Reduction

Field data is presented in a complete and detailed report. The data and field reports are then reduced, summarized, and sorted into key points, focusing on selecting the most important points, and then searching for themes or patterns (through editing, coding, and tabulating). Data reduction is carried out continuously throughout the writing process. At this stage, after the data has been sorted and simplified, unnecessary data is sorted to facilitate display and presentation, and to draw preliminary conclusions.

2. Data Display

Data display is intended to facilitate researchers in viewing the overall picture and specific parts of the research results. Data presentation is done in the form of descriptive narratives that explain the research findings systematically and meaningfully. Through this presentation, researchers can understand the patterns, relationships, and meanings that emerge from the data collection. According to Miles, Huberman, and Saldaña (2014), data presentation is a crucial stage in qualitative data analysis, enabling researchers to draw more focused conclusions. Data presentation can take the form of narrative descriptions, matrices, tables, charts, or graphs that display relationships between categories or research themes.

In qualitative research, data presentation also involves the process of coding data from interviews, observations, and documentation. Coding is done to group data into specific themes or categories according to the research focus. According to Saldaña (2013), the coding process involves several stages:

1) Open coding – identifying initial concepts or categories from the raw data.
2) Axial coding – connecting relevant categories to discover relationships among data.
3) Selective coding – selecting core categories and constructing a theoretical narrative from the analyzed data.

In addition to narrative form, qualitative data can also be presented in tabular form (data tabulation) to help researchers organize information systematically.

3. Drawing Conclusions (Verification)

Researchers draw conclusions and verify them by seeking meaning in the phenomena observed in the field. They note possible regularities and configurations, the causal flow of the phenomena, and propositions. At this stage, conclusions are drawn from previously obtained and concluded data. Then, researchers double-check and compare them with the results and notes from the research.

Data Validation Techniques

1. Triangulation

There are four types of triangulation: source triangulation, method triangulation, researcher triangulation, and theoretical triangulation. The triangulation methods used in this research are data source triangulation and method triangulation. Data source triangulation involves gathering information from various data sources, including primary and secondary data.

Data sources, including primary and secondary data, are as follows:

1) Primary data: Provincial Education Office, School Principals, Teachers, and parents/mentors of students with autism.
2) Secondary data: written data in the form of program data, profiles, program reports from the Education Office and schools, as well as books, journals, and related research.

Method triangulation involves using various methods, such as interviews, focus group discussions, observation, and documentation (Gunawan, 2022).

2. Member Check

Member checks are a credibility test for verifying data with data providers. To review the data obtained by the researcher to ensure it aligns with the data provider's intent. If the analyzed data aligns with the provider's intent, the data is valid. If the data is not agreed upon by the provider, further discussion with the provider is necessary to establish agreement with the provider. The goal is to ensure that the research results obtained align with the provider's intent. This is done after a period of data collection has been completed, both individually and in groups (Sudaryono, 2023).

3. Audit Trail

An audit trail is a data validity technique that involves tracing the entire research process to ensure transparency and consistency of research procedures (Lincoln & Guba, 1985). This technique allows third parties, or independent auditors, to examine the research process, from data collection and analysis to conclusion drawing.

An audit trail helps ensure that the entire research process is well documented and scientifically sound. Audit trail components include:

1) Field notes – systematic documentation of the researcher's observations and reflections in the field.
2) Interview transcripts and original documents – storing the raw data sources used in the analysis.
3) Data coding and analysis process – recording the stages of coding, categorization, and interpretation of data.

4) Methodological decisions – documenting the rationale for selecting techniques, methods, or analysis procedures.
5) Researcher reflection journal – recording the researcher's views, assumptions, and decisions throughout the research.

By implementing an audit trail, the credibility and dependability of the research can be enhanced because the process is transparent and can be replicated or verified by other researchers.

RESULTS AND DISCUSSION

RESULTS

Evaluation of learning programs for students with autism in special schools in North Sulawesi Province

a. Context Evaluation

Special education policies in Indonesia have been implemented in line with the development of national special education policies to ensure access to education for all, including children with special needs. Indonesia's commitment to providing services for children with special needs is evident in the synergy of regulations at both the regional and national levels. While improvements are still needed in some areas, significant progress has been made year after year. Evaluation of learning programs for students with autism in North Sulawesi Province demonstrates a serious effort to provide special education services, particularly with the issuance of Governor Regulation Number 12 of 2022, which establishes a structure with specific duties and functions for special education and services within the North Sulawesi Provincial Education Office. Furthermore, special education programs have received special attention from the Indonesian Ministry of Education, with the establishment of the Autism Service Center (PLA), which has been operational since 2016. However, this PLA is not a special school or special school but rather a self-funded, therapeutic center for children with special needs, equipped with expert consultants. This means that not all children with special needs attending school have access to these services, especially those with financial constraints or those living far away.

The lack of medical services for students with disabilities at school forces parents to independently seek educational and healthcare facilities. Currently, in North Sulawesi Province, particularly in Manado, therapy services are still provided at hospitals, autism service centers, private clinics for children with special needs, and other private therapy facilities to provide optimal care for children with autism. The North Sulawesi Provincial Government, through the North Sulawesi Provincial Education Office, has prioritized learning programs for children with special needs, as evidenced by improvements in infrastructure, human resource competency, and activities involving students with special needs. Although data shows that the distribution of special education facilities in North Sulawesi still requires improved access, two regencies, namely South Bolang Mongondow Regency and South Bolaang Mongondow Regency, still lack special education facilities.

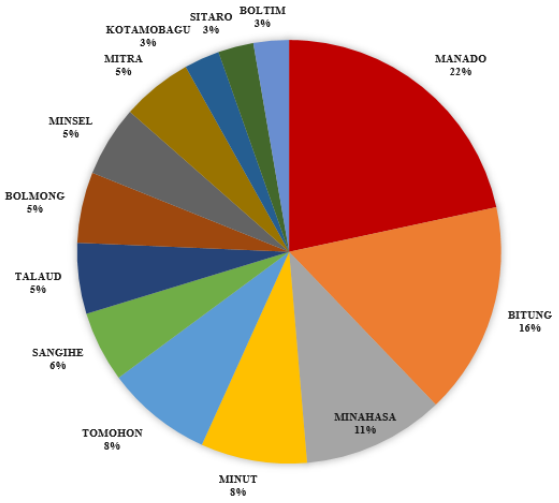

Figure 1. Percentage of Distribution of Special Needs Schools in North Sulawesi

Figure 1 further explains the challenges of accessibility in remote areas and areas far from special education access. It also highlights the need for equitable distribution of special education through policies that support the establishment of public special education schools (SLB) in underserved areas. The annual increase in the number of students with autism poses a pressing challenge to improving access to services. Interconnected cross-sectoral collaboration between the Central Government, Provincial and Regency/City Governments, community organizations, academics, and the private sector could also be a solution to addressing the limitations of special education in these areas.

In addition to access, government budget allocations, both the National Budget (APBN) and Regional Budgets (APBD), highlight the government's commitment to improving special education facilities and infrastructure, including physical construction, procurement of learning aids, rehabilitation of existing facilities, and supporting management. However, despite this significant figure, challenges remain in managing these funds, particularly ensuring that the budget covers the needs of special education schools in a sustainable and efficient manner across the province. Regarding learning in schools, schools have a primary goal of orienting themselves to student needs. Services are centered on promoting optimal student development by leveraging their strengths. This is crucial because it demonstrates the school's commitment to serving students professionally.

The primary learning objectives need to be supported by an understanding of the urgency of learning programs for students with autism. Principals, teachers, and parents need to share a common understanding to foster effective collaboration in developing learning plans for students in the classroom. This can be hampered by a lack of human resources and inadequate infrastructure. Identifying students' learning needs requires collecting data from various sources, such as student development, health conditions, medical diagnoses, and previous learning history. This identification is crucial for planning future learning. Student assessment is crucial, given that each individual has different abilities and health conditions, especially for students with autism. Each student's strengths and weaknesses can be incorporated into learning plans to motivate them, enhance existing abilities, and address existing barriers. Social and cultural support is crucial for developing a learning program

for students with autism. Understanding a child's condition is crucial for building a sense of community and supporting optimal learning.

Current environmental and sociocultural conditions require more extensive outreach and education. A lack of understanding among schools, families, and the community often impacts student learning. This requires student-centered learning, where schools need to create an environment and culture that continuously supports the learning of students with autism so they can learn well. While families are very understanding, many people still don't fully understand autism, which often hinders student development. An understanding and caring school environment is necessary to prepare students for comfortable learning. Socialization is often carried out by autism-focused organizations, which are still very limited in this area. The stigma that exists in society that children with autism are unable to learn and attend school is a barrier for families to send their children with autism to school as early as possible.

b. Input Evaluation

The availability of teaching staff in schools is a problem in the learning of students with autism. Schools with students with autism, with all their challenges, require more teachers than regular schools. Students require assistant teachers, or even their own teachers, if possible, for individual instruction. Furthermore, some students with severe disabilities who frequently experience tantrums will require special classroom management.

The availability of teaching staff without a background in special education will hinder classroom learning in dealing with students with autism who have problems with gross and fine motor skills, socialization, or who cannot speak. Teaching staff in classes with students with autism are not only tasked with providing academic education for students but also need to be able to address the child's challenges. Other professionals are also needed to address the problems of students with autism. Therapists are needed who can address the deficiencies needed to support classroom learning. Therefore, schools need other professionals in addition to teaching staff.

All special education schools still have a significant shortage of teaching staff with special education competencies. Therefore, teaching staff with non-special education backgrounds need to independently obtain or participate in additional training outside of school. This will complicate matters for educators, and such training is rarely held in the regions. Schools need to conduct their own training, involving multidisciplinary professionals to improve the quality of learning in schools. Resource persons from education, health, psychology, and therapists are needed who can collaborate in caring for students with autism. Currently, the training received focuses more on educational training to improve competency in learning and teaching materials.

Furthermore, schools need teachers who are highly motivated to develop their potential and competencies without waiting for routine training provided by the Education Office. Schools need to motivate teachers to develop their competencies. In today's digital technology era, teachers need to learn independently using cross-border technology and have visionary thinking to continuously update rapidly evolving knowledge. Furthermore, teaching staff for students with autism requires adequate facilities and infrastructure. Ensuring a welcoming and safe learning environment for students with autism is crucial, as they may have special space and design requirements to minimize distractions and

maximize focus. The provision of assistive devices, such as learning aids and sensory, occupational, and speech therapy materials, is crucial for helping students with autism learn more effectively.

Schools currently have supporting infrastructure, but these are inadequate, particularly for the provision of supporting equipment for training related to students with medical disabilities. Support for the provision of infrastructure and operational costs at schools through the Special Allocation Fund (DAK), School Operational Assistance (BOS), and foundation subsidies is a valuable support for the sustainability of learning programs. Schools are building partnerships with various parties to improve the quality of learning. These partnerships need to be clearly understood by all parties. Each party's duties and responsibilities are crucial for ensuring the collaboration benefits the school and improves the learning of students with autism. Collaborations need to be periodically evaluated to ensure they are running smoothly and are mutually beneficial. Collaborations that fail to produce results will not contribute to student learning.

c. Process Evaluation

The daily learning process for students with autism is carried out according to a schedule developed based on the national curriculum. Learning activities vary between academic, social, and independent activities. The national curriculum, or independent curriculum, is implemented using a variety of learning methods for students with autism. Several approaches to teaching children with autism currently exist, but the most commonly used in schools today are Applied Behavior Analysis (ABA), a behavioral therapy designed to increase positive behavior and reduce negative behavior; Treatment and Education of Autistic and Related Communication-Handicapped Children (TEACH), a structured approach using visual aids to help students better understand tasks and become independent in completing them; and Picture Exchange Communication System (PECS), a therapy that uses picture cards or symbols for communication. These therapeutic approaches are important for educators of students with autism to understand because they significantly contribute to learning outcomes and reduce existing barriers to optimal learning. Additionally, students with autism require speech and language therapy, occupational therapy, sensory therapy, physiotherapy, and other interventions. Unlike previous approaches, this therapy requires professionals with relevant competencies.

Each school has its own specific learning strategy for classroom management. Some employ groups based on ability, while others implement individual learning. This, of course, depends on the condition of infrastructure and the availability of teaching staff. Individualized learning in the classroom requires the support of teaching staff appropriate to the number of students. This will be more beneficial if the teaching staff also possess the appropriate competencies and professionalism to develop appropriate learning according to the established lesson plan. Group learning, on the other hand, benefits students with socialization and communication difficulties. The individualized education program should position students as active participants in learning through the use of various modern technologies. Teachers need to develop interactive learning media to enable students to engage directly in learning. This requires teachers with adequate digital technology competencies. The use of digital technology for students with autism is particularly appealing because they are strong visual learners. Learning in schools is currently monitored and regularly supervised by the Education Office. Supervision of learning by teachers is carried out by the principal. The Provincial Education Office regularly supervises special needs schools (SLB). Supervision is crucial for maintaining the quality of

learning by both teachers and principals. Supervision is also crucial for maintaining the continuity of standardized learning.

Parental involvement in learning has been implemented through in-class and out-of-class activities, competitions, and meetings. In practice, some parents are involved, while others are not. Currently, parental involvement in learning is limited to school requests for meetings, extracurricular activities, or accompanying children in competitions. Parents are not yet actively involved in student learning. Parents need to understand their children's learning so they can implement it at home and in activities outside the home. Parents need to monitor their children's learning achievements regularly and continuously. Family-based learning is highly beneficial for students with autism because they require structured learning and repeated reminders not only in school but also outside of school. Challenges faced by schools in learning include student tantrums and lack of focus during learning. Other challenges include teacher consistency in dealing with children, the effectiveness of children's attendance at school, and parental support.

In learning, students with autism sometimes experience tantrums, which teachers can or cannot manage. These tantrums stem from various causes and require solutions. A teacher's skill in reassuring the child will help the student stop acting out. Tantrums can impact students, preventing them from continuing their learning that day. Another obstacle is teacher consistency. This is caused by the teacher's inability to provide consistent lessons for students. Teachers need training to educate students with autism. The barriers to student attendance and parental support are closely related. Parental support in student activities is essential to encourage students to attend school every day. The lack of assistance to school can lead to students not attending. School factors can also contribute to students' dislike of school. Therefore, a comfortable school, friendly teachers, and learning activities tend to attract students to school.

d. Product Evaluation

Results or changes seen in students after participating in a learning program occur gradually, visible in their behavior and changes in academic grades. Student changes are assessed through behavioral and social changes in addition to academic ones. Some schools show rapid progress, while others are less so. Behavioral and social changes serve as the basis for school assessments in addition to academic ones, as children with autism have significant behavioral and social challenges that can hinder classroom learning. Slow changes often lead to parents' frustration in trying to keep their children engaged in school.

Some learning outcomes, according to the school's plan, are achieved, while others are not. This is due to student barriers to learning. If these barriers are still perceived as lacking, it is the school and teachers' responsibility to find solutions to overcome these barriers. This requires multidisciplinary collaboration. Reports on student learning outcomes are provided periodically at midterm and annually. Another form of recognition is displaying student worksheets in the classroom to recognize student work. Reports on learning outcomes provide parents with feedback on their children's learning achievements so they can track their progress. Continuous evaluation of learning for students with autism is essential to ensure continuous monitoring of their progress from kindergarten through high school.

Schools must have plans for future development or improvement of learning programs, based on learning reflection, so teachers can identify areas of unmet needs and identify the causes. Other plans include teacher recruitment and infrastructure. Schools must implement future development plans to improve the quality of educational services by reflecting on the evaluation results.

Barriers to Implementing Learning Programs for Students with Autism in Special Needs Schools in North Sulawesi Province

The challenge of assisting children learning at home is indeed a significant issue, with children becoming too clingy and easily bored when taught at home. This reflects the reality that not all parents feel comfortable or ready to adapt effective teaching methods at home. Parents' limitations in handling children's tendencies to clingy or easily bored children indicate a gap between learning at home and at school. Children accustomed to structure and routine at school may struggle with a more flexible or relaxed approach at home. In this context, the role of parents is crucial in understanding their children's learning styles and finding ways to make learning more engaging and structured. Additional support for parents, such as training or guidance on how to manage an effective home classroom, can help parents feel more confident in assisting their children's learning.

Furthermore, it is important to create a pleasant atmosphere to prevent children from getting bored quickly. This can be achieved through a variety of approaches, such as utilizing engaging learning media, providing break times, or even adapting materials to be more relevant to the child's interests. In addition, schools can also provide clearer guidance on more creative and innovative methods to implement at home to ensure consistency between home and school learning. In conclusion, the challenges of assisting children with learning at home reflect the need for greater support for parents to optimally contribute to their children's learning, both in terms of pedagogical knowledge and the application of appropriate teaching techniques.

Barriers for educators arise when dealing with students who struggle to respond. Teachers typically try a personal approach by building emotional connections and consistently providing positive reinforcement. To engage students, teachers also try to relate learning materials to their interests, involve interactive activities, and use visual aids to make them more engaging for students with autism. Frequently encountered barriers include students' inability to focus, aggressive behavior, and sensitivity to sound and the environment. In terms of competency, most teachers felt the need to improve their knowledge and skills related to special education. They also mentioned the importance of patience, empathy, and flexibility in dealing with students' mood swings. Although not all teachers have received specialized training, some have experience in special education. The main challenges faced are the need for extra patience, adaptation of methods to individual needs, and limited resources such as inadequate teaching aids and other infrastructure.

Other obstacles to implementing learning programs for students with autism in Special Needs Schools (SLB) in North Sulawesi Province demonstrate the multidimensional challenges that must be addressed to achieve optimal special education. Key barriers include limited access and infrastructure, as well as a shortage of special educators. SLBs in North Sulawesi generally face significant human resource challenges. Teaching students with autism requires educators who possess not only basic teaching skills but also in-depth knowledge of the autism spectrum, alternative communication techniques, and individualized approaches. However, the limited number of educators specifically

trained to address the needs of students with autism is a crucial issue. Many teachers may not fully understand techniques such as image-based communication or assistive technology devices designed to support the learning of children with autism. Even with training, implementation of these skills can be hampered by the high workload due to the limited number of teachers in SLBs. Continuous training programs and increasing the number of specially trained teachers for autism are crucial steps to improve the quality of education in SLBs, as students with autism require individualized and varied educational programs tailored to their individual potential and circumstances. Students with autism require vocational skills that are more focused on life skills, encompassing personal, vocational, social, and academic skills.

Although the government allocates significant funding annually through the state budget (APBN) and regional budgets (APBD) for the procurement of equipment and rehabilitation of special education (SLB) facilities, the existing infrastructure remains inadequate to support the learning of children with autism. Students with autism often require a distraction-free learning environment with a special design that supports sensory and motor skills, as well as specialized equipment. However, many SLBs may not be equipped with autism-friendly classrooms, such as rooms with soundproofing or lighting adjusted to reduce overstimulation. Furthermore, the availability of assistive devices such as sensory toys, audio-visual devices, and other assistive technology is often limited. This lack of support suboptimally impacts the learning experience for children with autism, as the available facilities are not tailored to their specific needs. Learning for students with autism often requires cross-sectoral support, particularly from health and social welfare. Autism is not only about academic limitations but also encompasses aspects of mental and physical health. This is especially important during initial school screening and appropriate treatment for students' needs. In North Sulawesi, support from the health sector, such as child development services, psychiatry, therapy, or family counseling, remains limited and often poorly coordinated with the education system. Furthermore, many families may face financial barriers to accessing additional therapy or counseling outside of school. Closer cross-sector collaboration between education and health departments, as well as social service providers, is crucial to ensure a more holistic approach to students with autism. This could include providing therapy services in schools or subsidizing families who require medical services outside of school, ensuring that autistic students' education encompasses physical, mental, and social aspects in an integrated manner.

Another equally important issue is social stigma and a lack of public understanding of autism. Many parents and the general public still have negative perceptions or lack understanding of the needs of children with autism, resulting in social exclusion that impacts the psychological well-being of children and their families. Fear of stigma often prevents families from accessing special education services or recognizing their child's special needs. Lack of public knowledge about autism also contributes to a less supportive school environment. In some cases, children with autism in unsupportive environments can experience additional stress that hinders their learning progress. Educational and outreach programs targeting the general public and parents are essential to changing attitudes toward autism, ensuring these children are accepted in more inclusive social and educational environments and are quickly identified and enrolled in school.

Overall, the barriers to implementing learning programs for students with autism in special needs schools in North Sulawesi require a long-term strategy that includes equitable access, improving the

quality of human resources, investing in adequate infrastructure, data-driven evaluation, close cross-sector collaboration, and changing social attitudes through public education. By addressing these barriers, local governments can create an inclusive and holistic educational environment for students with autism, enabling them to grow and develop according to their potential.

Data shows that learning programs for students with autism in special schools in North Sulawesi Province integrate several comprehensive elements, from multidisciplinary assessments to a curriculum focused on individual abilities. The Individual Learning Plan (IEP) is the core foundation, tailored to each child's needs. The IEP includes specific goals for social, communication, and academic skills that are measured periodically. The IEP evaluation process emphasizes the child's progressive achievement of independence and social interaction skills, supported by an assessment team. However, limited competent human resources prevent the IEP from being implemented optimally. The program also emphasizes the importance of supportive therapy as an integral part of learning. Occupational therapy, for example, plays a role in helping children develop fine and gross motor skills that support independence in daily activities, such as dressing and eating. Evaluation of the effectiveness of this therapy is conducted through regular observation of the child's ability to implement the trained skills, which are targeted through repeated therapies, such as behavioral therapy and physical therapy, which target coordination and muscle strengthening. A structured, patterned, and consistent, principles-based approach is also adopted in the daily learning process. Autistic children typically develop optimally in an environment with structure and scheduled activity patterns. Therefore, evaluation of the consistency of these learning patterns is also conducted to ensure that the patterns implemented at school are also adopted at home.

Furthermore, integrated therapeutic support plays a crucial role in the learning of autistic children in special needs schools. Various types of therapy, such as occupational therapy, physical therapy, speech therapy, behavioral therapy, social therapy, occupational therapy, and sensory integration therapy, are needed to help children overcome the challenges of motor development, communication difficulties, and sensory hypersensitivity often experienced by autistic children. Occupational therapy, for example, helps improve a child's delayed motor skills, while speech therapy and behavioral therapy facilitate children in developing speaking skills and responding appropriately to their environment. This multidisciplinary approach has been proven to help autistic children manage their condition holistically, ultimately contributing to their success in learning. However, in practice, schools cannot provide this support because it requires collaboration with multidisciplinary professionals and the preparation of supporting equipment, which requires significant funding. Furthermore, this program applies a skill-oriented curriculum tailored to each child, supported by methods such as Discrete Trial Training (DTT). This approach breaks down each skill learned into small parts that are repeated consistently until the child fully masters them. Visual methods such as PECS (Picture Exchange Communication System) are also applied to communication training, as many autistic children are visual learners. Evaluation of the effectiveness of this method measures how well children understand and use visual communication tools in everyday life. However, it is important to understand that this can only be achieved if supported by the availability of adequate learning support tools.

Based on interviews with the school principal, he shared his view of autism as a developmental disorder that hinders communication and social interaction. According to him, children with autism

exhibit several signs and symptoms, such as difficulties with communication, social interactions, and following school lessons. They stated that children with autism can attend school, but they often experience difficulties concentrating on their learning. Communication difficulties also affect these children's learning outcomes, as they may struggle to understand and express thoughts or questions relevant to the subject matter. From his experience teaching at a special needs school, he emphasized that communication barriers are a major factor affecting the learning outcomes of students with autism. However, the school lacks specialized facilities for children with autism, which can hinder meeting the learning needs of students with this condition. The availability of supporting facilities and infrastructure in the classroom impacts more effective learning. Students with autism experience difficulties interacting in the classroom, such as differences in sensory processing, executive function deficits, language and communication challenges, differences in cognitive processing, learning style preferences, and restrictive and repetitive behaviors.

The above can be important indicators for the government and educational institutions to pay attention to and design more in-depth policies to improve student quality. Adding facilities to support children's talents goes beyond adding physical space, but involves developing a more comprehensive curriculum that includes therapy, counseling, and talent development. This will result in a more balanced and inclusive quality of education. Overall, this proposal reflects the societal need for a more holistic and integrated approach to education, with greater attention paid to students' mental health and character development, beyond mere academic ability.

Supporting Factors in the Implementation of Learning Programs for Autistic Students in Special Needs Schools in North Sulawesi Province

Evaluation of the learning system at this school was conducted through direct supervision during the teaching and learning process. Furthermore, teacher learning in the classroom was monitored to ensure the teaching methods used supported the learning needs of students with autism. To support the education of children with special needs, the school received assistance in the form of ICT facilities, infrastructure, and learning support tools from the Ministry of Education and the Provincial Education Office. This significantly assisted the school, as these costs would not be covered solely by the private sector. The majority of SLB education providers are private. The government's policy of empowering the private sector in special needs education is a good strategy to open access for children with special needs to education.

Furthermore, the role of teachers is crucial. Special Needs Schools have teachers, but only a small proportion of them possess competency in special education. To improve their competency, teachers are encouraged to utilize digital technology, participate in training, and read books related to improving their teaching skills. Based on interviews with teachers regarding learning for students with autism, several key points were identified. Teachers generally understand autism as a developmental disorder that affects a child's behavior, communication, and social interactions. They are able to identify and explain common signs and symptoms such as lack of eye contact, repetitive behaviors, speech delays, difficulty interacting socially, and a tendency toward tantrums or aggressive behavior.

Interviews indicate that parents who send their children to special schools are generally satisfied with their children's academic development and social skills. On average, parents observe positive developments in both academics and social skills, as well as their children's independence. For some

parents, the primary reason for choosing a school is because it is well-suited to their children's needs, particularly those with special needs such as ASD (Autism Spectrum Disorder). Over time, they see improvements, particularly in communication and independence. Parents' suggestions for additional facilities to support their children's talents reflect an awareness of the importance of holistic education. In this context, they not only want their children to succeed academically but also to ensure their behavioral and emotional needs are optimally developed. Some parents choose special schools because they see them as places that support their children's social development. This choice stems from the belief that an environment that addresses special needs can provide more than just an academic education; They also provide space for social and emotional development. For example, one parent stated, "I feel like a school that's suitable for my child is one that interacts with other children his age and personality," indicating the importance of peer interaction as part of the school experience.

This indicates that parents' motivation in choosing a special school focuses not only on curriculum adaptation, but also on how the school creates a welcoming and supportive environment for children with special needs. This inclusive approach is considered crucial for helping children develop social skills, boosting self-confidence, and reducing feelings of isolation. In this regard, the school's role is not only as an educational institution, but also as a community that strengthens children's social relationships with their environment. Overall, a supportive social environment is key for parents in choosing the right school for children with special needs. This provides insight into the social aspect of education being a priority for parents, especially in the context of special education.

The improvement in children's academic achievement and social skills demonstrates effective collaboration between schools and parents in supporting their children's development. A parent's statement, "Every year there's always improvement," suggests that the school's educational process focuses not only on academic outcomes but also includes aspects of social development. From a child development perspective, social skills are a crucial part of helping children interact with their environment, develop empathy, and understand social differences. These improvements in skills demonstrate that schools are able to provide a conducive environment for social learning, through group activities, joint projects, or learning approaches that involve interaction between students. Parents observing these changes may feel that the education provided has a lasting impact. Furthermore, with these gradual improvements, children are able to develop not only academically but also become more independent and responsible. They learn to manage their time, overcome challenges, and find ways to achieve goals independently, which are important assets for their lives. This demonstrates that schools can serve as places for character development and independence that provide added value beyond the formal academic curriculum.

The implementation of learning programs for students with autism in Special Needs Schools (SLB) in North Sulawesi Province involves several significant supporting factors, including infrastructure, budget, cross-sector support, and teacher training. One key component is infrastructure support and a special budget allocation from the provincial government, which ensures that SLBs have adequate facilities, such as classrooms, learning support equipment, and an environment appropriate to the special needs of students with autism. This budget allows for renovations and improvements to facilities, creating a more conducive environment for the development of students with autism and providing access to relevant learning tools to enhance their interaction and understanding. Although not all learning support tools are available, cross-sector collaboration is crucial in supporting the quality

of learning in special needs schools. This collaboration aims to expand the scope and quality of education for children with special needs. Various competitions and festivals for special needs students, such as olympiads and talent competitions, provide students with autism with the opportunity to develop their social skills, talents, and interests. By participating in these activities, students are encouraged to participate in an environment that supports their social and emotional development, which is essential for improving communication and social interaction skills.

The learning program for autistic students in Special Needs Schools (SLB) in North Sulawesi is influenced by several important interrelated factors, including the curriculum, therapy support, the quality of the supervising teacher, the social environment, and the child's health and emotional aspects. The integrated curriculum, which combines the independent curriculum and the Individual Education Plan (IEP) approach, which adapts the learning process to each child's unique needs, requires specialized skills from the teaching team. In special needs learning, various skills such as communication, social skills, academic skills, and independence need to be integrated gradually. This structured curriculum allows autistic children to acquire skills that will help them in their daily lives and improve their ability to adapt to social environments. The supervising teacher plays a central role as the main facilitator in implementing the curriculum, learning objectives, and learning objectives, as well as teaching modules in SLB. A teacher trained in the education of children with autism needs to possess patience, creativity, and a deep understanding of the basic principles of learning appropriate for autistic children, such as structure, patterns, and consistency. With this approach, teachers can respond effectively to children's needs and maintain continuity of learning at school and at home. The sensitive and consistent teaching quality of the supervising teacher helps autistic children feel safe and accepted, enabling them to learn better and feel comfortable in their environment.

Furthermore, a supportive social environment is also a crucial factor in the development of autistic children in special needs schools (SLB). Interaction with peers, family support, and an inclusive community provide opportunities for these children to practice their social skills. A positive social environment not only helps autistic children improve their communication and social skills but also builds their self-confidence, which is crucial for their adaptation to various life situations. Overall, learning programs for autistic students in special needs schools in North Sulawesi are successfully implemented when all these factors work synergistically, providing full support for autistic children to develop academically, socially, and emotionally.

DISCUSSION

Evaluation of learning programs for students with autism in special schools in North Sulawesi Province.

Limited access to special education in North Sulawesi is evident in the distribution of special education schools (SLB) across regencies and cities across North Sulawesi Province. The largest concentration of special education schools is in Manado and Bitung. Furthermore, many special education schools cater to a variety of disabilities, not just one. The annual increase in the number of children with autism demonstrates the importance of preparing for special education. This aligns with the government's commitment to education for children with special needs, as outlined in the current vision of the Ministry of Primary and Secondary Education: Quality Education for All. Education for children with special needs requires consideration of the shortage of teachers with special education and supporting infrastructure, as well as integrated multi-sectoral management if inclusive schools are

to be implemented as the sole solution for special education today. Coordination between the Education Office, the Health Office, the Social Service Office, and other relevant agencies opens up opportunities for the development of educational programs that also address the health and social aspects of children with autism, which often require a holistic or multi-professional approach. Steven Merahn (2024) emphasized the importance of implementing a holistic approach to autism management. Care for individuals with autism encompasses the whole person in a biopsychosocial context. Children and adults with autism often have overlapping health care needs across medical, behavioral, social, educational, home, and community services. When these services are not integrated, this can lead to fragmentation or inefficiency, which can reduce optimal quality of life. Research by Kristin et al. (2021) suggests that interdisciplinary collaboration requires consideration of potential conflicts in practice, as each party comes from a variety of educational backgrounds and unique values. Therefore, it is necessary to establish an Integrated Professional Services Team that collaborates in collaborative care in special schools through involvement in the development of integrated teaching modules.

Currently, schools use the Independent Curriculum, which is expected to provide flexibility in adapting learning methods to meet student needs. The Independent Curriculum was designed to improve the quality of education by empowering schools and local governments to implement education according to student and regional needs. The Independent Curriculum also integrates synergy between various educational stakeholders to address the current rapid technological revolution and incorporates various methods and strategies for student learning (Kurniasi, 2023). Children with special needs will have numerous opportunities to learn using this system because teachers can innovate more broadly to improve student learning outcomes. Although supported by a flexible curriculum, the education system within the Independent Curriculum has not yet integrated children's medical conditions into the learning process. Sembiring et al. (2024) found in their research at SDN Keleyan 1 Bangkalan that children with autism face two main learning challenges: low focus and rapid mood swings. This requires appropriate individual intervention. The significant barriers across sectors such as education, health, and social aspects necessitate holistic management of students with autism (Mailindawati et al., 2021).

Evaluating the use of the Education Report Card as a basic tool for developing school needs is another significant challenge. Some special schools (SLB) still haven't optimally implemented the Education Report Card, which ideally would provide measurable insights into student achievement, curriculum evaluation, and the effectiveness of designed learning programs. The use of the Education Report Card can help track the progress of individual students with autism and provide useful data for evaluating overall education policies. With this data, policymakers can develop more targeted steps to improve the quality of learning, whether through increasing the capacity of special educators, curriculum improvements, or pedagogical interventions that better suit students' abilities. This aligns with research by Melan and Sukirman (2017), which states that evaluations are conducted at every stage and in the daily learning process through a liaison book. The liaison book is crucial because by tracking a child's development, parents also monitor their child's progress. Parental support is crucial in the learning of children with autism. Therefore, communication between the school/teacher and parents is a key asset in supporting successful learning at school. Parents and teachers can monitor the

progress of each stage to help create individualized learning modules tailored to the student's strengths and weaknesses.

Barriers to implementing learning programs for students with autism in special schools in North Sulawesi Province.

North Sulawesi Province has 37 special schools (SLB) consisting of 6 public schools and 31 private schools, serving a total of 1,665 students. This data shows that most special schools are still dominated by the private sector, indicating a reliance on the provision of special education services outside the direct control of the government. With only 6 public special schools, the distribution of government-owned special schools is uneven, resulting in certain areas, such as North and South Bolaang Mongondow, lacking access to special schools, a significant barrier for children with autism in remote areas. According to Mawei et al. (2019), special schools in North Sulawesi are a combination of schools that serve various disabilities. This results in an unorganized education and services system, forcing many children with special needs to enroll in mainstream schools. This presents new challenges for schools and teachers accustomed to the general education system.

The shortage of teachers with special education competencies in North Sulawesi Province is a challenge for special education now and in the future. This will impact the quality of service in special education schools. High motivation and commitment are needed not only to complete academic tasks but also to contribute to the future development of special education in North Sulawesi. Special education teachers face significant challenges in learning, requiring long periods of time to achieve learning outcomes and special skills in developing teaching modules to tailor learning to students' needs. The current shortage of special education teachers is another crucial factor in anticipating the significant increase in the number of children with autism each year. Empowering non-special education teachers is an alternative to address the shortage of special education teachers. The Education Office needs to improve the competency of regular teachers through training related to education and the care of children with special needs, the use of technology, and the development of both formal and informal curriculums, in accordance with Governor Regulation No. 12 of 2022 concerning the structure of special education, especially supported by the availability of the Special Education Program at UNIMA, which could provide significant opportunities for improving the competence of teachers with special education in North Sulawesi Province.

Supporting Factors in the Implementation of Learning Programs for Students with Autism in Special Needs Schools in North Sulawesi Province

In the learning process, teachers use a variety of methods tailored to the individual needs of each student. Commonly used methods include ABA (Applied Behavior Analysis), visualization, consistent routines, and positive reinforcement. Learning strategies are implemented individually using visual media, such as images and videos, which are considered more effective for students with autism. Furthermore, some teachers implement initial assessments to understand students' strengths and challenges, then adapt the curriculum to suit their specific needs. Teachers play a crucial role in curriculum implementation. Therefore, successful learning relies not only on the curriculum but also on the competence of the teachers. Another supporting factor is collaboration between schools, the government, and parents (Kurniasih, 2023).

Creative, innovative, and forward-thinking teachers will produce creative, innovative, and forward-thinking children. Therefore, a sustainable education system that prioritizes teacher competence is one solution for developing a future special education system. Today's remarkable technological advances allow for the design of visual learning that engages students with autism. Modifying teaching models will help students with autism overcome learning difficulties. Combining creative learning with music and digital technology provides opportunities for children with autism to explore creativity in learning. The influence of music is very beneficial in the learning of children with autism. Lee & FangLin (2023) studied the influence of music technology on improving communication, emotional control, and social behavior in children with autism. El Marakbi et al. (2023) found in their research that the use of digital technology tools is very beneficial in improving the learning skills of students with autism. Therefore, the competence of special education teachers who can collaborate on a special education system based on digital technology and arts education is absolutely necessary. In terms of communication, most parents prefer direct or telephone communication with the school to monitor their child's progress. This demonstrates the need for close interaction between parents and schools to effectively support children's development. This study reveals that parents' understanding of improving student learning outcomes is already very good. It is known that educational responsibility ultimately rests with parents because children only spend a short time at school, so goals are needed to develop students' abilities as adults. Teachers and parents must be able to provide time and energy to prepare long-term plans for students (Pieters, T., 2009). Overall, this reflects the relationship between parents and educators in their children's education, while highlighting the challenges faced in supporting the continuity of learning from school to home.

CONCLUSION

This study concludes that the learning program for students with autism in special needs schools (SLB) in North Sulawesi Province is implemented under the guidance of the North Sulawesi Provincial Education Office. Regulations adhere to the Education Regulations of the Indonesian Ministry of Education. Learning policies in special needs schools in North Sulawesi already have provincial regulations. These regulations are still not integrated, resulting in the management of students with autism being implemented independently by each agency. Learning programs in SLB are largely implemented by educators with non-special education backgrounds due to the limited number of educators with special education backgrounds. Therefore, schools need to improve the competency of teachers. Likewise, teachers are required to improve their professionalism to develop learning programs for students with autism in line with current technological developments. Learning programs for students with autism in SLB require collaboration with various relevant parties, including cross-sectoral institutions, academics, the private sector, and community organizations, to support each other in improving student learning programs both in and outside of school. The success of this program depends heavily on collaboration between teachers, parents, doctors, and therapists to provide adaptive and responsive education that focuses not only on academic aspects but also on developing essential life skills for autistic children for their future independence. Collaboration between parents, teachers, and all related professionals significantly contributes to improving learning outcomes for students with autism. Learning in schools requires ongoing evaluation and monitoring to ensure that all aspects, from

interventions conducted by parents to teaching methods implemented by teachers, are well-structured and integrated according to standardized lesson plans.

The biggest obstacle in learning programs for students with autism is the limited availability of specialized facilities and infrastructure tailored to their needs. Another obstacle is multi-sector collaboration. Limited collaboration with relevant parties makes it difficult for students with autism to access additional services, such as routine therapy or social skills development programs outside of school, which should be an integral part of their learning. Synergy between central and regional government policies is essential for achieving positive learning outcomes for students with autism. Financial assistance for facilities and infrastructure, along with school and human resource development, helps improve the quality of learning for students with autism. The commitment, enthusiasm, and creativity of principals and teachers in classroom learning can foster a conducive and creative environment for student learning. Support from parents, family, and the community can provide strong encouragement for students with autism to become independent and creative.

Recommendations

1) Regional governments need to establish regulations for cross-sector connectivity across government, community, and private sectors to enhance integrated service support and improve standardized educational services for students with autism.
2) Professional and visionary teacher training programs for educators and teaching staff in special needs schools (SLB), both those with special education and non-special education backgrounds, need to be systematically planned and implemented to ensure educators have adequate skills in managing and delivering effective learning for students with autism.
3) Integrated home-school learning programs need to be developed by increasing family involvement to optimally improve learning outcomes.
4) Continuous evaluation is needed to monitor student program achievement on an ongoing basis.
5) Schools need to build networks for education and care for children with autism, both at the local, district, and city levels, nationally, and internationally, to develop learning programs in line with the latest developments in knowledge.
6) Schools can empower parents to participate in their children's learning and therapy programs. Collaboration between schools and families is fundamental to maintaining the consistency of learning and therapy methods applied, both at school and at home.
7) The government needs to prepare regional regulations regarding integrated cross-sectoral care for children with special needs to ensure the continuity of special education. These regulations will include the provision of special education personnel, the improvement of special infrastructure, and community empowerment to support early detection of children with special needs, health services for children with disabilities and health disorders, and the enhancement of social service programs for children with limited access to special education.
8) Parents need to form groups to build collective support for the learning of students with autism in schools.

REFERENCES

Adi, I. R. (2003). Pemberdayaan, pengembangan masyarakat dan intervensi komunitas:(pengantar pada pemikiran dan pendekatan praktis). Lembaga Penerbit, Fakultas Ekonomi, Universitas Indonesia.

Adi, I. R. (2015). Intervensi Komunitas & Pengembangan Masyarakat Sebagai Upaya Pemberdayaan Masyarakat.

Al-Fraihat, D., Joy, M., Masa'deh, R., & Sinclair, J. (2020). Evaluating E-learning systems success: An empirical study. Computers in Human Behavior, 102, 67–86.

Al Jaffal, M. (2022). Barriers general education teachers face regarding the inclusion of students with autism. Frontiers in Psychology, 13, 873248.

Arikunto, S. (2021). Dasar-dasar evaluasi pendidikan edisi 3. Bumi Aksara.

Arikunto, S., & Jabar, C. S. A. (2010). Evaluasi Program Pendidikan, Pedoman Teoritis dan Praktis Bagi Mahasiswa dan Praktisi Pendidikan, Ed. Kedua, Jakarta: PT. Bumi Aksara.

Arikunto, S., & Jabar, C. S. A. (2014). Evaluasi Program Pendidikan: pedoman teoritis praktisi pendidikan.

Aulia, A. I. (2019). Model Pembelajaran Bagi Anak Autis Di Sekolah Dasar Negeri Ketawanggede Malang. Universitas Islam Negeri Maulana Malik Ibrahim.

Barghi, F., Safarzadeh, S., Marashian, F. S., & Bakhtiarpour, S. (2023). Effectiveness of DIR/Floor Time Play Therapy in Social Skills and Emotion Regulation of Children with Autism Spectrum Disorder. Middle East Journal of Rehabilitation and Health Studies, 11(2).

Basuki, S. (2006). Metode Penelitian. Jakarta : Wedatama Widya Sastra.

Bhakti, Y. B. (2017). Evaluasi program model CIPP pada proses pembelajaran IPA. JIPFRI (Jurnal Inovasi Pendidikan Fisika Dan Riset Ilmiah), 1(2), 75–82.

Bowman, K. S., Suarez, V. D., & Weiss, M. J. (2021). Standards for interprofessional collaboration in the treatment of individuals with autism. Behavior Analysis in Practice, 14(4), 1191–1208.

Brinkerhoff, R. O. (1983). Success case: A low-cost, high-yield evaluation. Training and Development Journal, 37(8).

Bush, T. (2007). Educational leadership and management: Theory, policy and practice. South African Journal of Education, 27(3), 391–406.

Bush, T. (2008). Leadership and management development in education.

Catts, H. W., & Kamhi, A. G. (1999). Language and reading disabilities. (No Title).

Chapman, D., & Sarvi, J. (2017). Widely recognized problems, controversial solutions: Issues and strategies for higher education development in East and Southeast Asia. Managing International Connectivity, Diversity of Learning and Changing Labour Markets: East Asian Perspectives, 25–46.

Chepka, O. (2023). Psychological and pedagogical accompaniment of children with autism spectrum disorders. Věda a Perspektivy, 12 (31).

Danial, D., Nurjannah, N., & Mirna, M. (2019). Evaluation of The Learning Program of Mathematics Study Program at Islamic Institute Of Muhammadiyah Sinjai. Matematika Dan Pembelajaran, 7(1), 65–80.

Daroni, G. A., Solihat, G., & Salim, A. (2018). Manajemen Pendidikan Khusus di Sekolah Luar Biasa Untuk Anak Autis. Kelola: Jurnal Manajemen Pendidikan, 5(2), 196–204.

Daryanto, M. (2014). Administrasi pendidikan. Rineka Cipta, Jakarta.

De Boer, A., Pijl, S. J., & Minnaert, A. (2012). Students' attitudes towards peers with disabilities: A review of the literature. International Journal of Disability, Development and Education, 59(4), 379–392.

Deng, M., & Harris, K. (2008). Meeting the needs of students with disabilities in general education classrooms

in China. Teacher Education and Special Education, 31(3), 195–207.

Deng, M., Poon-Mcbrayer, K. F., & Farnsworth, E. B. (2001). The development of special education in China: A sociocultural review. Remedial and Special Education, 22(5), 288–298.

Dewi, A. . (2022). KPPPA: Pandemi COVID-19 sulitkan penyandang autis ke akses pendidikan. https://www.antaranews.com/berita/2721145/kpppa-pandemi-covid-19-sulitkan-penyandang-autis-ke-akses-pendidikan

Edi, S. (2005). Membangun masyarakat memberdayakan rakyat. Bandung: Refika Aditama.

Edwards, D. (2008). Providing practical support for people with autism spectrum disorder: Supported living in the community. Jessica Kingsley Publishers.

Emerson, E., & Heslop, P. (2010). A working definition of learning disabilities. Durham: Improving Health & Lives: Learning Disabilities Observatory.

Faizy, C. B., Lestari, R. W., Roviat, D. D., & Bagaskara, G. A. (2023). 1. Model Pengajaran Untuk Anak Autisme Dalam Proses Pembelajaran Bahasa Indonesia Pada Kelas Homogen Antarjenjang Di Slb Tunas Mulya Surabaya. Jurnal Education And Development, 11(2), 150–154.

Fauziah, A. T., Putri, M., & Lubis, M. A. (2022). Evaluasi Program Keterampilan Anak Berkebutuhan Khusus Di Slb Abc Taman Pendidikan Islam (Tpi) Medan. Jurnal Pendidikan Indonesia, 3(12), 1136–1146.

Fletcher, T., Dejud, C., Klingler, C., & Mariscal, I. L. (2003). The changing paradigm of special education in Mexico: Voices from the field. Bilingual Research Journal, 27(3), 409–430.

Fletcher, T. V, & Lopez, C. K. K. de. (1995). A Mexican perspective on learning disabilities. Journal of Learning Disabilities, 28(9), 530–534.

Gersons-Wolfensberger, D. C. M., & Ruijssenaars, W. A. (1997). Definition and treatment of dyslexia: A report by the Committee on Dyslexia of the Health Council of the Netherlands. Journal of Learning Disabilities, 30(2), 209–213.

Ghony, M. D., & Almanshur, F. (2012). Metodologi penelitian kualitatif. Jogjakarta: Ar-Ruzz Media, 61, 177–181.

Glasper, A., Coad, J., & Richardson, J. (2014). Children and young people's nursing at a glance. John Wiley & Sons.

Glickman, C. D., Gordon, S. P., & Ross-Gordon, J. M. (2001). Supervision and instructional leadership: A developmental approach. ERIC.

Gorton, R., Alston, J., & Snowden, P. (2006). School Leadership and Administration: Important Concepts, Case Studies and Simulations. ERIC.

Greenspan, S. I., & Wieder, S. (1999). A functional developmental approach to autism spectrum disorders. Journal of the Association for Persons with Severe Handicaps, 24(3), 147–161.

Hallinger, P., & Heck, R. H. (2011). Conceptual and methodological issues in studying school leadership effects as a reciprocal process. School Effectiveness and School Improvement, 22(2), 149–173.

Hallinger, P., & Murphy, J. F. (2013). Running on empty? Finding the time and capacity to lead learning. NASSP Bulletin, 97(1), 5–21.

Hidayat, A., & Machali, I. (2010). Pengelolaan Pendidikan: Konsep. Prinsip, Dan Aplikasi Dalam Mengelola Sekolah Dan Madrasah, Bandung: Pustaka Educa.

Holcombe, W., & Plunkett, M. (2023). Bridges and barriers: building an innovative model of support for teachers of students with ASD. In Inclusion, Equity, Diversity, and Social Justice in Education: A Critical Exploration of the Sustainable Development Goals (pp. 217–232). Springer.

Hsiao, Y.-J. (2011). Educating students with learning disabilities in Taiwan. Intervention in School and Clinic, 47(1), 50–55.

Hughes, M. M., Kirby, A. V, Davis, J., Bilder, D. A., Patrick, M., Lopez, M., DaWalt, L. S., Pas, E. T., Bakian, A. V, & Shaw, K. A. (2023). Individualized Education Programs and Transition Planning for Adolescents With Autism. Pediatrics, e2022060199.

Jandorf, B. D., Haven, D., & Nielsen, H. (2005). Dyslexia in Denmark. The International Book of Dyslexia: A Guide to Practice and Resources, 72.

Jensen, V. K., & Sinclair, L. V. (2002). Treatment of autism in young children: Behavioral intervention and applied behavior analysis. Infants & Young Children, 14(4), 42–52.

Johnson, M. S., & Hernandez Rodriguez, F. P. (2005). The handbook for educators who work with children of Mexican origin. http://people.uncw.edu/martinezm/%0AHandbook/html/about.htm

Kritzer, J. B. (2011). Special education in China. Eastern Education Journal, 40(1), 57–63.

Learning, A. (2002). Health and life skills. Interactions, 2, 6.

Leblanc, L., Richardson, W., & Burns, K. A. (2009). Autism spectrum disorder and the inclusive classroom: Effective training to enhance knowledge of ASD and evidence-based practices. Teacher Education and Special Education, 32(2), 166–179.

Lim, L., & Nam, S. S. (2000). Special education in Singapore. The Journal of Special Education, 34(2), 104–109.

Löwe, C., & Schulte-Körne, G. (2004). Dyslexia in Germany. International Book of Dyslexia: A Guide to Practice and Resources, 100–102.

Lynch, S. L., & Irvine, A. N. (2009). Inclusive education and best practice for children with autism spectrum disorder: An integrated approach. International Journal of Inclusive Education, 13(8), 845–859.

MacKay, T., Knott, F., & Dunlop, A. (2007). Developing social interaction and understanding in individuals with autism spectrum disorder: A groupwork intervention. Journal of Intellectual and Developmental Disability, 32(4), 279–290.

Manullang, M. (2002). Dasar-dasar manajemen.

Martha, E., & Kresno, S. (2016). Metodologi penelitian kualitatif. Jakarta: Rajawali Press.

Marzano, R. J., & Marzano, J. S. (2003). The key to classroom management. Educational Leadership, 61(1), 6–13.

Maslow, A. H. (1943). A theory of human motivation. Psychological Review, 50(4), 370.

Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). Qualitative data analysis: A methods sourcebook. 3rd. Thousand Oaks, CA: Sage.

Mithout, A.-L. (2016). Children with disabilities in the Japanese school system: a path toward social integration? Contemporary Japan, 28(2), 165–184.

Moleong, L. J. (2009). Penelitian kualitatif. Jakarta: Rineka Cipta.

Moleong, L. J. (2010). Metodologi Penelitian Kualitatif. In Bandung: Remaja Rosdakarya. Remaja Rosdakarya.

Mount-Cors, M. F. (2007). What is the history of special education in Mexico? http://www.learnnc.org/lp/pages/1911

Muftia, D., Bahri, S., & Bustamam, N. (2020). Model pembelajaran anak autis di SMPLB-CD YPAC Banda Aceh. Jurnal Suloh, 5(1), 10–19.

Munifah. (2009). Manajemen Pendidikan. Kediri : STAIN Kediri Press.

Muri, Y. (2015). Asesmen dan Evaluasi Pendidikan. Jakarta: PT Fajar Interpratama Mandiri.

Mustari, M., & Rahman, M. T. (2014). Manajemen pendidikan. RajaGrafika Persada.

Nagano, M., & Weinberg, L. A. (2012). The legal framework for inclusion of students with disabilities: A comparative analysis of Japan and the United States. International Journal of Special Education, 27(1), 128–143.

Newschaffer, C. J., Croen, L. A., Daniels, J., Giarelli, E., Grether, J. K., Levy, S. E., Mandell, D. S., Miller, L. A., Pinto-Martin, J., & Reaven, J. (2007). The epidemiology of autism spectrum disorders. Annu. Rev. Public Health, 28, 235–258.

Ningrum, L. D. C., Yuwono, J., & Supriyadi, S. (2023). Strategy for the Implementation of Autistic Children's Vocational Programs in Special Schools. JPP: JURNAL PENDIDIKAN DAN PEMBELAJARAN, 30(1), 17–25.

Ningrum, P., Wuryani, W., & Lianty, L. (2021). Strategi Pembelajaran Bahasa Indonesia untuk Siswa Autis. Jurnal Pendidikan Terbuka Dan Jarak Jauh, 22(2), 74–87.

Nurhidayati, I. (2016). EVALUASI PROGRAM ASESMEN BAGI ANAK TUNADAKSA DI SEKOLAH LUAR BIASA GANDA DAYA ANANDA. Jurnal Widia Ortodidaktika, 5(2), 1–12.

Oemar, H. (2003). Kurikulum dan Pengajaran. Jakarta: PT Bumi Aksara.

Ogletree, B. T., & Oren, T. (2001). Application of ABA principles to general communication instruction. Focus on Autism and Other Developmental Disabilities, 16(2), 102–109.

Patton, M. Q. (1980). Making methods choices. Evaluation and Program Planning, 3(4), 219–228.

Penyusun, T. (1999). Kamus besar bahasa Indonesia. Balai Pustaka.

Pereira, D. M., & de Paula Nunes, D. R. (2018). Diretrizes para a elaboração do PEI como instrumento de avaliação para educando com autismo: um estudo interventivo. Revista Educação Especial, 31(63), 939–980.

Poblano, A., Borja, S., Elías, Y., García-Pedroza, F., & de Lourdes Arias, M. (2002). Characteristics of specific reading disability in children from a neuropsychological clinic in Mexico City. Salud Pública de México, 44(4), 323–327.

Poon, K., Musti-Ra, S., & Wettasinghe, M. (2013). Special education in Singapore: History, trends, and future directions. Intervention in School and Clinic, 49(1), 59–64.

Prihatin, E., Aprilia, I. D., & Permana, J. (2018). Model Manajemen Pendidikan Life Skill pada Anak Berkebutuhan Khusus. Jurnal Penelitian Pendidikan, 18(3), 306–317.

Prizant, B. M., Wetherby, A. M., Rubin, E., & Laurent, A. C. (2003). The SCERTS model: A transactional, family-centered approach to enhancing communication and socioemotional abilities of children with autism spectrum disorder. Infants & Young Children, 16(4), 296–316.

Provus, M. (1971). Discrepancy evaluation: for educational program improvement and assessment. McCutchan,.

Rahman, A. A., & Nasryah, C. E. (2019). Evaluasi Pembelajaran (Cetakan Pe). uwais inspirasi indonesia.

Rahmawati, T., Candiasa, I. M., & Suarsana, I. M. (2014). Analisis pembelajaran matematika di sekolah dasar luar biasa (SDLB) B Negeri Singaraja. Prosiding Seminar Nasional MIPA, 2(1), 132–142.

Reich-Erdmann, G. (1999). Educational opportunities for children with disabilities in Mexico. The Bilingual Review, 24(1/2), 135.

Ropii, M., & Fahrurrozi, M. (2017). Evaluasi Hasil Belajar. Yogyakarta: Pustaka Pelajar.

Rubin, E., Prizant, B. M., Laurent, A. C., & Wetherby, A. M. (2013). Social communication, emotional regulation, and transactional support (SCERTS). In Interventions for autism spectrum disorders:

Translating science into practice (pp. 107–127). Springer.

Sansosti, J. M. (2008). The meaning and means of inclusion for students with autism spectrum disorders: A qualitative study of educators' and parents' attitudes, beliefs, and decision-making strategies. University of South Florida.

Scott, J., Clark, C., & Brady, M. P. (2000). Students with autism: Characteristics and instructional programming for special educators. (No Title).

Sharma, U., & Ng, O. (2014). What has worked for bringing out-of-school children with disabilities into regular schools? A literature review. Disability, CBR & Inclusive Development, 25(2), 57–74.

Sigit, C. N., Muarifin, M., Darmawan, A., & Amin, L. (2024). Development of application-based learning for autistic students. Journal of Science and Education (JSE), 4(2), 149–162.

Skinner, B. F. (1965). Science and human behavior (Issue 92904). Simon and Schuster.

Smith, R., Florian, L., Rouse, M., & Anderson, J. (2014). Special education today in the United Kingdom. In Special education international perspectives: Practices across the globe (Vol. 28, pp. 109–145). Emerald Group Publishing Limited.

Stake, R. E. (1967). The countenance of educational evaluation. Teachers College Record, 68(7), 1–15.

Stecher, B., & Davis, W. A. (1987). How to focus an evaluation (Vol. 2). Sage.

Strain, P. S., & Schwartz, I. (2001). ABA and the development of meaningful social relations for young children with autism. Focus on Autism and Other Developmental Disabilities, 16(2), 120–128.

Stufflebeam, D. (2001). Evaluation models. New Directions for Evaluation, 2001(89), 7–98.

Stufflebeam, D. L. (1971). The use of experimental design in educational evaluation. Journal of Educational Measurement, 8(4), 267–274.

Stufflebeam, D. L. (1974). Meta-evaluation. Evaluation Center, College of Education, Western Michigan University Kalamazoo.

Stufflebeam, D. L. (1978). Meta evaluation: An overview. Evaluation & the Health Professions, 1(1), 17–43.

Stufflebeam, D. L. (1982). A review of progress in educational evaluation. Evaluation News, 3(2), 15–27.

Stufflebeam, D. L. (2000). The CIPP model for evaluation. In Evaluation models: Viewpoints on educational and human services evaluation (pp. 279–317). Springer.

Stufflebeam, D. L., Shinkfield, A. J., Stufflebeam, D. L., & Shinkfield, A. J. (1985). An analysis of alternative approaches to evaluation. Systematic Evaluation: A Self-Instructional Guide to Theory and Practice, 45–68.

Sulistiyaningsih, M., & Sukirman, S. (2017). Efektivitas Model Pembelajaran Discerete Trial Training untuk Siswa Penyandang Autisme. Indonesian Journal of Curriculum and Educational Technology Studies, 5(1), 49–56.

Sumiwi, M. E. (2022). Autisme A-Z Webinar Peringatan Hari Peduli Autisme Sedunia2022. https://kesmas.kemkes.go.id/konten/133/0/autisme-a-z-webinar-peringatan-hari-peduli-

Syamsi, I. (2016). Pelaksanaan Evaluasi Asesmen Akademik Siswa Tunalaras Di Slb-E Prayuwana. Jurnal Pendidikan Khusus, 12(1), 31–42.

Tanahashi, S. (2010). Dyslexia in Japan: Clues for better English language learning strategies. Journal of Bunkyo Gakuin, 1–9.

Tayibnapis, F. Y. (2008). Evaluasi program dan instrumen evaluasi untuk program pendidikan dan penelitian.

Tyler, R. W. (1950). Basic principles of curriculum and instruction. Chicago, Ill.: University of Chicago Press.

Tyler, Ralph W. (2013). Basic principles of curriculum and instruction. University of Chicago press.

Tzeng, S. (2007). Learning disabilities in Taiwan: A case of cultural constraints on the education of students with disabilities. Learning Disabilities Research & Practice, 22(3), 170–175.

UNICEF. (2013). Progress on sanitation and drinking-water. World Health Organization.

Volkmar, F. R., Chawarska, K., Klin, A., Chawarska, K., Klin, A., & Volkmar, F. R. (2008). Autism spectrum disorders in infants and toddlers. Autism Spectrum Disorders in Infants and Toddlers: Diagnosis, Assessment, and Treatment, 1–22.

Wahyuni, W., Rivai, F. H., & Silitonga, M. S. (2024). STRATEGI PENANGANAN AUTISME ANAK PADA DINAS SOSIAL PEMERINTAH PROVINSI DAERAH KHUSUS JAKARTA. Jurnal Pembangunan Dan Administrasi Publik, 33–42.

Waisman, T. C., Alba, L. A., & Green, S. A. (2022). Barriers to inclusive learning for autistic individuals. Pediatrics, 149(Supplement 4).

Wang, J., Ma, B., Wang, J., Zhang, Z., & Chen, O. (2022). Global prevalence of autism spectrum disorder and its gastrointestinal symptoms: A systematic review and meta-analysis. Frontiers in Psychiatry, 13, 963102.

Wobick, A. (2013). What Services are School Boards Required to Provide to Students with Disabilities? Education & Law Journal, 22(2), 237.

Wong, B. Y. L., & Hutchinson, N. (2001). Learning disabilities in Canada. Research and Global Perspectives in Learning Disabilities, 197–216.

Xu, S. Q., Cooper, P., & Sin, K. (2018). The 'Learning in Regular Classrooms' initiative for inclusive education in China. International Journal of Inclusive Education, 22(1), 54–73.

Yusuf, A. M. (2017). Asesmen dan evaluasi pendidikan. Prenada Media.

Yusuf, F. (2008). Evaluasi program dan instrumen evaluasi untuk program pendidikan dan penelitian. Jakarta: Rineka Cipta, 14.

Zambrano-Sánchez, E., Martínez-Wbaldo, M. del C., & Poblano, A. (2010). Frecuencia de factores de riesgo para problemas de aprendizaje en preescolares de bajo nivel socioeconómico en la Ciudad de México. Revista Latino-Americana de Enfermagem, 18, 998–1004.

Zeidan, J., Fombonne, E., Scorah, J., Ibrahim, A., Durkin, M. S., Saxena, S., Yusuf, A., Shih, A., & Elsabbagh, M. (2022). Global prevalence of autism: A systematic review update. Autism Research, 15(5), 778–790.