Inclusive Education for Students with Autism Spectrum Disorder in an Indonesian Bilingual Elementary School: A Program Evaluation Study Using CIPP Model

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Abstract. Cases of students with Autism Spectrum Disorder (henceforth referred to as ASD) who could reach university level led the researcher to dig into more information on ASD and education. Observing the unique phenomenon of the daily routines of ASD students in bilingual-inclusive education inspired this study that aimed at evaluating the inclusive education program for children with ASD in a Bilingual Elementary School in North Bali, Indonesia. The program evaluation used the CIPP model by Stufflebean and Coryn (2014). Observations and in-depth interviews were conducted intensively to analyse the context, input, process and product of the program. It was found that the program was carefully designed and implemented with a clear purpose and meaningful results. The context covers the availability of the fundamental requirements and facilities needed to support the program. The input elements provide special education plans for different individuals and qualified human resources. The process elements include instructional practices for maximising the learning process to benefit students with ASD. The product consisted of the assessment instruments, covering both formative and summative assessments. This study concludes that the Bilingual-Inclusive Education Program for students with ASD was well-implemented and can be used as an appropriate source to manage inclusive education for students with ASD in the Indonesian context and other developing countries in Asia.

Keywords: Autism Spectrum Disorder; bilingual program; bilingual elementary school; inclusive education

1. Introduction

The Indonesian Health Ministry has reported on the increasing number of Autistic Spectrum Disorder (ASD) cases year by year. In 2022, there were 5,530 cases of developmental disorders in children recorded, including autism spectrum disorders at 500 cases per year (Kemenkes, 2022). Children with autism spectrum disorders (ASD) have communication and social skills that are impaired, show repetitive and exhibit typical behaviour patterns, reject environmental changes or changes in their daily routines, and exhibit excessive sensory sensitivity (Abdullah et al., 2022; Vlachou & Drigas, 2017; Galligan et al., 2021). Children with ASD also exhibit traits that point to interpersonal communication challenges and show very early literacy skills (Varlamov, 2020; Hughes et al., 2021). ASD can be distinguished from other neurotypical children's conduct by a number of behavioural signs (Vlachou & Drigas, 2017). ASD is defined as involving impairments in interpersonal interaction and communication as well as restricted and recurrent behaviours, hobbies, or activities. Less often than their neurotypical peers, students with autism spectrum disorder (ASD) struggle to initiate conversations, respond appropriately when the subject shifts, and comprehend the meaning and impact of language (Erasmus et al., 2019; Bolourian et al., 2019; Amsbary et al., 2020). Children with autism frequently struggle to read others' emotions as well as convey their own feelings through facial expressions. Understanding difficulties are common in autistic children.

Given the high amount of ASD cases in Indonesia and based on the ASD children's parents' preference to have inclusive regular schools for their children, the constitution of the Republic of Indonesia (UUD 1945) guarantees the right to education for all citizens without discrimination. It emphasises the importance of inclusive education and equal opportunities for students with disabilities and other special needs. Ministerial Regulation No. 70/2009 on Inclusive Education issued by the Ministry of National Education (now the Ministry of Education and Culture) provides guidelines for the implementation of inclusive education (Kemdikbudristek, 2022). It emphasises the inclusion of students with disabilities and special needs in regular schools, the adaptation of teaching methods, and the provision of support services and facilities to enhance their learning. These regulations clearly state that inclusive education aims to provide equal educational opportunities for all students, including those with Autism Spectrum Disorder (ASD). It aims to create an inclusive and supportive learning environment that respects and values the diversity of students, promotes their academic and social development, and prepares them for active participation in society (Kemdikbudristek, 2022; Padmadewi et al., 2021). The education of students with Autism Spectrum Disorder (ASD) requires specialised approaches to cater to their unique learning needs (Hampshire & Hourcade, 2014; Fleury et al., 2021; Basso et al., 2021; Azano et al., 2017). Although inclusive education regulation has been established for years, there are still schools that cannot handle ASD students.

An interesting case comes from a famous Bilingual School in Bali that offers inclusive education for ASD students. This school is known for its detailed inclusive education program that supports the optimum development of ASD children in their communication and social skills.   Based on the results of

interviews with the school principal and three shadow teachers, this school has attracted the attention of experts and practitioners in bilingual education, inclusive education, and special education regarding students with ASD from different countries. This private school employs Indonesian and English native speaker teachers to support the bilingual program. It is important for a research to be conducted to describe how the bilingual-inclusive education program for ASD in this school is implemented. In bilingual schools where English is used as the medium for instruction, some adaptation to the curriculum and its implementation could be expected to occur. In addition, the careful designing and planning of the context, input, process and product should become the main elements of the program leading to implementation success. For these reasons, this study employed the CIPP model of Evaluation Study to evaluate the effectiveness of English language instruction for students with ASD. Previous research by Lei et al. (2022); and Padmadewi (2013) have been treated as empirical evidence of how ASD children's learning could be developed in inclusive education.

There have been several previous studies that have been conducted in the area of evaluating inclusive education programs (see Indriani & Satrianawati, 2019; Basaran et al., 2021; Rubio-Alcalá et al., 2021; Agustina & Mukhtaruddin, 2019) as well as bilingual education (Raudhatul, 2016; Bialystok & Ellen, 2018). However, a study that specifically evaluates the practice of inclusive bilingual education for students with ASD is rare. The urgency behind conducting this research lies in the need for evidence-based practices to enhance the English language learning experience of students with ASD in bilingual schools. By utilising the CIPP evaluation model, this study aims to evaluate the Bilingual-Inclusive Education Program for ASD children in a Bilingual Elementary School in Bali regarding the context, input, process, and product aspects. The results of this study will provide information on the strengths and weaknesses of the current teaching practices, inform policy recommendations, and contribute to the overall improvement of English language programs for ASD students in bilingual schools. In summary, evaluating English language teaching for ASD students in bilingual schools using the CIPP evaluation model has the potential to enhance their language learning experience (Indriani & Satrianawati, 2019; Basaran et al., 2021; Agustina & Mukhtaruddin, 2019). This research aims to provide valuable insights to support evidence-based instructional practices and the academic and social integration of ASD students in bilingual education settings by systematically assessing the context, input, process, and product. Several research questions were formulated to guide the program evaluation in this study:

1. What are the context, input, process and product elements implemented in inclusive education for students with ASD in an Indonesian bilingual elementary school?
2. How are the context, input, process and product elements implemented in inclusive education for students with ASD in an Indonesian bilingual elementary school?

2. Review of the Related Literature

2.1 Autism Spectrum Disorder (ASD)

ASD stands for autism spectrum disorder. ASD can affect the way a person interacts with others, as well as how they communicate and experience the world around them, caused by neurodevelopmental disorders (Abdullah et al., 2022; Vlachou & Drigas, 2017; Galligan et al., 2021). It is referred to as a "spectrum" disorder because it is characterised by a variety of symptoms and behaviours (Varlamov, 2020; Hughes et al., 2021). Some of the common signs and symptoms of ASD include social difficulties, communication challenges, repetitive behaviours and restricted interests, sensory sensitivities, cognitive and learning differences (Amsbary et al., 2020; Bolourian et al., 2019). People with ASD may have social difficulties or have trouble communicating with others and understanding social cues (Erasmus et al., 2019; Padmadewi et al., 2021). They frequently have trouble making eye contact, initiating or maintaining conversations, and developing friendships. They also often fail to understand nonverbal cues like facial expression, voice tone and body language (Fardani & Sayatman, 2020; Hammel & Hourigan, 2020; Padmadewi et al., 2021). They often fail when they have to start or get their turn in conversations. They mostly prefer to keep silent and focus on their own interests rather than asking questions of others and making friends. Communication is a big challenge for them.

Repetitive behaviours and restricted interests are mostly experienced by people with ASD. They tend to frequently engage in repeated actions or have intensely focused and narrowly defined interests (Erasmus et al., 2019; Padmadewi et al., 2021). They usually follow strict routines, and even minor variations or changes to their surroundings or daily schedule can frighten them. Meeting a new teacher and a new friend may bother them. Increased sensitivity to sensory stimuli, such as certain noises, textures, or lighting, is also common in people with ASD (Hammel & Hourigan, 2020; Hornby, 2014; Meeks, 2017). They could be excessively or insufficiently sensitive to sensory input, which can affect how they function on a daily basis and cause sensory overload or avoidance. Autism also can affect cognitive functioning, with some individuals experiencing intellectual disabilities, while others may have average or above-average intelligence (Fleury et al., 2021). People with ASD often have specific strengths and weaknesses in areas such as attention, memory, and problem-solving. It's important to note that each person with ASD is unique, and that individuals may experience a combination of these characteristics to varying degrees. Early intervention and appropriate support services can help individuals with ASD lead fulfilling lives and reach their full potential.

2.2 Bilingual-Inclusive Education Program

Bilingual-inclusive education program refers to an educational program implementation approach that incorporates the use of multiple languages and promotes inclusivity for students from diverse linguistic backgrounds (Baca & Cervantes, 2008; Baca & Amato, 1989). It aims to provide equal educational opportunities for students who are proficient in different languages and cultures.

According to Baca and Cervantes (2008) the main objective of a bilingual-inclusive education program is develop the students' proficiency in two or more languages. It recognises and values the students' native language and provides instruction in both their native language and a second language, typically the language of instruction in broader society. This approach aims to ensure that students attain high levels of academic achievement in all subject areas. It includes literacy, numeracy, and other content areas in both languages of instruction. Bilingual-inclusive education acknowledges that preserving the students' cultural and linguistic identities is important. It enhances a positive self-image and stimulates pride in one's cultural heritage while increasing the understanding and appreciation of other cultures. This approach looks to pursue an inclusive and equitable learning environment where all students have equal access to quality education, no matter their linguistic background. It can address educational disparities and promote social integration among students from diverse linguistic and cultural backgrounds. Research demonstrates that bilingual education provides cognitive benefits, such as increased executive functioning, problem-solving skills, and mental flexibility. Bilingual-inclusive education aims to expand these advantages to support the students' overall cognitive development. It can also take various forms, such as dual language programs or bilingual classrooms. Particular approaches may vary depending on the educational context, available resources, and community needs. It aims to offer a complete bilingual inclusive education, acknowledge and value the students' linguistic and cultural diversity, and aspire to create an inclusive and empowering learning environment that supports their academic, linguistic, and sociocultural development.

2.3 CIPP Evaluation Model
The CIPP evaluation model is a comprehensive framework used for assessing various programs and projects. CIPP is short for Context, Input, Process, and Product. It was developed by Stufflebeam (2023). This model offers a structure through which to evaluate the effectiveness and efficiency of educational programs and interventions. Each element of this model targets distinct aspects of evaluation, as outlined below:
1. Context Evaluation: This aspect focuses on understanding the program's context. It involves identifying needs, challenges, and opportunities within the program setting. This context examines the social, political, cultural, and economic influences that may affect the program outcomes and identifies external factors that could impact its success.
2. Input Evaluation: This component evaluates the resources and strategies utilised in the program implementation. It assesses the sufficiency and relevance of resources such as funding, personnel, infrastructure, and materials. Input evaluation ensures that the program's design aligns with research-based best practices and adheres to relevant policies or standards.
3. Process Evaluation: This element evaluates the program's implementation. It emphasises how the program is carried out, such as the strategies, methods, and activities employed. Process evaluation assesses the consistency of the program's execution, the quality of the instruction or service delivery, and the extent to which the program efficiently reaches its target audience. It also

involves feedback collection from the participants and stakeholders to understand their experiences and perceptions.
4. Product Evaluation: This assesses the program outcomes and overall impact. Product evaluation measures the extent to which the program has achieved its intended goals and objectives while identifying the united effects. It involves collecting data to assess the program's effectiveness, efficiency, and relevance. This also includes identifying academic performance, behavioural or attitudinal changes, and other key indicators of success.

The CIPP evaluation model is frequently used in an iterative manner, with each component being assessed at various stages of a program's lifecycle, from initial planning and development to implementation and beyond (Stufflebeam & Coryn, 2014). This model highlights the importance of evaluating the program's context, available resources, implementation process, and outcome to support informed decision-making, to increase program effectiveness, and to scaffold future improvements. Utilising the CIPP model is beneficial for evaluators because they can systematically examine different aspects of a program, offering a comprehensive analysis of its strengths, weaknesses, and areas needing improvement.

3. Materials and Methods
This case study aimed to explore the phenomenon of bilingual-inclusive education for students with ASD in a bilingual school in Bali. This research adopted the CIPP evaluation model by Stufflebeam and Coryn (2014) to assess the various aspects of the program. The data was gathered through observations and in-depth interviews with three shadow teachers (a shadow teacher is a teacher who assists and provides one-on-one support to students with ASD in an inclusive context), twelve regular class teachers, four students with ASD in the special class, twelve students with ASD in the regular classes (who were transitioned from special class to regular classes after receiving special treatment in the special class), the school principal, and an expert in inclusive education (a Canadian male teacher working at the school).

4. Findings
There were five data sets collected to describe the implementation of a bilingual inclusive program for students with ASD. Each of them is presented below.

4.1 Context
The context component involved understanding the background, environment, and needs of the ASD students on the bilingual program. The evaluators needed to assess the relevance of the program within this context and identify any contextual factors that may impact its effectiveness.

Table 1. Context components of the Program

No	Aspect to be valued	Findings	Availability	
			Yes	**No**
1.	Students Health Report	ASD diagnosis letter	✓	
2.	Inclusive Classes	Two inclusive classes	✓	
3.	Human Resources	a. Three Shadow Teachers: One man and two women	✓	
		b. Experts on ASD regularly visit	✓	
		c. Bilingual Teachers (local and international)	✓	
4.	Facilities	a. Seats, whiteboards, LCD projectors, screens, speakers, personal computers, information boards, lockers for each student, many kinds of interactive and instructional visual media for ASD students and computers.	✓	
		b. Tablet, interactive digital media		✓

The Bilingual Elementary School that provides the most effective inclusive education program in the city meets the needs of ASD students to help them get an appropriate education, which is the focus of the context evaluation here. ASD students need to prepare a "Students with ASD Health Report" which is a basic requirement to enrol ASD students at this school. During the registration process, the Health Report for students with Autism Spectrum Disorder (ASD) plays a significant role (Abdullah, 2021; Bolourian et al., 2019). This report provides important details that allow the school to understand and address potential health issues, such as any medical conditions, allergies, or sensitivities that a student may have or risks that may arise while the student is at school.

In addition to helping the school staff and administrators be aware of preventive measures and emergency protocols, this information is also important to effectively manage the students' health and ensure their safety while at school. To support student health, inclusive schools actively collaborate with doctors, therapists and specialised service providers. Health reports help professionals to communicate and coordinate with schools. The school is aware of specific recommendations, therapies or interventions from this report. Schools use health reports to plan and provide appropriate support services. This report serves to identify the special needs of students by considering the accommodations or modifications needed in the classroom environment, in the curriculum, and in their daily routines. The information obtained can be used to design effective strategies to enhance the learning experience, distribute resources appropriately, and assign support staff as needed. This report also helps deepen the

understanding of the students' health condition and other considerations, which can help the school staff create an environment that supports the overall well-being of the students.

During the inclusive school registration process, it is essential to prepare a health report of students with ASD. This helps to ensure the student's safety, well-being, and appropriate support, as well as facilitating collaborative care, and enabling the school to provide an inclusive and nurturing environment that promotes the student's overall development and success. Based on the health reports of the students with ASD, the placement was done in two different classes. This school provides two classes for inclusive students. Based on the observation results, there were one student in A class and three students in B class. This separation was done due to the different levels of the students with ASD. There were three shadow teachers in charge of teaching and intensively controlling the four students development in the school. Before starting a lesson, the shadow teachers prepared the lesson plans that support the curriculum. The lesson plans are organised based on the topics in the syllabus and they serve as a method of instruction utilised by the teachers to help the students reach their learning objectives. They are also organised based on the students' needs, preferences and academic level. The shadow teachers here used the Indonesian and English as the daily instruction languages while teaching. Most of the instructional media and also the interactive visual media used both languages to present the bilingual education in the class.

Having three shadow teachers present to take the control of four students with ASD is more than sufficient. They are qualified and competent to teach students with ASD because they were trained. They also attended professional development activities regularly on teaching children with ASD. They also mastered both the English and Indonesian languages as well. The three shadow teachers were also assisted by regular teachers who taught Sport, Art and Music when the students with ASD join the regular classes.

This Bilingual Elementary School's structures and facilities were very supportive of the establishment of bilingual programs to make an inclusive educational context. Young (2003) notes that having nice school facilities can inspire pride in the educational system and foster positive attitudes toward learning, which will benefit the students' academic performance. Modern amenities such tables, seats, white boards, LCD projectors, screens, speakers, information boards, lockers for each student, many kinds of interactive and instructional media for ASD students, and computers in each class furnish the classroom buildings. Students can use the science and language labs at this school to put the theories and materials they have learned about into practice. The language lab is furnished with contemporary teaching tools such as computers, LCD projectors, screens, speakers, and multimedia. Additionally, the computer lab and library offer a variety of sources for the students to search. Wi-Fi was enabled in the computer lab to assist the educational program and to make it simpler for students to connect to the internet and view websites.

4.2 Input

The input component focuses on the resources, materials, and supports provided for the bilingual program. In bilingual programs for students with ASD, it is important to evaluate the adequacy and relevance of bilingual learning regarding the effectiveness of teaching strategies, the application of specific interventions, and assistive technology. The evaluator must ensure that these aspects are well-aligned to support the academic success and communication of students with ASD in a bilingual environment.

Table 2. Input Components of the Program

No	Aspect to be valued	Findings	Availability Yes	No
1.	Curriculum	Individualised Education Plans (IEPs)	✓	
2.	Teaching Materials	a. My Body b. My Hobby c. My Habits d. My Family e. My Environment	✓	
3.	Teaching Methodologies	a. Visual Supports	✓	
		b. Structured Teaching	✓	
		c. Multi-sensory Approaches	✓	
		d. Social Stories	✓	
		e. Applied Behaviour Analysis (ABA) Techniques	✓	
4.	Assistive Technologies	a. Laptop / Personal Computer	✓	
		b. Speakers	✓	
		c. Digital Timer	✓	
		d. Tablets		✓
5.	Bilingual Teacher Qualifications	a. Mastering Indonesian Language	✓	
		b. Mastering English Language	✓	
		c. Mastering Math	✓	
		d. Mastering Art and Music	✓	
		e. Mastering Sport	✓	
6.	Teachers' Professional Development	a. Training for Teaching in Inclusive Education	✓	
		b. Training for Teaching ASD Students	✓	

In the United States, supporting the learning needs of students with disabilities is specifically mandated through plans involving developed Individualised Education Programs (henceforth referred to as IEPs). This program ensures that each student receives suitable educational interventions and has their needs met (Choi et al., 2020; Hornby, 2014; Nur, 2022; Thompson et al., 2001). IEPs were developed to design bilingual teaching strategies that involve the collaboration of educators, parents or guardians, and educational professionals by including accommodations and modifications according to the specific needs of students

with disabilities. They consider the student's strengths and weaknesses, set clear and measurable goals, establish educational support, and provide services to support their academic and social development (Choi et al., 2020; Hornby, 2014; Thompson et al., 2001). Through designing the learning objectives, accommodations, and adaptive modification in English language teaching and implementing the Individualised Education Plans (IEPs), the school can provide appropriate support to ASD students. In addition, this strategy in teaching means that this program is widely recognised in society in Bali. The inclusive education in this school was designed based on the characteristics of students with ASD. There are six basic courses taught to ASD students covering Math, Indonesian Language, English Language, Art, Music and Sport. The courses are taught differently. The Math and Indonesian Language courses are taught in a special class where the students with ASD learn with the shadow teachers in an exclusive class. This strategy aims to maintain the effectiveness of the regular class because the ASD students only learn the basic material of the course. Therefore, the ASD students are placed in a special class for them to receive more effective learning based on their academic level. The English Language, Art, Music, and Sport courses are taught in the form of a regular class where the students with ASD are involved with normal students and learned together. This strategy aims to provide chances for the students with ASD to socialise within the school environment and to make friends. Additionally, the ASD students also had fifteen minutes screen time during the last session of the school day. They are able to play, draw, watch learning videos, and learn using the PCs. This IEPs omitted Science and Social courses for ASD students due to their academic level and characteristics.

Teaching materials play a crucial role in supporting English language learning for ASD students (Lei et al., 2022; Indriani & Satrianawati, 2019) . There were five basic integrated materials for ASD students in this school covering (1) My Body, (2) My Hobby, (3) My Habits, (4) My Family, and (5) My Environment. These basic materials were taught and integrated into the Mathematics, Indonesian Language, English Language, Art, Music, and Sports courses. The materials were taught repeatedly to meet the characteristics of students with ASD. Assistive technologies can provide additional support in their English language learning journey (Vlachou & Drigas, 2017). These technologies may include speech-to-text or text-to-speech software, augmentative and alternative communication (AAC) devices, visual timers, and apps specifically designed for language development and communication skills. Based on the observation and interview results, there was no specific software in the form of gamification, while interactive media and other education apps for teaching children with ASD were found. There was only YouTube that was used to play children's songs and interactive videos for learning, and a painting application for them to practice drawing on the computer. Other media was still in the form of visual hard copies and interactive hard copies.

According to Richards (2005), instructors play a crucial role in the effective implementation of a program. Successful instructors are those who are able to recognise the challenges, aspirations, and hopes of their students as they are learning from them (Azano et al, 2017). Teachers should be qualified according to a number of criteria in numerous circumstances, including (1) language

proficiency; (2) teaching experience; (3) skill and expertise; (4) training and qualification; (5) morale and motivation; and (7) teaching style. The bilingual shadow teachers are well-versed in both languages they teach in. Even though some of them didn't have a background in ASD teaching, the institution set up training and initiatives to help the teachers enhance their teaching skills for the purpose of enabling inclusive education, especially for students with ASD. In order to be able to treat ASD students correctly, the school management invited experts regularly to the school to provide training as well as to relay additional knowledge to the shadow teachers. The shadow teachers here had sufficient enough skills and knowledge to teach and provide the needed treatments to the students. There were also special requirements when enrolling at the bilingual elementary school for ASD students. Parents need to complete the registration by attaching their children's health reports. This was done to place the students in appropriate classes, giving them the most suitable treatment and enabling the students with ASD to obtain academic achievements. Additionally, there are levels of ASD severity that cannot be handled at this school.

4.3 Process
The process component examines the implementation and delivery of the bilingual program. For students with ASD, this involves assessing the quality of the teaching and support provided, the collaboration between bilingual and special education professionals, the individualised support plans, and the strategies used to promote language development and social-emotional skills. The evaluators need to assess how well the program is implemented and whether the processes are effective at meeting the unique needs of students with ASD in a bilingual context.

Table 3. Process Components of the Program

No	Aspect to be valued	Findings	Availability	
			Yes	No
1.	Instructional Practices	a. IEP-based Lesson Plans	✓	
		b. Visual Support	✓	
		c. Structured and Predictable Routines	✓	
		d. Multi-sensory Approaches	✓	
2.	Classroom Management Strategies	a. Visual Support for Behaviour	✓	
		b. Positive Reinforcement	✓	
		c. Proactive Behaviour Management	✓	
3.	Individualised Support and Differentiation	a. Individualised Education Plans (IEPs)	✓	
		b. Small Group or One-on-One Instruction	✓	
		c. Differentiated Instruction	✓	
4.	Collaboration between Special Education and English Language Teachers	a. Co-Planning and Co-Teaching	✓	
		b. Regular Communication and Information Sharing	✓	
		c. Professional Development and Training	✓	

During the observation of the bilingual inclusive classes for students with ASD, the researcher found there to be a meaningful teaching and learning process involved. The lesson plans, the visual aids and the assessment were ready and effective at leading and monitoring the students' achievements and behaviour. The lesson plans consist of daily progress reports, the materials to be taught, teaching and learning activities from the pre-activity, activity, post-activity, recess, and activities before going home. These activities were monitored and given four different codes that assessed the students' achievement and ability using a range from 'not able' to 'independent'.

Before the class starts, the students entered the class and put all of their stuff in their named lockers. After that, they proceeded to the sticky schedule and moved the schedule to what they needed to do first, making themselves ready for the first course. Alongside the teaching and learning process, positive reinforcement such as rewards and praise were implemented to motivate and encourage the ASD students to actively participate and engage in the English language activities, as well as the other courses (Ela and Sari, 2021). Before the class starts, the shadow teachers always asked them about their feelings by assigning them to choose the "feeling wheel aid" that has different colours for different feelings. After that, they did "Social Stories" in a semi-circle to develop their literacy and curiosity when reading. In every activity, the teachers mixed the two languages and differentiated the dominant language from the different language backgrounds of the students (Padmadewi, 2013). The use of visual aids here is dominant due to the ASD characteristic of them being visual learners (Fleury et al., 2021; Abdullah et al., 2022).

During the activity, the students were involved in regular classes for four courses: English Language, Art, Music and Sport. They were then pulled out to special classes for two courses: Mathematics and the Indonesian Language. This system can be done if all behaviours of the students with ASD are under control and stable. This also could be changed whenever there were unpredictable or out-of-control behaviours or conditions. This program was made to be flexible to give the ASD students a chance to make friends and socialise them with other students. Although the ASD students joined in for the regular class learning, there were differentiated instructions for them. They listened to the regular teachers' explanations as well as doing the tasks provided like they were to other students. However, the shadow teachers were always with them to monitor their condition, progress and to consider whether the tasks and worksheets were suitable for them to do.

In the post-activity, the students confirmed what had been learned. The shadow teachers asked questions about what the students had learned repeatedly until they could answer the question correctly. Repetition is needed to teach ASD students to enhance and practice their focus with the assistance of visual aids.

After that, recess was used to train them to be independent in having their meals by themselves. The shadow teachers monitor their activity during the recess and let them to take their meal and tumbler by themselves, as well as enabling them to eat, drink and clean up their meal stuff alone. This activity could help to train their social functional skills. It was done repeatedly and assessed everyday to be

reported on at the end of the term. Not only were they encouraged to have meals by themselves, the students with ASD were also given the chance to play outside the class with other students while still under the shadow teachers' control.

When all courses have ended, ASD students have to move the sticky schedule to the "finish" place to indicate that they have done all courses, and they were automatically going to the computer lab to do the next activity before going home. In the computer lab, the students with ASD could choose whether they wanted to draw or watch videos on the PC. This activity only last for fifteen minutes due to the screen management for students with ASD.

4.4 Product
The product component evaluates the outcomes and impact of the bilingual program. This includes assessing the progress and achievements of students with ASD in areas such as language acquisition, academic performance, social skills development, and overall well-being. Evaluators need to examine the data and evidence from the student outcomes to determine the effectiveness of the program and identify areas for improvement.

Table 4. Product Components of the Program

No	Aspect to be valued	Findings	Availability	
			Yes	No
1.	Formative Assessment	a. Daily Progress Report	✓	
		b. Daily Verbal Report	✓	
2.	Summative Assessment	a. Final Term Report	✓	
		b. Final Term Verbal Report	✓	

The availability of formative and summative assessments makes this bilingual inclusive program more effective (Thompson, 2001). These records could enhance the parents' satisfaction of the program. Verbal consultations could also improve the teachers' prior knowledge to help them cope with the students at school as well as improve the parents' control at home (Hornby, 2014). A frequently discussed barrier was about screen time. When at home, parents forgot to limit screen time and this affected the students' behaviour at school. Assessing students with ASD is different to assessing regular students (Thompson, 2001; Varlamov, 2020). Therefore, daily progress reports are needed to record their achievements and behaviour progress. The compilation of this daily progress is used when writing the Final Term Report. This report shows the students' progress over three months of learning and illustrates what has improved, what still needs to be improved and the students' language preferences, activities preferences and learning preferences. This report can also be used as a consideration to develop the students with ASD's vocational skills.

5. Discussion
Implementing bilingual education for students with Autism Spectrum Disorder (ASD) can support their language development in both their daily-used language and the national language, Bahasa Indonesia, as well as the global language of English since some students grow with English and some with other languages. This must be done with careful consideration of their unique learning needs.

There are strategies and benefits for effectively implementing bilingual education for students with ASD. First of all, the use of IEPs is developed to carefully plan the needs of the students based on their characteristics and condition. It modifies bilingual education to each student's language proficiency, cognitive abilities, and communication needs. It also incorporates goals in both languages, focusing on functional use for daily interactions and academic purposes (Choi et al, 2020; Hornby, 2014; Thompson et al., 2001).

The selective use of visual aids, gestures, and technology can also reinforce understanding and facilitate language acquisition in a manner that benefits students with ASD in terms of their academic development. This can include multimedia tools like bilingual storybooks, apps, and videos that pair spoken and written language with imagery. This, along with the quality of the instructors and the learning materials, and visual aids (like pictures, charts, and graphic organisers) can help facilitate the comprehension and organisation of information in bilingual schools for students with ASD (Azano & Sigmon, 2017; Padmadewi & Artini, 2017). Simplified texts and materials in a clear and concise language can aid understanding. The use of multimedia resources, such as videos or interactive digital platforms, can engage students with ASD and reinforce language concepts.

There were found to be commonly employed strategies among the shadow teachers in this school including visual supports, such as visual schedules, visual cues, visual prompts, instruction tags, and visual worksheets, all of which are able to enhance understanding and assist the students in following instructions and keeping to daily routines (Azano & Sigmon, 2017; Padmadewi & Artini, 2017). Structured teaching approaches, such as the TEACCH (Treatment and Education of Autistic and Communication Handicapped Children) method, provide clear organisation and predictability, helping students with ASD comprehend and engage with the learning tasks (Brower et al., 2008; Jennet et al., 2003; Mesibov & Shea, 2004). Incorporating multi-sensory activities, such as hands-on manipulatives, gestures, and movement, can reinforce language concepts and engage students with ASD in the learning process (Moustafa & Ghani, 2017). Implementing social stories and narrative-based interventions that help students with ASD understand social situations and appropriate language use were also found to be very useful in this context. They can be used to teach social communication skills in English and promote social interaction (Bordoff et al., 2021; Almutlaq, 2018; Sani et al., 2017). Using ABA techniques, such as discrete trial training, can be utilised to break down language skills into small, manageable steps and provide repeated practice and reinforcement (Jennett, Harris, & Mesibov, 2003; Kazdin, 2001).

Providing consistent exposure to both languages in natural and meaningful contexts like the use of colloquialisms at home and Bahasa Indonesia and English in structured school activities is needed. It is important to ensure consistent reinforcement by involving parents, teachers and therapists (Ding & Toran, 2024). Focusing on the practical vocabulary and sentence structures that students can use in everyday life as well as in their academic tasks will be more contextual. Bridging concepts between the two languages with parallel teaching methods,

involving similar words, phrases and grammar completed by pictures will benefit the progress of students with ASD (Azano & Sigmon, 2017; Padmadewi & Artini, 2017). Teaching bilingual pairs for key vocabulary, such as "apel" in Indonesian and "apple" in English, can be done so then the students can build connections between the two languages. Supporting students with limited verbal abilities can be done using augmentative and alternative communication (AAC) tools, such as picture exchange systems or sound generating devices, that are available in both languages. The use of timetables and other visual cues make it easier for students to navigate the dual-language environment. It is also important to integrate the cultural context of both languages into the curriculum to make the learning process more comprehensible and engaging (Ding & Toran, 2025). Role-playing activities can also be implemented to practice social interactions in both languages. By meeting the unique needs of students with ASD and implementing a structured, supportive and individualised bilingual education approach, students will have the opportunity to gain proficiency in their vernacular Bahasa Indonesia as well as English, or vice versa. This will not only improve their communication skills in various situations but also empower them to succeed in the standardised tests while stimulating their academic and personal growth.

6. Conclusion

This study assessed a Bilingual Inclusive Education Program aimed at students with Autism Spectrum Disorder (ASD) in a bilingual primary school in Bali, Indonesia, using the CIPP evaluation model. The results revealed that the program was implemented effectively, with an emphasis on student health reports as the first step in the school enrolment process. In addition, the availability of inclusive classrooms, human resources, and facilities were also important elements that influenced the effectiveness of the program in the context analysis. The input elements, such as Individualised Education Plans (IEPs), teaching materials, methodologies, assistive technologies, bilingual teachers' qualifications, and the teachers' professional development, were provided to meet the needs of students with ASD and to support their academic experiences based on their characteristics. The process stage included instructional practices, classroom management strategies, individualised support and differentiation, as well as collaboration between shadow teachers, language teachers, special class teachers, and regular class teachers. These elements are crucial in supporting the Bilingual- Inclusive Education Program. The teachers conducted formative and summative assessments based on the IEPs. A daily progress report was used to evaluate the final judgment of students with ASD. Therefore, the student's everyday progress was able to be recorded and used in decision-making, such as whether the students with ASD were able to move from the special class to a regular inclusive classroom or not. The study found that there was a need to provide digital activities for students with ASD, such as interactive mobile applications, to encourage them to practice their digital literacy and both basic English as well as Indonesian literacy.

7. Limitations and Recommendations

This study is limited on evaluating a program in a school. It was done by considering its success in handling students with ASD properly and inclusively

within the Bilingual Education Program. Although the scope of this study involves only a school, but its result can be used widely to support the implementation of inclusive education. Therefore, evaluation research regarding to inclusive education needs to be conducted in the future to identify any advantages and challenges face by the teachers, parents and stakeholders. Besides, the findings of this research could give insights about proper inclusive education for ASD students in bilingual and even monolingual contexts. Essential elements found during the analysis phases regarding the context, input, process and product evaluation could be a beneficial consideration for the government, especially Kemdikbudristek, to take or create further revision plans and programs to improve the quality of inclusive education in Indonesia. This is because there are hundreds of cases reporting on the increasing number of children with ASD in Indonesia per year. Besides, many teachers in regular schools in Indonesia have lack knowledge and skill on the correct procedures for handling students with ASD. Thus, by reading the results of this research, the Indonesian government, parents and teachers can prepare children with ASD with appropriate academic solutions for their future.

8. Acknowledgement

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Appendix 1. Observation Sheet

No	Context aspect to be valued	Findings	Availability	
			Yes	No
1.	Student's Health Report			
2.	Inclusive Classes			
3.	Human Resources			
4.	Facilities			

	Input aspect to be valued	Findings	Availability	
			Yes	No
1.	Curriculum			
2.	Teaching Materials			
3.	Teaching Methodologies			
4.	Assistive Technologies			
5.	Bilingual Teacher Qualifications			
6.	Teachers' Professional Development			

No	Process aspect to be valued	Findings	Availability	
			Yes	No
1.	Instructional Practices			
2.	Classroom Management Strategies			
3.				

	Individualised Support and Differentiation			
4.	Collaboration between Special Education and English Language Teachers			

No	Product aspect to be valued	Findings	Availability	
			Yes	No
1.	Formative Assessment			
			✓	
2.	Summative Assessment		✓	
			✓	

Appendix 2. Interview Guide

No	Interview Questions for Context Aspects
1.	What is the student's health report?
2.	When should parents bring this document to school?
3.	How important is this document for school registration as a requirement for those with ASD?
4.	What happens if parents do not have this health report document?
5.	What is an inclusive class?
6.	What is a special class?
7.	What is a regular class?
8.	Which class will be where beginner students with ASD are placed?
9.	What procedures should be passed by the students with ASD for them to be able to join the inclusive and regular classes?

No	Interview Questions for Input Aspects
1.	What curriculum was used to implement the bilingual-inclusive education program at this school for students with ASD?
2.	What teaching materials are chosen to be taught to the students with ASD in this program?
3.	What teaching methodologies are implemented in this program?
4.	Are there any assistive technologies used to support this program and maximise the progress of the students with ASD?
5.	What are the teachers' qualifications who are involved teaching on this program?
6.	What activities are joined in by the teachers as part of their Professional Development program?

No	Interview Questions for Product Aspects
No	What kind of fo**Interview Questions for Process Aspects**he students with ASD's daily progress within the program?
1. 2.	**What kind of instructional practices are involved in this program?**ecord the students' final
2.	progress within the make decisions for further of the program?ment of academic
3.	What kind of individualised support and differentiation strategies are used in this program?
4.	How does the collaboration between Special Education and English Language Teachers take place in this program?
	How many students with ASD are there in this school?
	How many students with ASD are there in the special class?
	How many students with ASD are there joining the bilingual-inclusive education program in the regular classes?
	How many teachers are there handling the students with ASD in the special classes?
	How many teachers are there handling students with ASD in the bilingual-inclusive education program of regular classes?
	Can the facilities support the student's academic development?