



Evaluation of the Competency Improvement Program for Teachers of Students with Intellectual Disabilities in Reproductive Health Education

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Abstract: This study evaluates the implementation quality of the Special Education Teacher Competency Improvement Program in Reproductive Health Education organized by the Ministry of Education, Culture, Research, and Technology. Using the Kirkpatrick evaluation model, the study examines four levels: participant reactions, learning outcomes, behavioral changes, and program results. A mixed-methods approach was employed, involving questionnaires, interviews, classroom observations, analysis of student learning outcomes, and program documentation. Participants included 9 master teachers and 42 partner teachers. The findings indicate high levels of teacher enthusiasm and satisfaction, with training materials perceived as relevant and practical. Significant improvements were observed in teachers' knowledge, attitudes, and instructional skills, accompanied by observable changes in classroom practices, including lesson planning, assessment, and the use of contextual learning media. The program positively impacted students with intellectual disabilities by enhancing understanding, learning motivation, and self-protection skills. It also strengthened collaboration among teachers, parents, school leaders, and health professionals. Overall, the program was systematically designed, responsive to teachers' needs, and underscores the importance of sustained mentoring and the strategic role of master teachers in ensuring program sustainability.

Keywords: *training evaluation, reproductive health education, intellectual disabilities, kirkpatrick model, teacher competency*

I. Introduction

Inclusive education that ensures equal access for all citizens, including persons with disabilities, is a key principle in achieving the Sustainable Development Goals (SDGs) or the 16th Sustainable Development Goal, which emphasizes the importance of peace, justice, and strong institutions (Hanifan, 2024). In the context of education, efforts to create a fair and inclusive learning environment not only mean providing physical access but also involve curriculum adaptation, teaching approaches, and teacher competencies in serving students with special needs, including children with intellectual disabilities.

Reproductive health and sexuality education is an integral part of comprehensive and holistic education. Its aim is to provide understanding of the importance of maintaining reproductive health, recognizing personal boundaries, and understanding social issues and human rights related to sexuality (Plaza-del-Pino et al., 2021; Chavula et al., 2022). However, various studies indicate that the delivery of this education among students with special needs, particularly children with intellectual disabilities, still faces many challenges. This is partly due to low teacher competence, limited accommodative learning media, and a lack of specialized training for special needs school teachers (Utami et al., 2024; Nelson et al., 2020).

The need for inclusive sexual and reproductive health education is becoming increasingly urgent, given global data indicating that children with disabilities, especially those with intellectual disabilities, are at higher risk of becoming victims of sexual violence (Jones et al., 2012; UNFPA, 2019). In Indonesia, a study by Rutgers WPF and the Ministry of Education and Culture (2017) noted that adolescents with intellectual disabilities have a very low understanding of basic reproductive concepts, healthy relationships, and self-protection. The lack of appropriate information makes them vulnerable to exploitation, sexual misconduct, and the inability to access proper health services.

A study on the risk of violence against people with disabilities by a research team from the University of Liverpool and WHO in 17 low-income countries showed that children with disabilities are 3.6 times more likely to experience physical violence and 2.9 times more likely to experience sexual harassment (UNFA 2019). Specifically, children with intellectual disabilities are 4.6 times more likely to be victims of sexual harassment compared to their peers without disabilities. Children and adolescents with intellectual disabilities have limitations in their abilities, and due to these limitations, children with intellectual

disabilities face various problems. According to the WHO, children with intellectual disabilities in Indonesia account for about 5-9%, which is approximately 7-11 million of Indonesia's population. The number of children with intellectual disabilities ranks first among children with other special needs. The inability to live independently due to limited intelligence in children with intellectual disabilities makes this group vulnerable to problems, including issues related to sexual education. Information about sexual education is very important to provide to adolescents, including adolescents with intellectual disabilities (Sunensil et al., 2023).

Children with intellectual disabilities have below-average intellectual abilities, which affect the way they understand abstract concepts such as the functions of reproductive organs, personal body boundaries, and the risks of sexual violence. According to Widodo & Wahyuni (2021), competent teachers can simplify concepts into concrete and visual forms and use appropriate learning media such as images, simulations, or anatomical dolls. Meanwhile, according to Maftuhah & Arief (2020), children with intellectual disabilities often do not recognize their rights over their bodies and have difficulty distinguishing between safe and unsafe touches. The competence of teachers in reproductive health education is important to help increase children's awareness of self-protection and to develop their ability to say "no" and report incidents.

Certainly, the importance of effective communication between teachers and students with intellectual disabilities requires special competencies. Teachers must be sensitive to nonverbal cues and able to use language that children can understand (Ismail & Fitri: 2022). Teacher competence is the key to delivering this material safely, effectively, and inclusively. Competent teachers know that teaching cannot be done alone. They involve parents, psychologists, and medical personnel to make the material more consistent and contextual (Rachmawati & Hadi: 2021). Learning delivered by competent teachers contributes to building students' self-identity and social understanding (Nugroho & Setiani: 2020).

Based on the Guidelines for Inclusive Education Services by the Ministry of Education and Culture (2015), it emphasizes the importance for teachers to have an understanding of the characteristics of students with special needs in order to deliver material adaptively. In addition, Efendi (2013) explains that a psychopedagogical approach is vital so that sensitive topics such as reproductive health can be received safely and meaningfully. WHO (2011) also affirms that inclusive, human rights-based education, including topics on health, must be delivered by trained educators who are sensitive to the special needs of students.

In response to this need, the Directorate of Secondary and Special Education Teachers under the Directorate General of Teachers and Education Personnel at the Ministry of Education, Culture, Research, and Technology has organized a Competency Improvement Program for Teachers of Students with Intellectual Disabilities in Reproductive Health Education, in collaboration with the Ministry of Health of the Republic of Indonesia, UNFPA, and Rutgers Indonesia. This program aims to strengthen teachers' knowledge and skills in delivering reproductive health education to students with intellectual disabilities through an adaptive, communicative, and rights-based approach (PKRS Module, 2020).

To address these challenges, a training strategy is required that is not only technical but also builds a sustainable learning ecosystem at the school level. Therefore, the Directorate of Secondary and Special Education Teachers has developed a partnership-based training model through the Master Teacher and Partner Teacher approach. This training is designed to encourage the horizontal transfer of knowledge, experience, and best practices among teachers, thereby forming a solid learning community that supports each other and is oriented towards improving the quality of classroom learning.

Master Teachers are teachers with outstanding performance and adequate experience in a certain field, who are mandated to act as facilitators and professional mentors for Partner Teachers, who are teachers with high potential for development. This training model is collaborative, participatory, and contextual, and emphasizes competency improvement collegially through joint activities, practice reflection, and direct application in schools.

This competency improvement program is expected to enhance the competence of teachers of students with intellectual disabilities in teaching Reproductive Health in the classroom. The Competency Improvement Program for Teachers of Students with Intellectual Disabilities in reproductive health education has been carried out through several stages, starting with workshop activities, the implementation of On the Job Learning, as well as online and offline mentoring, and the final stage is the dissemination of the results of the competency improvement program for teachers in reproductive health in the implementation of the program at schools to teachers and peers (other special education teachers within the same Regency/City). However, to date, there have been few studies that systematically evaluate the effectiveness of the implementation of this program.

As a follow-up, it is necessary to evaluate the Master Teachers and Partner Teachers, as well as the program's support capacity, which has been implemented. This evaluation is crucial to ensure that the program's objectives are met and whether it truly impacts the improvement of teachers' capacities and students' learning outcomes. To assess the program's success comprehensively, this study uses the evaluative approach of the Kirkpatrick Model, which includes four levels of evaluation: participants' reactions to the training, the learning that occurs, changes in teachers' behavior in teaching practice, and the actual results of the program on students and the school environment. Thus, the research findings are expected to serve as a basis for recommendations to strengthen the program in the future.

To obtain a comprehensive overview of program effectiveness, this study uses the Kirkpatrick evaluation model, which includes four levels: participants' reactions to the training (reaction), improvement in knowledge and skills (learning), changes in teachers' behavior in teaching practice (behavior), and final impact (result). (Prasetyo & Mulyani, 2021; UNESCO, 2009). With this approach, program evaluation is expected to provide valid and relevant data as a basis for the development of future programs. The Kirkpatrick model measures effectiveness in a hierarchical manner, from the initial responses of learners to long-term impact. According to Prasetyo, H., & Mulyani, E. (2021), this model is not only used in formal training but is also suitable for evaluating adaptive education programs that involve students with special needs with varying cognitive abilities. The Kirkpatrick model allows researchers to evaluate teacher performance not only in terms of teaching but also based on the real changes that occur in students, which is an important aspect in the education of children with intellectual disabilities focusing on life skills and self-protection (Safitri & Sundari, 2021). According to UNESCO (2009), the Kirkpatrick model is the most widely used evaluation model globally due to its validity and clear structure. In the context of reproductive health education for students with intellectual disabilities, it helps show how teachers play a role in transforming understanding into self-protection.

Previous studies have also been conducted to examine the urgency of this research. The study by Novembli & Hasanah (2024) showed that inclusion training helps change teachers' knowledge and attitudes towards students with disabilities, showing significant improvement after the training. However, this study stopped at the level of individual change without measuring how these changes translate into long-term classroom practice or their impact on students' learning outcomes. Walker (2022) and Shawbitz (2023) emphasize that although there is increasing attention on the development of special education teacher competencies, most studies only focus on teachers' perceptions or the effectiveness of materials, rather than on a comprehensive evaluation of training programs. Furthermore, Vi et al. (2023) found that most of the literature on education and professional training related to intellectual and developmental disabilities focuses on curriculum development and initial knowledge, while empirical evidence regarding training outcomes is relatively scarce.

Although the Kirkpatrick Model is widely used to evaluate general training programs, its application in special education teacher training, particularly for teachers of students with intellectual disabilities (SLB), is still rare and often limited to Level 1 (reaction) and Level 2 (learning). Several studies on adapting and developing the Kirkpatrick model emphasize the need to incorporate Level 3 (behavior) and Level 4 (results) to assess the transfer of training to practice as well as systemic effects; however, empirical implementation faces challenges related to data and research design (Cheung, 2023; Hoppmann et al., 2025).

Therefore, this study offers a novel contribution by filling this gap in the literature through a comprehensive evaluation based on the Kirkpatrick Model across all four levels. This study spans seven provinces, providing large-scale empirical evidence not found in previous studies, which are generally based on single cases or limited regions. The study adopts a master–partner teacher approach, a tiered mentoring model that allows for a more accurate analysis of learning transfer at Level 3 (behavior) and Level 4 (results). In addition, focusing on reproductive health education for students with intellectual disabilities makes this research unique, considering that this topic is minimally evaluated despite its high urgency as a self-protection competency for students with intellectual disabilities. With this combination of characteristics, this study not only fills a theoretical gap but also provides an empirical basis for policymakers to design more effective and sustainable special needs teacher training programs.

Evaluation using this model allows researchers to assess the program comprehensively, from participants' training experiences to real changes in the classroom and school environment. Based on this background, this study aims to evaluate the Teacher Competency Improvement Program for Students with Intellectual Disabilities in Reproductive Health Education using the Kirkpatrick evaluation model, in order to obtain a comprehensive overview of the program's effectiveness and its contribution to creating inclusive, safe, and meaningful learning for students with intellectual disabilities, seen from the levels of reaction, knowledge enhancement, changes in teaching behavior, and the outcomes of implementing the training program in the context of reproductive health education for students with intellectual disabilities.

II. Method

The research method used is a mixed method of quantitative and qualitative approaches, utilizing data collection techniques through questionnaires, interviews, and other documentation materials that support the evaluation of the Training Program for Increasing the Competence of Teachers for Students with Intellectual Disabilities in Reproductive Health Education, which has been conducted by the Directorate of Secondary and Special Education Teachers, Directorate General of Teachers and Education Personnel, Ministry of Education, Culture, Research, and Technology.

This study uses the program evaluation method with the Kirkpatrick model to assess the effectiveness of a teacher competency enhancement program in teaching reproductive health skills to students with intellectual disabilities. The evaluation covers four levels: Reaction, Learning, Behavior, and Results. This model was chosen because the Kirkpatrick model allows for a comprehensive evaluation from the participants' responses to the program's impact on teacher performance and student learning.

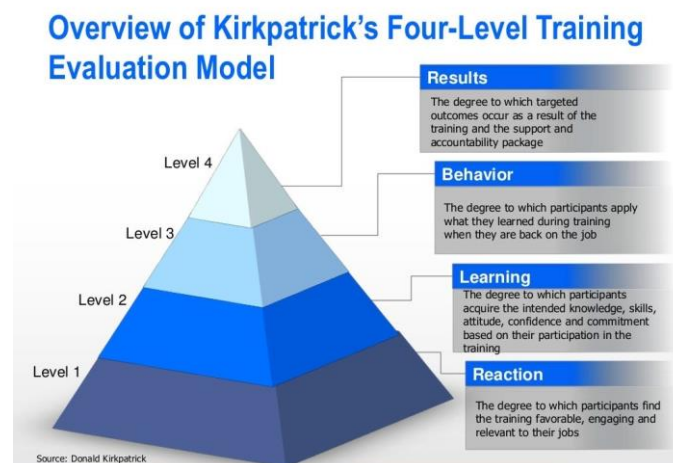


Figure 1. KickPatrick Model Design (KickPatrick, 1959)

This evaluation model is very suitable for use in evaluating the Training Program for Improving the Competence of Teachers of Students with Intellectual Disabilities in Reproductive Health Education because this model provides a comprehensive and systematic evaluative approach, capable of examining various aspects of the program thoroughly, from the background to the final results. Based on its level, the implementation of the Kirkpatrick evaluation model conducted is as follows:

1. Reaction

The reaction evaluation aims to assess the interest, attention, and motivation of participants as well as the implementation of the Teacher Competency Development Program for Students with Intellectual Disabilities in Reproductive Health Education, which has been carried out by the Directorate of Secondary and Special Education Teachers, Ministry of Education, Culture, Research, and Technology. The aspects evaluated are the interest, attention, and motivation of participants, as well as the implementation during the training (workshop) and the material provided during the activity.

2. Learning

At this stage, the learning evaluation measures the extent of the teacher's understanding of skills in handling Reproductive Health issues and managing Reproductive Health cases in students with intellectual disabilities at school.

3. Behavior

Behavioral evaluation includes assessing the application of the material provided during training under real conditions in the classroom learning implementation process. The aspects evaluated are the application of the material received by the participants, in this case, teachers of students with intellectual disabilities, during the training.

4. Result

At this level, evaluation is conducted to determine the final results or the impact obtained by teachers on improving the abilities of teachers for students with intellectual disabilities in implementing Reproductive Health Education in schools, as well as the influence on teachers' performance, networks, and learning communities in disseminating the results of Reproductive Health Education implementation in schools.

The evaluation subjects used were the Training Program Participants for the Improvement of Competence of Teachers for Students with Intellectual Disabilities in Reproductive Health Education, conducted by the Directorate of Secondary and Special Education Teachers, Directorate General of Teachers and Education Personnel, Ministry of Education, Culture, Research, and Technology. The training participants were teachers for students with intellectual disabilities representing 7 (seven) provinces across Indonesia, totaling 51 individuals, selected based on the best teacher scores according to recommendations from each Provincial Education Office in accordance with the criteria specified in the Guidelines for the Implementation of the Training Program for Improving the Competence of Teachers for Students with Intellectual Disabilities in Reproductive Health Education.

Participants of this program are teachers who educate students with Intellectual Disabilities (Tunagrahita) in special education institutions, meeting the established criteria to ensure the quality and sustainability of the program. Teachers serving as Master Teachers must fulfill various requirements, including being a special school (SLB) teacher who teaches students with Intellectual Disabilities and possessing a teaching certificate recorded in the Basic Education Data (Dapodik). Participants must also be civil servants (PNS) or permanent foundation teachers (GTJ), be proficient in using information and communication technology, be physically and mentally healthy as proven by a doctor's certificate, and be no older than 50 years in 2024. In addition, they are required to have experience in implementing reproductive health education in learning as well as experience as an instructor, resource person, or facilitator at least at the provincial level. Participants are also required to sign an integrity pact for the Teacher and Educational Staff Competency Enhancement Cooperation Program regarding Reproductive Health, commit to participating in the entire series of activities as evidenced by a statement from the school principal, and are preferably from schools with A accreditation and have a minimum of five years of teaching experience.

In addition to Master Teachers, this program also involves Partner Teachers who play a strategic role in improving the quality of learning for students with Intellectual Disabilities. Teachers serving as Partner Teachers must meet several requirements, including being teachers at special schools (SLB) who teach students with Intellectual Disabilities and holding a teaching certificate registered in the Education Basic Data (Dapodik). Participants must also be Civil Servants (PNS) or Permanent Foundation Teachers (GTY), possess skills in using information and communication technology, and be physically and mentally healthy, as evidenced by a certificate from a doctor or community health center (Puskesmas). The age limit for participants is set at a maximum of 45 years in 2024, with an interest in implementing reproductive health education in learning and ensuring the success of the program. Additionally, Partner Teachers are required to commit to participating in all activities, as evidenced by a statement from the school principal, preferably coming from schools accredited A within the Master Teacher's work area, and have a minimum of five years of teaching experience. By meeting these criteria, Partner Teachers are expected to optimally contribute to the implementation and success of the program.

Table 1. Score Interpretation

Scale	Interpretation
0-1 (Very Low)	Indicating that participants did not show positive responses, had low enthusiasm, minimal engagement in the training, and the material was perceived as less relevant to the needs at school.
1-2 (Low)	Indicates that participants have begun to give positive responses, but they are still limited. Understanding of the material, discipline, and involvement in training activities are not yet optimal.
2-3 (High)	Indicates that participants responded positively, showed high enthusiasm, considered the material relevant, and there was an apparent increase in knowledge as well as the impact of skills and knowledge that can be applied in schools.
3-4 (Very High)	Indicating that the participants' reactions and engagement were very good, the training was considered very beneficial and relevant, and encouraged real behavioral changes, both in knowledge and skills, which had a significant impact supporting successful implementation in the classroom.

Based on the data processing results regarding the reactions of master teachers and partner teachers during the program, the following picture was obtained, with a scale of 1-4. The interpretation is (Very low: 0-1; Low: 1-2; High: 2-3; and Very High: 3-4). This scale is interpreted in Table 1 above.

Before that, in order to ensure that the instruments used in this study are capable of measuring what they are supposed to measure and produce consistent data, validity and reliability tests were conducted on the instruments, which consist of a number of statement items. The testing was carried out using the Pearson Product Moment correlation technique with a total of 30 respondents ($n = 30$).

Table 2. Validity Test Results

No Item	r hitung	r tabel	Description
1	0,926	0,361	Valid
2	0,791	0,361	Valid
3	0,914	0,361	Valid
4	0,900	0,361	Valid
5	0,851	0,361	Valid
6	0,850	0,361	Valid
7	0,926	0,361	Valid
8	0,909	0,361	Valid
9	0,936	0,361	Valid
10	0,880	0,361	Valid
11	0,739	0,361	Valid
12	0,823	0,361	Valid
13	0,926	0,361	Valid
14	0,868	0,361	Valid
15	0,541	0,361	Valid
16	0,709	0,361	Valid
17	0,887	0,361	Valid
18	0,818	0,361	Valid

19	0,906	0,361	Valid
20	0,940	0,361	Valid
21	0,909	0,361	Valid
22	0,805	0,361	Valid
23	0,854	0,361	Valid
24	0,910	0,361	Valid
25	0,908	0,361	Valid
26	0,923	0,361	Valid
27	0,824	0,361	Valid
28	0,924	0,361	Valid
29	0,901	0,361	Valid
30	0,774	0,361	Valid
31	0,866	0,361	Valid

Based on Table 2, the test results show that of the 31 instrument items, all have correlation coefficients (r) that are significant above the r -table ($r > 0.361$ for $n = 30$, $\alpha = 0.05$), and the significance value (p) < 0.05 . Therefore, it can be concluded that all items in the instrument are considered valid and can be used for research. Next, a reliability test was conducted to determine the extent to which the instrument can be used consistently.

Table 3. Reliability Test Results

Variable	N of Items	Reliability Limits	Cronbach Alpha	Description
Instrumen	31	0.60	0.78	Reliabele

Based on the results of the reliability test shown in Table 3, the reliability test was conducted using the Cronbach's Alpha formula, resulting in $\alpha = 0.78$. According to the reliability interpretation guidelines by Arikunto (2009), a Cronbach's Alpha value of 0.78 (> 0.60) falls into the acceptable category. This means that the instrument has an adequate level of internal consistency to be used in this study. Based on the results of the validity and reliability analyses that have been carried out, it can be concluded that this research instrument is valid and reliable, making it suitable for accurately and consistently measuring the variables studied in this research.

III. Results and Discussion

Based on the results of the training evaluation analysis using the Kirkpatrick model, the success of the program falls into the very good category with an average score of 3.46 on a scale of 1 to 4, and the standard deviation values at all evaluation levels show a consistent pattern, ranging from 0.30 to 0.37, which means the data variation is very low and the training participants' responses tend to be homogeneous, with details described in the table below.

Table 3. Results of the Training Evaluation Analysis Using the Kirkpatrick Model

Aspect	Average	Standard Deviation
Reaction	3.63 (Very High)	0.32
Learning	3.46 (Very High)	0.30
Behavior	3.34 (Very High)	0.37
Result	3.39 (Very High)	0.35
Average	3.46 (Very High)	-

This program has successfully improved teachers' knowledge about reproductive health in implementing reproductive health education in classroom learning, impacting the learning process and outcomes of students, as well as influencing the healthy living behaviors of students with intellectual disabilities at school.

Furthermore, based on the training analysis in this program, it was found that the overall average falls into the very good category, with an average of 3.46 on a scale of 1 to 4. The overview of each aspect of the Kirkpatrick model training evaluation is shown in the figure below.

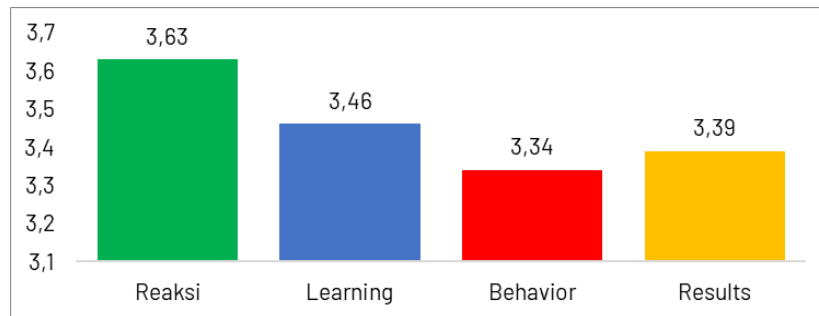


Figure 2. Training Evaluation Aspects

Based on the graph above, it is known that the highest aspect is participants' reaction to the program with an average score of 3.63 (very high category). Conversely, the weakest aspect is behavior (learning outcomes) with an average of 3.34 (high category). In detail, the evaluation results across the four Kirkpatrick levels show.

The average reaction score is 3.66 (very high), which can be interpreted as the teacher showed very high enthusiasm and satisfaction with the training. The material was considered relevant, practical, and in accordance with the learning needs in SLB. This positive reaction serves as an initial indicator of the program's success, as it demonstrates teachers' readiness to internalize the training material. The standard deviation of Reaction is 0.32, indicated that participants' perceptions of comfort, relevance, and training experience are very consistent and close to the average value. This suggests that the program successfully provided a consistent training experience for all participants. These findings are consistent with the research of Vahlufi et al. (2020) and Chavula et al. (2022), which states that participants' positive reactions to training increase motivation to implement sensitive learning, such as reproductive health education.

The average score for Learning is 3.46 (very high), indicated that the training successfully improved teachers' knowledge, attitudes, and skills in teaching reproductive health education adaptively. Teachers are able to develop integrated lesson plans, conduct learning assessments, and use visual media as well as hands-on practice to facilitate understanding for students with intellectual disabilities. Then, the standard deviation value of Learning is 0.30, which is the lowest among all levels. This indicates that the improvement in participants' knowledge, attitudes, and skills after attending the training is relatively uniform. It can be said that there is no significant difference between participants who achieved very high competency improvement and those whose improvement was low; all are at almost the same level. This competency improvement aligns with the research of Plaza-del-Pino et al. (2021) and Assyifa & Handayani (2024), which confirms that practice-based training using adaptive media effectively improves the competencies of special needs school teachers in teaching sensitive topics.

The Average score for Behavior is 3.34 (very high), indicated that the training program brings about tangible changes in teachers' behavior, demonstrated by their ability to implement reproductive health education in the classroom, improve performance in planning and assessment, and develop simple and contextual learning media. Although already very good, behavior is the aspect with the lowest score, indicating that consistency in application and field assistance still needs to be strengthened. Then, it is reinforced by a standard deviation of 0.37, which indicates that the implementation of training outcomes into teaching practice is also fairly consistent among teachers, although the variation is slightly higher compared to other levels. This means that most teachers were able to apply the competencies acquired in learning, with only minor differences in the frequency or quality of their application. Studies by Prasetyo & Mulyani (2021) and Safitri & Sundari (2021) emphasize that teachers' behavioral changes will be more optimal if training is accompanied by ongoing mentoring and supervision.

The training outcomes have had a tangible impact on students and the learning ecosystem in schools, as shown by an average score of 3.39, supported by a standard deviation of 0.35, indicating that the impact of the training on systemic outcomes such as teacher performance, collaboration, and learning networks is also relatively homogeneous. This suggests that the benefits of the training are felt evenly by both teachers and the school environment, without extreme differences between one school or teacher and another. The observed results on students and the learning ecosystem in schools include: Teachers are more competent and confident in delivering reproductive health education. Students with intellectual disabilities are more enthusiastic and have improved knowledge about personal hygiene, body protection, and prevention of sexual violence risks. Collaboration has been established with parents, school principals, and healthcare personnel, and a teacher learning community network for special schools (SLB) has begun to form. This positive impact aligns with the research of Jones et al. (2012) and UNESCO (2009), which emphasizes that reproductive health education for children with intellectual disabilities effectively reduces the risk of sexual violence if teachers are well-trained and supported by collaborative networks.

The results of qualitative data processing through observations and interviews with master teachers and partner teachers reveal various suggestions and input for improving the effectiveness of the Competency Enhancement Program for Teachers of Students with Intellectual Disabilities in Reproductive Health Education. The testing of qualitative data in this study used the data triangulation method by comparing the interview and questionnaire data with observation and document study data that had been conducted. The stages of qualitative analysis in this study were carried out through a systematic and layered process. First, all data from in-depth interviews, training observations, and participant reflections were transcribed verbatim. Second, the researchers conducted initial coding on statements related to the four levels of Kirkpatrick evaluation to identify relevant units of meaning. Third, these codes were categorized into main themes reflecting participants' experiences regarding the program's effectiveness, such as perceptions of the material, improvement in understanding, changes in teaching practices, and its impact on students with intellectual disabilities. Fourth, the interpretation stage was conducted by linking these themes with the theoretical framework of the Kirkpatrick Model, enabling the researchers to comprehensively understand how the program contributed to enhancing teachers' competencies. The analysis process is conducted iteratively to ensure consistency, depth, and accuracy of meaning in this evaluative study.

These findings enrich the results of the quantitative evaluation by providing an in-depth overview of the experiences, challenges, and expectations of the training participants, as follows: The teachers conveyed that their understanding of the urgency of reproductive health education for students with special needs is still limited, thus requiring training with longer duration, broader material, and more frequent sessions. They also emphasized the importance of in-person training to allow for more intensive interaction and easier application of practice. This need indicates that teachers experience a learning gap on sensitive and specific topics such as reproductive health for students with intellectual disabilities. Comprehensive and repeated training becomes an important strategy to ensure optimal knowledge transfer. Chavula et al. (2022) emphasize that teacher training on reproduction and sexuality topics must be continuous and intensive, as these topics require strong psychological and pedagogical readiness. Vahlufi et al. (2020) also found that repeated training with hands-on practice sessions improved the ability of special needs school teachers to integrate reproductive health education into learning.

The results of the interview emphasize that creative and adaptive learning media are highly needed so that students with intellectual disabilities can more easily understand abstract material. Teachers expect the training to include materials on media development, such as visual posters, anatomical dolls, or interactive technology-based media. Learning media serve as a bridge between abstract material and the concrete understanding of students with intellectual disabilities. Engaging and contextual media can increase students' attention, motivation, and learning retention. Adinda et al. (2025) show that creative media can significantly enhance the understanding of reproductive health among children with special needs. Assyifa & Handayani (2024) also found that the use of audiovisual media accelerates the mastery of self-care skills in students with intellectual disabilities.

Teachers emphasized the importance of intensive and continuous mentoring to ensure that the learning acquired during training can be consistently implemented in schools. They proposed both online and offline mentoring, with monthly individual consultation sessions, as well as rewards for outstanding teachers. Post-training mentoring and supervision are key to successful behavior transfer at Level 3 of Kirkpatrick, where changes in teacher behavior can be sustained if continuous support is provided. Prasetyo & Mulyani (2021) assert that teacher training accompanied by mentoring and regular monitoring has a tangible impact on the performance of special needs school teachers. Safitri & Sundari (2021) also found that long-term mentoring and cascading to other schools reinforce changes in teacher behavior and the sustainability of reproductive health education programs.

Teachers emphasize the need for the involvement of school principals, parents, and healthcare professionals at every stage of implementation. This collaboration is believed to strengthen the consistency of reproductive health education messages received by students, both at school and at home. Cross-stakeholder collaboration builds a sustainable inclusive learning ecosystem and engages the students' social environment. Rachmawati & Hadi (2021) emphasize that the involvement of parents and medical personnel is an important factor in the success of reproductive health education in special schools. UNESCO (2009) also states that inclusive education will be effective if supported by community networks and the active participation of stakeholders.

Teachers hope for a professional learning community among SLBs (Special Schools) that can serve as a platform to share experiences, discuss challenges, and develop learning media together. This network is important to ensure the sustainability of the program after formal training is completed. The formation of a teacher network will create a learning community that strengthens the dissemination of best practices and learning innovations in SLBs. Safitri & Sundari (2021) found that the SLB teacher community plays an important role in maintaining behavioral changes after training and accelerating the transfer of best practices to other schools.

Synthesis with qualitative findings shows alignment with quantitative findings on:

1. Reaction Level: Reinforced by teacher enthusiasm, but there is a need for longer and more in-depth training.
2. Learning Level: Consistent with qualitative findings on the need for the development of creative media to enhance teachers' and students' understanding.
3. Behavior Level: Challenges in consistent implementation of RTL emerge, making ongoing mentoring a primary necessity.
4. Result Level: Program impact is evident in the increase in students' knowledge and stakeholder collaboration, but the teacher network still needs to be strengthened for program sustainability.

Thus, this synthesis shows that the qualitative findings support the quantitative results while also providing positive outcomes for programs, such as the importance of reproductive health topics for students with intellectual disabilities, the need for creative media for learning, ongoing mentoring, stakeholder collaboration (school principals, parents, and medical personnel), as well as the formation of teacher networks (learning communities).

IV. Conclusion and Suggestion

In the implementation of the Competency Improvement Training for Teachers of Students with Intellectual Disabilities in Reproductive Health Education, carried out by the Directorate of Secondary and Special Education Teachers, several issues can be identified as follows. Participants' reactions to the training showed a very positive response to the program. Teachers felt enthusiastic and disciplined, and the training materials were considered relevant and practical in the context of learning at special schools, with the need for increased duration, frequency, and depth of training materials. The program successfully enhanced participants' knowledge, skills, and attitudes in understanding the material significantly. Teachers were able to prepare integrated lesson plans, develop learning media, and conduct reproductive health education assessments adaptively.

The training has a tangible impact on behavior change and the application of learning in real practice, as well as improving participants' performance, particularly in the implementation of learning. Teachers successfully implement reproductive health education in the classroom, enhancing performance in planning, assessment, and the development of simple learning media. The training has a positive impact on students and the learning ecosystem, as well as forming community networks in reproductive health education for students with intellectual disabilities. Teachers become more competent and confident in delivering reproductive health education. Collaboration with stakeholders is established, and a teacher learning community network in special schools is beginning to form as a supporting ecosystem for the sustainability of the program.

The practical implications of this research finding indicate that programs to enhance the competence of teachers of students with intellectual disabilities in reproductive health education need to be strengthened through the development of a mentoring system among teachers, particularly between master teachers and partner teachers, so that knowledge transfer and the reinforcement of teaching practices can occur sustainably within the school environment. Furthermore, the evaluation results based on Kirkpatrick Model Levels 3 and 4 suggest the necessity of developing advanced training modules focused on changes in teaching behavior and their impact on the learning outcomes of students with intellectual disabilities. This program also has the potential to be replicated in other provinces by making adjustments to the local context and ensuring adequate policy support. From an academic perspective, this study recommends conducting longitudinal studies to assess the long-term impact of training on the consistency of teachers' competency application as well as the development of students' knowledge and skills, so that the effectiveness of the program can be mapped more comprehensively.

References

- Akmaliyah, Hudzaifah, Y., Ulfah, N., & Pamungkas, M. I. (2021). Child-friendly teaching approach for arabic language in nn indonesian islamic boarding school. *International Journal of Language Education*, 5(1), 501–514. <https://doi.org/10.26858/IJOLE.V5I1.15297>
- Adinda, A., Junizar, H. D., Fidiyanto, A., Putry, A. M., Maulana, M. R. I., & Oktarina, Y. (2025). Lift the flap book berbasis augmented reality sebagai media pendidikan kesehatan reproduksi bagi anak berkebutuhan khusus. *Jurnal Pendidikan Khusus dan Inovasi Pembelajaran*, 12(1), 45–56.
- Assyifa, N., & Handayani, D. Y. (2024). Peningkatan keterampilan merawat diri siswa tunagrahita dengan metode drill dan media audio-visual. *Jurnal Pendidikan Luar Biasa Indonesia*, 10(2), 101–112.
- Chavula, C., Banda, T., & Phiri, G. (2022). Teacher preparedness in delivering reproductive health education to students with intellectual disabilities. *International Journal of Inclusive Education*, 26(5), 482–495.
- Cheung, V.K.L., Chia, N.H., So, S.S., Ng., G.W.Y., & So, E.H.K. (2023). The effectiveness of further education and training programs for plastic and aesthetic surgeons: an evaluation according to Kirkpatrick levels 1–3. *Heliyon*, 9, 1-14.

- Hanifan, A.(2024). Mewujudkan SDGs 16: Kesetaraan dan Inklusivitas bagi Penyandang Disabilitas. Diakses di <https://www.kompasiana.com/afinahanifan3472/676ae24f34777c31f9077a12/mewujudkan-sdgs-16-kesetaraan-dan-inklusivitas-bagi-penyandang-disabilitas>.
- Hoppmann, N.A., Manassa, E.H., & Ehlersh, J.P. (2025). The effectiveness of further education and training programs for plastic and aesthetic surgeons: an evaluation according to Kirkpatrick levels 1–3. *BMC Medical Education*, 25(636), 1-13.
- Jones, L., Bellis, M. A., Wood, S., Hughes, K., McCoy, E., & Eckley, L. (2012). Prevalence and risk of violence against children with disabilities: A systematic review and meta-analysis. *The Lancet*, 380(9845), 899–907.
- Kirkpatrick, D. L., & Kirkpatrick, J. D. (2006). *Evaluating Training Programs: The Four Levels*. San Francisco: Berrett-Koehler
- Maftuhah, N., & Arief, F. (2020). Pendidikan seks untuk anak dengan disabilitas intelektual sebagai upaya pencegahan kekerasan seksual. *Jurnal Ilmiah Psikologi*, 8(2), 156–165.
- Novembli, M.S., & Hasanah, N. (2024). Transformation of Teachers' Attitudes and Understanding of Students with Disabilities through Inclusive Education Training. *Jurnal Pendidikan dan Pengajaran*, 57(3), 666-675.
- Nugroho, A., & Setiani, T. (2020). Pengaruh pendidikan seks terhadap kemandirian anak dengan hambatan intelektual. *Jurnal Intervensi Psikologi*, 11(2), 45–54.
- Plaza-del-Pino, F. J., Soliani, I., Fernández-Sola, C., et al. (2021). Primary school teachers' perspective of sexual education in Spain: A qualitative study. *Healthcare*, 9(3), 1-12.
- Prasetyo, H., & Mulyani, E. (2021). Evaluasi program pelatihan guru inklusif menggunakan model kirkpatrick. *Jurnal Penelitian dan Evaluasi Pendidikan*, 25(1), 45–57.
- Safitri, I., & Sundari, H. (2021). Pencegahan kekerasan seksual melalui pendidikan seksualitas pada anak berkebutuhan khusus. *Jurnal Ilmiah Psikologi Terapan*, 9(1), 35–45.
- Setiawan, A., & Marzuki, M. (2021). Evaluasi pelatihan guru menggunakan model kirkpatrick. *Jurnal Evaluasi Pendidikan*, 15(1), 45–56.
- Safitri, N., & Sundari, R. (2021). Evaluasi pelatihan guru SLB dalam pendidikan life skill menggunakan model Kirkpatrick. *Jurnal Pendidikan Khusus dan Keterampilan Hidup*, 7(1), 22–33.
- Shawbitz, K.N., Brock, M.E. (2022). A systematic review of training educators to implement response prompting. *Sage Journal*, 46(2).
- UNESCO. (2009). *Policy Guidelines on Inclusion in Education*. Paris: UNESCO.
- Utami, D. R. R. B., Nurwati, I., & Lestari, A. (2024). School-based sexual and reproductive health education among adolescents in developing countries. *International Journal of Public Health Science*, 13(1), 141-149.
- Vahlufi, E. P., Martha, E., & Erwandi, D. (2020). Analisis pelaksanaan pendidikan kesehatan reproduksi dan seksualitas di SLB X (boarding) dan SLB Y (non-boarding). *Jurnal Pendidikan Luar Biasa*, 6(2), 55–68.
- Vi, L., Jiwa, M.I., Lunsy, Y., Thakur, A. (2023). A systematic review of intellectual and developmental disability curriculum in international pre-graduate health professional education. *BMC Medical Education*, 23(329), 1-17.
- Walker, V.L., Douglas, K., Wang, C., & Li, Z. (2024). Special education teachers' perspectives of effective pre-service training practices in systematic instruction for students with extensive support needs. *International Journal of Developmental Disabilities*, 70(4), 582-593.
- Widodo, H., & Wahyuni, S. (2021). Pentingnya penyesuaian materi kesehatan reproduksi untuk anak berkebutuhan khusus. *Jurnal Pendidikan Khusus*, 17(1), 34–42.