



### Between policy and practice: Assessing implementation gaps in adaptive sex education for adolescents with intellectual disabilities

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#### Abstract

This study aimed to evaluate the implementation of the adaptive sex education program at SLB Negeri Manggar, the only special needs school in East Belitung Regency, Indonesia. Despite legal mandates and the recognized vulnerability of adolescents with intellectual disabilities to sexual violence and exploitation, a significant gap exists between the policy intent and the practical, standardized delivery of adaptive sex education in special schools. Challenges such as insufficient teacher training, limited parental support, and a lack of dedicated curriculum guidelines hinder effective program implementation. Using the CIPP (Context, Input, Process, Product) evaluation model, this research focused specifically on the input (educator quality, facilities, stakeholder support) and process (integration, teaching methods, material delivery) components. A mixed-methods sequential explanatory design was employed, collecting quantitative data via questionnaires from 20 students and 20 parents, and qualitative data through in-depth interviews with five teachers and one vice-principal. Results indicate that the program is well-implemented overall (process achievement score: 80%). Educator competence and facility availability were categorized as "good," and parental support scored 75.11%. However, the study identified persistent challenges, including worn teaching aids, parents' discomfort in modeling appropriate behaviors, and the need for more consistent habituation at home. The findings confirm that while the program's structure is sound, systemic gaps in training, resource renewal, and holistic stakeholder engagement remain. This evaluation provides evidence-based recommendations for enhancing program quality, ensuring it more effectively safeguards and empowers students with intellectual disabilities.

**Keywords:** Adaptive sex education; intellectual disabilities; program evaluation; CIPP model; special needs education

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#### INTRODUCTION

Adolescents with intellectual disabilities are adolescents who have below-average intelligence (Yusri & Fauziah, 2017). Nevertheless, they have the same right to receive appropriate and adaptive education. This is emphasized in Law No. 8 of 2016 on Persons with Disabilities and Law No. 20 of 2003 on the National Education System, which state that every student with special needs has the right to receive education according to their characteristics and needs. One important need is adaptive sex education, which is a systematic effort to equip learners with knowledge, attitudes, and skills related to sexuality, social relationships, and self-protection.



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[Colarossi et al. \(2023\)](#) emphasizes that sex education not only provides information but also develops values and protective competencies, crucial for highly vulnerable groups such as adolescents with intellectual disabilities.

Various studies show that adolescents with intellectual disabilities are at higher risk of sexual violence, exploitation, and inappropriate sexual behavior. Data from Komnas Perempuan indicate a rise in cases of sexual violence against persons with disabilities from 47 cases in 2017 to 105 cases in 2023, demonstrating the urgency of strong self-protection education. Many adolescents with intellectual disabilities have been exposed to pornography and exhibit inappropriate sexual behaviors, indicating a lack of understanding of bodily boundaries and sexual risks ([Sari & Warsiti, 2017](#); [Müller et al., 2024](#)). In this context, adaptive sex education is an integral part of special education services as regulated in Articles 25 and 74–78 of Law No. 20 of 2003, which mandate educational institutions to provide safe environments and educational services that protect learners from violence and harassment.

However, the implementation of adaptive sex education in special schools (SLB) faces various challenges. The national curriculum does not provide a specific subject; therefore, schools integrate it into self-help subjects (bina diri) as regulated by Permendikbud No. 157 of 2014. Teachers often have not received adequate training in delivering sex education, while some parents still consider sexuality a taboo topic, thus offering limited support at home ([Penny et al., 2017](#)). These conditions lead to suboptimal implementation of adaptive sex education programs.

This condition is also found at SLB Negeri Manggar, the only special needs school in East Belitung Regency. According to school documents, the program has been implemented since 2018 but was interrupted during the pandemic and resumed in 2022. Although it involves teachers, the school, and parents, gaps remain regarding roles and responsibilities. Teachers reported no specialized training; parents felt uncomfortable discussing sexuality; and the school had limited facilities. Similar barriers have been documented in recent studies, which found that insufficient teacher preparation and parental hesitation often reduce the effectiveness of sexuality education for students with intellectual disabilities ([Iqbal et al., 2021](#); [Müller et al., 2024](#)). Initial observations revealed that some students did not understand body boundaries, could not refuse inappropriate touches, and lacked consistent reproductive hygiene practices, indicating a gap between program objectives and outcomes.

Therefore, a comprehensive evaluation is needed to determine whether the program meets the needs of students with intellectual disabilities and aligns with proper standards ([Stobbe et al., 2021](#)). The CIPP (Context, Input, Process, Product) evaluation model developed by Stufflebeam is relevant because it enables comprehensive assessment of program readiness and implementation ([Maksum et al., 2021](#)). This study focuses on input, educator quality, facilities, and stakeholder support, and process implementation, integration into self-help learning, and delivery of adaptive sex education materials.

The study aims to evaluate the implementation of adaptive sex education at SLB Negeri Manggar based on input and process. This evaluation is crucial given the high vulnerability of adolescents with intellectual disabilities, the absence of standardized adaptive sex education guidelines, and SLB Negeri Manggar's role as the only special needs institution in East Belitung. Recent literature emphasizes that systematic evaluation using models like CIPP helps ensure program accountability, contextual fit, and measurable improvement, especially in inclusive education ([Kim et al., 2020](#); [Zhang, 2023](#)). The evaluation is expected to provide objective insights and recommendations for improving the program.

## METHODS

The input and process components were the focus of this study's evaluative research design, which used the CIPP approach. The study was carried out in the East Belitung Regency at SLB Negeri Manggar. Since 2018, SLB Negeri Manggar has run an adaptive sex education program. Because of its direct engagement in the execution of the program under evaluation, this place was purposefully chosen. Based on the outcomes of coordination with the school, data

collecting started in late October 2025. All school personnel participating in the program's execution, including teachers, pupils with intellectual impairments at the junior and senior special school levels (SMPLB and SMALB), and parents, made up the research population. Purposive sampling was used to choose the sample because of their active participation in the program. Twenty kids with intellectual disabilities, twenty parents, one vice principal for facilities and infrastructure, and five teachers made up the sample. It was anticipated that this choice would yield pertinent and targeted information about the use of the adaptive sex education program.

A sequential explanatory design was used in data collection methods to mix quantitative and qualitative data, with quantitative data being gathered first and then expanded upon with qualitative data. Likert-scale questionnaires (1–4) were used to collect quantitative data from students and parents in order to evaluate program execution and family support. In-depth interviews with instructors and the vice principal were used to gather qualitative data in order to investigate the quality of educators, the implementation of learning, the program's integration into the Self-Help (Bina Diri) subject, and the accessibility of facilities and infrastructure. Interview guidelines and questionnaires were among the tools utilized. Experts evaluated each instrument's content validity using the Aiken's V formula ([Kartowagiran & Jaedun, 2016](#)), which revealed that every item fell into the valid category. Cronbach's Alpha for the surveys and the Intraclass Correlation Coefficient (ICC) for the interview guides were used to assess instrument reliability ([de Jonge, 2006](#)). All of the instruments were in the high to very high categories according to the reliability results, which made them appropriate for use in this investigation. Table 1 provides an overview of the content validity and reliability findings.

**Table 1.** Summary of content validity and instrument reliability

Instrument	Number of Valid Items	Validity	Reliability	Conclusion
Student questionnaire	14/14	Valid (Aiken's V $\geq 0.78$ )	$\alpha = 0.963$ (Very High)	Suitable for use
Parent questionnaire	11/11	Valid	$\alpha = 0.907$ (Very High)	Suitable for use
Teacher interview	17/17	Valid	ICC = 0.987 (Excellent)	Suitable for use
Vice principal (facilities) interview	8/8	Valid	ICC = 0.865 (Excellent)	Suitable for use

Quantitative data were analyzed using descriptive statistics consisting of means, percentages, standard deviations, and score categorization based on ideal means and ideal standard deviations. This analysis was used to determine the category of achievement of program implementation in each evaluation component. Qualitative data were analyzed through data reduction, data display, and conclusion drawing to deepen and explain the quantitative findings. The final results of the analysis were compared with the evaluation criteria to determine the level of success of the adaptive sex education program at SLB Negeri Manggar.

## RESULTS AND DISCUSSION

### Results

The findings on the implementation of the adaptive sex education program at SLB Negeri Manggar are presented based on two main evaluation aspects: input and process. In the input aspect, the data show that the quality of educators falls into the "good" category. All teachers involved hold a bachelor's degree in Special Education (S1 Pendidikan Luar Biasa), have received self-help (bina diri) training from the Provincial Office of Bangka Belitung Islands, and possess adequate experience teaching students with intellectual disabilities. Interviews with teachers revealed that they understand the scope of adaptive sex education, are able to formulate simple learning objectives, and use visual and demonstrative approaches during instruction. Teachers stated that selecting simple media and language greatly helps students understand material related to body privacy, personal hygiene, and appropriate behavior.

In terms of the availability of facilities and infrastructure, the school has provided a self-help room, a training bathroom, educational posters, visual cards, anatomical dolls, and instructional videos. These media support the delivery of concrete learning materials. However, several teaching aids have begun to show signs of wear and therefore need to be replaced to

maintain optimal learning. The use of the self-help room must also be scheduled alternately among classes, as the school has only one such room. Parental support for adaptive sex education was obtained through a questionnaire. The detailed descriptive statistical results for each item of the parent questionnaire instrument are presented in Table 2.

**Table 2.** Descriptive statistics for each item of the parent questionnaire instrument

Item	Min	Max	Mean	SD	Mode	Median	Category
R1	2	4	3	0.794	3	3	Well Implemented
R2	2	4	3.05	0.759	3	3	Well Implemented
R3	2	4	2.8	0.695	3	3	Well Implemented
R4	2	4	3.05	0.686	3	3	Well Implemented
R5	2	4	3.2	0.695	3	3	Well Implemented
R6	2	4	2.9	0.788	3	3	Well Implemented
R7	2	4	2.95	0.686	3	3	Well Implemented
R8	2	4	3.05	0.759	3	3	Well Implemented
R9	2	4	3.05	0.759	3	3	Well Implemented
R10	2	4	2.95	0.686	3	3	Well Implemented
R11	2	4	3.15	0.745	3	3	Well Implemented

The analysis of the parent questionnaire consisted of 11 statements using a 1–4 Likert scale. The mean score for each item ranged from 2.8 to 3.2, all of which fall into the “Well Implemented” category. The consistent mode and median value of 3 indicate that the distribution of responses was generally homogeneous within the “Agree” category. The standard deviation (SD), ranging from 0.68 to 0.79, falls into the low category, meaning that the variation in responses among parents was relatively small. This indicates that most parents provided similar responses to each item, demonstrating consistent perceptions and experiences. Overall, all items fall into the “Well Implemented” category. Further analysis of the questionnaire showed an achievement score of 75.11%, with the highest sub-indicator being the monitoring of children's interactions, which reached 80%. A detailed analysis of the sub-indicators in the parent questionnaire is presented in Table 3.

**Table 3.** Detailed analysis of sub-indicators in the parent questionnaire

Sub-Indicator	Obtained Score	Expected Score	Final Score	Category
Guiding the child to understand adaptive sex education material	121	160	75.63%	Good
Demonstrating behavior that aligns with appropriate norms	115	160	71.88%	Good
Monitoring the child's interaction with peers	64	80	80%	Very good
Controlling the child's access to media content	59	80	73.75%	Good
Communicating with teachers regarding the child's	59	80	73.75%	Good
Providing simple rewards for appropriate behavior	61	80	76.25%	Good
Allocating time for guidance	60	80	75%	Good
Creating a safe and open environment	59	80	73.75%	Good
Providing supporting learning facilities (books, visual media, etc.)	63	80	78.75%	Good

Most parents accompany their children while studying, maintain communication with teachers, and limit their children's access to inappropriate media. However, the sub-indicator on providing behavioral role models received a lower score compared to the others, indicating that parents still face challenges in demonstrating appropriate behavior directly related to sexual topics. This situation occurs because parents still perceive sexual education as a taboo topic and therefore hesitate to discuss it or provide concrete examples. In the process aspect, the results of the student questionnaire were analyzed using descriptive statistics. The detailed

descriptive statistical results for each item of the student questionnaire instrument are presented in Table 4.

**Table 4.** Descriptive statistics for each item of the student questionnaire instrument

Item	Min	Max	Mean	SD	Mode	Median	Category
R1	1	4	3.15	0.875	3	3	Well Implemented
R2	2	4	3.25	0.786	4	3	Very Well Implemented
R3	2	4	3.3	0.656	3	3	Very Well Implemented
R4	2	4	3.25	0.716	3	3	Very Well Implemented
R5	2	4	3.2	0.767	3	3	Well Implemented
R6	2	4	3.2	0.767	3	3	Well Implemented
R7	2	4	3.25	0.716	3	3	Very Well Implemented
R8	2	4	3.25	0.716	3	3	Very Well Implemented
R9	2	4	3.15	0.67	3	3	Well Implemented
R10	2	4	3.25	0.786	4	3	Very Well Implemented
R11	2	4	3.35	0.67	3	3	Very Well Implemented
R12	1	4	3.1	0.852	3	3	Well Implemented
R13	1	4	3.05	0.887	3	3	Well Implemented
R14	2	4	3.5	0.606	4	4	Very Well Implemented

Based on the descriptive statistical analysis of the 14 items of the student questionnaire, it was found that all items had high mean values, ranging from 3.0 to 3.4 on a 1–4 Likert scale. This indicates that most students provided responses in the “Agree” to “Strongly Agree” range regarding the implementation of the adaptive sex education program at school. The consistent mode and median values of 3 and 4 indicate that students’ response patterns were relatively homogeneous and tended to reflect positive evaluations of the program. In addition, the standard deviation (SD), which ranged from 0.60 to 0.87, falls into the low category, meaning that differences among students’ responses were relatively small. This suggests that students shared similar perceptions regarding the implementation and content of the program. Based on the categorization, most items were classified as “Very Well Implemented,” with the remaining items categorized as “Well Implemented,” indicating that overall, students perceived the adaptive sex education program as being implemented very optimally. success

Further analysis to determine the level of the adaptive sex education program in the process aspect was conducted by comparing the obtained scores with the expected scores. Out of a total of 14 questionnaire items, the obtained score was 896 out of an expected score of 1120. Using percentage calculations, the final achievement score was 80 percent. According to the program success criteria, this score falls into the “Good” category. Thus, the implementation of adaptive sex education in the process aspect has been effective and aligned with the program objectives. More detailed results indicate that the sub-indicators of the process aspect also achieved good scores, as presented in Table 5.

**Table 5.** Detailed analysis of sub-indicators in the student questionnaire

Sub-Indicator	Obtained Score	Expected Score	Final Score	Category
Participating in lessons enthusiastically	189	240	78.75%	Good
Actively answering teacher questions	65	80	81.25%	Very good
Enjoying adaptive sex education lessons	193	240	80.42%	Good
Completing tasks well	65	80	81.25%	Very good
Demonstrating polite behavior at home and at school	130	160	81.25%	Very good
Avoiding inappropriate behavior	62	80	77.50%	Good
Recalling the lessons taught	192	240	80%	Good

The implementation of adaptive sex education learning falls into the “Good” category, with a final score of 80%. Students reported that the lessons were easy to follow and enjoyable,

especially due to the use of visual media, practical movements, and repeated exercises. Students also demonstrated their ability to apply the material in their daily lives. This was evident from the high scores in polite behavior (81.25%), ability to recall the material (80%), and ability to avoid inappropriate behavior (77.5%). Interview data with teachers further confirmed these findings, with teachers stating that students showed high enthusiasm during learning activities, especially during practical exercises such as handwashing, maintaining body hygiene, and identifying private body areas. Furthermore, the integration of adaptive sex education with the Self-Help (Bina Diri) subject was carried out effectively. Teachers integrated material on personal hygiene, toilet training, dressing, and social etiquette into daily activities in the self-help room. This integration made it easier for students to repeatedly practice adaptive skills, allowing these behaviors to develop optimally. Overall, the field findings indicate that the implementation of the adaptive sex education program is in the "Good" category across all components. The program has been carried out according to its objectives, although it still requires strengthening in terms of providing more complete learning materials and ensuring more consistent habituation at home.

## Discussion

The findings of this study indicate that the implementation of the adaptive sex education program at SLB Negeri Manggar has been carried out well across all components of input and process. In the input aspect, educator quality serves as a significant factor contributing to the success of the program. The teachers possess relevant educational qualifications, namely bachelor's degrees in special education, and have participated in training related to self-help (bina diri) instruction. This is supported by the statement of [Löfgren-Mårtenson \(2012\)](#), who argues that without specific training, teachers tend to be hesitant when discussing sexual education materials due to concerns about causing controversy or misunderstanding. However, during the delivery of sexual education content at SLB Negeri Manggar, teachers did not exhibit such hesitation, as they are graduates of a Bachelor's degree program in Special Education (PLB) and have received relevant training. Consequently, they are able to select and adapt sexual education materials appropriately. This alignment of teacher competencies is highly relevant to the theory proposed by [Hallahan et al. \(2015\)](#), which states that students with intellectual disabilities require concrete, sequential, and repetitive learning; therefore, teachers must have pedagogical competence that adapts to students' limitations. The study findings support this theory, as teachers at SLB Negeri Manggar have employed instructional strategies that are concrete, demonstrative, and structured.

On the other hand, [Penny et al. \(2017\)](#) highlight that one of the major obstacles in delivering sex education to students with special needs is the perception of sexuality as a taboo topic among teachers and parents. However, this study shows a more positive condition: teachers have a good understanding of the material, no longer view the topic as taboo, and are able to present it using simple language while being aware of the topic's sensitivity. This reflects that the school has met the professional standards described by [Arikunto and Jabar \(2018\)](#), who asserts that educator quality is a core element of a program's input. Based on these findings, it can be concluded that educator quality has reached the standards required in both special education theory and adaptive sex education theory. Educators not only understand the content but also master delivery methods tailored to the characteristics of students with intellectual disabilities, as recommended by [Schaafsma et al. \(2015\)](#), who emphasize that sex education for this population must be concrete, repetitive, and grounded in direct experience.

In addition to teacher competence, the availability of facilities and infrastructure also supports the success of the program. The school provides a self-help room, a training bathroom, picture cards, visual posters, simple anatomical dolls, and educational videos. These findings align with Regulation of the Ministry of Education and Culture No. 157 of 2014, which states that the special education curriculum must be supported by an appropriate learning environment to foster life skills, including personal hygiene and social skills. Concrete tools such as the self-help room and visual media are essential because students with intellectual disabilities have

difficulty processing abstract information (Harsiwi, 2025). Therefore, the availability of concrete instructional aids greatly determines the achievement of learning objectives. Teacher interviews further confirmed that using visual media helps students understand concepts related to body privacy and reproductive hygiene (Oliveira et al., 2025; Paulauskaite et al., 2022; Schmidt, 2007). Although some materials show signs of wear and require replacement, overall, the available facilities and infrastructure meet the needs of the program in accordance with SLB curriculum standards.

Parental support also falls into the “Good” category with a score of 75.11%. Sub-indicators such as monitoring children’s interactions, controlling media exposure, and maintaining communication with teachers received high percentages. These findings align with the theory of Strnadová et al. (2022), which states that the protection of children with intellectual disabilities is greatly influenced by family involvement, as they are more vulnerable to manipulation and risky behaviors. Likewise, Savtry et al. (2024) and Causing et al. (2024) emphasize that sex education for children with intellectual disabilities must involve parents so that habituation can be reinforced consistently at home. The parental support identified in this study shows that the learning provided at school is reinforced at home, creating continuity in behavioral development. However, the sub-indicator related to modeling appropriate behavior obtained a lower score, reflecting the theoretical understanding that parents often have limited knowledge of sexual education and may feel uncomfortable discussing sexual topics with their children. This suggests the need to improve parental understanding through guidance programs or educational workshops.

In the process aspect, the program achievement score of 80% shows that students received the lessons well, understood the material, and were able to apply several adaptive behaviors in daily life. These findings reinforce Melnikova (2024) theory, which stresses the importance of repeated practice for children with special needs. The results also align with Estruch-García et al. (2025) guidelines, which state that sex education must be relevant to daily life, oriented toward practical skills, and allow active student participation. At SLB Negeri Manggar, this was observed through students’ enthusiasm in handwashing activities, toilet training, maintaining body privacy, and refusing inappropriate touch.

The materials delivered include manners, body privacy, personal hygiene, and avoidance of inappropriate behavior. These materials are consistent with Paulauskaite et al. (2022) and Strnadová et al. (2022), who highlight that sex education for individuals with intellectual disabilities should include understanding the body, safe behavior, and self-protection skills. Teachers at SLB Negeri Manggar present the materials using visual approaches and simple language, as recommended by Schmidt (2007), who argue that individuals with intellectual disabilities struggle to understand abstract concepts and therefore require concrete, simplified material. The repetitive nature of the material, as delivered by teachers, also aligns with reinforcement-based learning approaches (Melnikova, 2024).

The integration of adaptive sex education into the Self-Help (Bina Diri) subject has proven effective. Activities such as handwashing, brushing teeth, using the toilet, maintaining privacy, and asking for permission are directly embedded in the self-help curriculum, as described by Estruch-García et al. (2025) and Pratt et al. (2025). This integration supports the theory that adaptive sex education does not need to be a separate subject; instead, it can be embedded into students' everyday routines (Savtry et al., 2024). At SLB Negeri Manggar, these activities serve not only as part of daily instruction but also as direct practice for self-protection skills and reproductive hygiene, as recommended by. Thus, this integration is not only relevant but also strategically strengthens the program's effectiveness.

## CONCLUSION

According to the study's findings, the adaptive sex education program at SLB Negeri Manggar has been successfully implemented across all assessment components, including input and process characteristics. Teachers have sufficient pedagogical skills and knowledge of adaptive sex education for students with intellectual impairments when it comes to the input element. The provision of educational resources including anatomical dolls, visual media, and a self-help (bina diri) area that facilitates hands-on learning supports this. Although some parents continue to have difficulties in modeling conduct that is consistent with adaptive sexual norms in the house, parental support is also classified as good.

The adaptive sex education curriculum has been successfully applied in the process area by using visual aids that aid in students' comprehension of the information, practical experience, and demonstration techniques. Students may put what they've learned into practice, especially when it comes to being courteous, protecting their privacy, and maintaining personal cleanliness. It has been demonstrated that including adaptive sex education resources into the Self-Help (Bina Diri) course helps students with intellectual impairments engage in everyday activities on a regular and consistent basis. Overall, individuals with intellectual impairments benefit greatly from the adaptive sex education curriculum in terms of their social skills, independence, and capacity for self-defense.

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