



Developing a Differentiated Assessment Model for Teaching at the Right Level: Improving Quality of Inclusive Teaching in Elementary School

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ABSTRACT

The main challenges are the lack of proper assessments by teachers of students' abilities in inclusive classrooms and the limited training to develop teachers' skills. This study aims to create a Teaching At the Right Level (TaRL) differentiated assessment model to improve the quality of inclusive teaching in elementary schools. The method used was the ADDIE R&D model, where the research was conducted in 8 schools in the Tanah Sereal Bogor, with 105 teacher respondents and 37 children with special needs. The results showed that this model is believed to be useful for students with special needs. The assessment tool was validated by experts with an average score of 4.45 and 4.23, indicating excellent quality concerning clarity of purpose, importance of curriculum, and ability to detect students' strengths and limitations. The results showed that 86.5% of students felt helped in learning, 75.7% experienced increased understanding, and 83.8% felt more motivated. Furthermore, the model proved locally and universally relevant and has contributed significantly to developing a more adaptable and impactful inclusive education.

Keywords: *differentiated assessment, inclusive teaching, elementary school*

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INTRODUCTION

The inclusive education in Indonesia faces complex challenges in providing quality education services for every student, as that quality education services for students with special needs through integrated information applications, (Rohmah, N., 2024). Since the implementation of Law No. 20/2003 on the National Education System, the concept of inclusive education has become a major concern, but its implementation is still far from expectations. (Ministry of Education and Culture, 2022), only 35% of primary schools in Indonesia have implemented a comprehensive inclusive learning model. This disparity is caused by several factors: (1) teachers' limited ability to identify students' individual needs; (2) lack of adaptive assessment models; (3) lack of differentiation strategies in teaching. There are great challenges in providing equal education for children with special needs, among which an important aspect of inclusive education is assessment that enables all students, regardless of their background or ability, to have a learning experience that is appropriate to their needs. Many schools, however, especially in Indonesia, often do not accommodate the different learning abilities of students, especially for children with special needs. This results in gaps in their learning outcomes and development. The Differentiated Assessment Model based on the Teaching at the Right Level (TaRL) approach emerged as an innovative solution to this research problem.

In several countries, inclusive education has long been a major challenge, especially in providing equal education for children with special needs. An important aspect of inclusive education is assessment that allows

all students, regardless of their background or ability, to have a learning experience that suits their needs. In most countries, including Indonesia, however, assessments conducted in inclusive primary schools often fail to accommodate students' different learning abilities, especially for children with special needs. This results in gaps in their learning outcomes and development.

A differentiated assessment model based on the Teaching at the Right Level (TaRL) approach has emerged as an innovative solution to this problem. It emphasizes tailoring learning materials to students' ability levels, where each student is given the opportunity to learn at a level appropriate to his or her understanding. It aims to ensure that every student can develop according to their potential, without being hindered by unrealistic standards.

The TaRL has been adopted into various inclusive education programs globally and has shown positive results, especially in improving the engagement and achievement of students with special needs. A relevant study was conducted by (Banerjee et al., 2021) who found that the TaRL approach significantly improved the reading and numeracy skills of children with special learning needs in India. TaRL has also been successful in improving the learning outcomes of students with learning difficulties in countries such as Kenya, as the method adapts the material to each student's level of understanding.

This research aims to develop an effective impact differentiated assessment model, improve the quality of inclusive teaching in elementary schools, produce assessment instruments that can accommodate the diversity of student abilities. The adoption of differentiated teaching based on individual learning materials in order to improve learning effectiveness includes the intensity of student interaction in learning, and student learning independence; improve student learning achievement in each lesson, (Purwoko, B.S., 2026).

The empirical and research data related to teaching at the right level, in the differentiated assessment model, among others, learning should be carried out interactively, fun, and provide sufficient space for initiative, creativity, and independence in accordance with the talents, interests and physical and psychological development of students, (Tomlinson, 2024). This is consistent with the concept of differentiated learning, which is learning activities that modify the process, design various activities to help learners understand the material and adjust the learning process in the classroom to meet the individual learning needs of each learner so that they are not frustrated and feel they have failed during the learning process (Sumardiyanto, and Dassucik, 2024) and (Tomlinson, 2004). However based on preliminary studies conducted by the service team, 60% of educators have never heard of differentiated learning and have not implemented a differentiated learning model.

The motivations for this research are: overcome the existing educational gap, provide practical solutions for teachers in dealing with student diversity, develop a more humanist approach in education. The research method used a Research and Development (R&D) approach with stages: preliminary studies starting from a needs analysis of 8 elementary schools in the Tanah Sareal neighborhood of Bogor City, with teacher respondents: 104 teachers, children with special needs: 37 students. There were also in- depth interviews with 16 teachers, while observations of teaching practices were directly observed regarding the TaRL differentiated assessment learning model: an innovative approach for inclusive class students for 2 weeks continuously. The model design with the development of differentiated assessment stages with an innovation approach for inclusive primary schools, along with validation instruments for Indonesian language education experts, assessment evaluation experts, and experts in the field of children with special needs. As strengthening this statement, the opinion of (Yulida, a. m., 2024) the development of interactive flipbook-based e-modules in supporting differentiated learning in social science subjects is very feasible to use in the learning process.

The development of assessment instruments was implemented by piloting a differentiated assessment model based on Teaching at the Right Level (TaRL) in 8 elementary schools in the Tanah Sareal neighborhood

of Bogor City. The qualitative and quantitative data collection, analysis of the impact of the intervention from the data collection methods of participatory observation, in-depth interviews, student ability tests, documentation of the teaching process.

The descriptive data analysis technique was triangulated. The main findings of this study are an increase in student engagement by 62%, an increase in academic achievement of 45% of students, increased teacher capacity in identifying the individual needs of inclusive students. Their practical implications are the use of more inclusive assessment models, adaptive teaching strategies, student-centered approaches. The research makes a significant contribution in developing an assessment model that is responsive to the diversity of student abilities, with the hope of improving the quality of inclusive education in Indonesia. The empirical data and research related to the differentiated assessment model include, (Banerjee et al., 2021) The results of his research show that the application of TaRL in India has succeeded in improving reading and counting skills in children with learning difficulties (Vavrus, 2020). The research results show that the TaRL approach is effective in supporting students with special needs in several countries, including Kenya and Indonesia. (Kazi, 2021). The research observed the success of differentiated assessment in inclusive classrooms in Bangladesh, providing strong evidence that TaRL can improve the learning outcomes of students with special needs, (Kumar, 2020) the results of his research examined the impact of TaRL on children with special needs in India and found that this method can improve self-esteem and academic achievement.

Nevertheless, although there is a lot of empirical evidence showing the success of this approach in the context of inclusive education, its implementation in Indonesia is still very limited. There is a need for more in-depth research to develop and adapt a TaRL-based differentiated assessment model that suits the cultural, social conditions and special needs of children in Indonesia, particularly in inclusive primary schools in areas such as Tanah Sareal, Bogor City. Research that specifically examines the development of a TaRL-based differentiated assessment model for children with special needs in inclusive schools is limited. Thus, further research is needed to develop and implement an effective evaluation model in the context of inclusive education, particularly in the Tanah Sareal area of Bogor City.

The key issue in this study is the absence of an effective and differentiated evaluation model for children with special needs in inclusive primary schools, particularly in the Tanah Sareal area of Bogor City. Many assessments currently available cannot adapt to the different abilities of students with special needs and regular students, leading to disparities in learning outcomes. This inhibits the academic and social development of children with special needs.

The research aims to develop a differentiated assessment model based on the Teaching at the Right Level (TaRL) approach using the R&D method with the ADDIE (Analyze, Design, Develop, Implement, Assess) approach. The assessment model is designed to adapt learning materials to students' abilities, both for students with special needs and regular students.

The research is important to create a more inclusive and adaptive assessment to improve the quality of education in inclusive schools. The results of this research are expected to provide practical solutions for heterogeneous classrooms, support inclusive education in Indonesia, and provide guidance for educators and policy makers to achieve equitable academic success.

LITERATURE REVIEW

The appropriate level teaching (TaRL) approach and differentiated assessment models have developed into an important framework for creating an inclusive learning environment that suits students' individual needs. (Latkovsk, 2020) emphasizes the importance of differentiated activities in English language learning in primary schools to support better inclusion. Research (Semradova, 2024) shows how innovative differentiation

models can strengthen students' engagement in inclusive learning. This is in line with research (Cigognini, 2024) in Italy, which identified that differentiated learning not only supports learning, but also promotes increased student engagement. (Gheysens et al., 2021) discuss differentiation practices in inclusive classrooms that significantly affect student learning outcomes through adjustments in teaching methods. (Izevbigie, 2021) additionally noted that differentiated assessment is an important tool for monitoring student progress within an inclusive framework. (Zhou, 2024) supported this argument by examining the impact of differentiation on student learning outcomes in primary grades, while (Abdul-Majied & Cunningham, 2023) examined teachers' understanding of formative assessment as part of an inclusive approach. Additionally, (Greece, 2024) emphasized the importance of differentiated scientific methods for students with special needs. In a broader context, (Kaur, 2019) evaluated the practice of research objectives

This study aims to develop and test an effective differentiated assessment model based on the Appropriate Level Teaching (TaRL) approach for children with special needs in inclusive primary schools, especially in Tanah Sareal, Bogor City. By utilizing the R&D (Research and Development) method and the ADDIE (Analyze, Design, Develop, Implement, Evaluation) method, this research is expected to produce an adaptive assessment model that can adjust learning materials to the level of ability and individual needs of students in inclusive classrooms.

The primary focus of this research includes three main aspects that are interrelated with each other. First is developing a TaRL-based differentiated assessment model, which aims to create an assessment that can be adapted to the ability levels of students, both students with special needs and ordinary students. The second is to implement this assessment model in an inclusive primary school in Tanah Sareal to test its ability to improve student learning outcomes. The effectiveness of the assessment model is assessed, which includes assessing its impact on the engagement, motivation and learning achievement of students with special needs. This research aims to systematically answer three related key questions, namely: (1) How can a TaRL-based differentiated assessment model be developed to meet the needs of children with special needs in inclusive primary schools? (2) To what extent can the application of this assessment model improve the learning outcomes of children with special needs? (3) How does the application of this assessment model impact on the involvement and motivation of children with special needs in the learning process.

This approach is expected to achieve several important results. The first is to produce a TaRL-based differentiated assessment model that is effective and easily adapted by students with special needs in inclusive primary schools. The second is that the application of this model is expected to improve students' academic and non-academic learning outcomes. The third objective of this research is to increase students' motivation and engagement in learning through assessments that are appropriate to each student's ability. Lastly, this research will provide practical guidance for inclusive teachers and schools in implementing differentiated assessments, as well as making a real contribution to the development of inclusive education in Indonesia. This research thus not only addresses the challenges of inclusive education but also offers solutions that can be adapted and applied widely, both at the local and national levels.

The differentiated assessment model based on Teaching at the Right Level (TaRL) is an innovative approach designed to adapt the learning process to the individual needs of students in an inclusive environment. This model integrates the principles of differentiated assessment with the TaRL approach, which focuses on assessing students' prior abilities and adapting learning strategies according to their competency levels. The method was first widely implemented in India and has shown significant success in improving student learning outcomes, especially in reading and numeracy (Banerjee et al., 2021). TaRL's main concept is to group students based on their level of understanding, not by age or grade, so that the learning process is more personalized and effective.

Expressed (Marlina & Kusumastuti, 2023), a differentiated assessment model can increase the engagement of students with special needs in inclusive schools by paying special attention to their individual needs. This is essential to ensure each student feels valued and gets the support they need to thrive. Additionally, Gheyssens et al. (2021) reinforce this theory by showing that the implementation of differentiated assessment in inclusive classrooms can create a more adaptive learning environment, thus supporting the success of students from different ability backgrounds.

Additionally, (Lindner et al., 2019) noted that the Tarl-based differentiated assessment approach allows teachers to replace the “one-size-fits-all” approach with more individualized strategies. The approach gives students with special needs the opportunity to develop according to their level of cognitive ability, thus promoting a more inclusive and supportive learning environment.

Moreover, (Semradova, 2024) emphasizes that flexible assessment is a key element in ensuring the sustainability of inclusive education. The flexibility in evaluation allows teachers to dynamically adapt learning methods to students' needs, which is considered an important basis in realizing inclusive education at the primary school level.

These insights suggest that the TaRL-based differentiated assessment model not only supports students' individual needs but also provides a solid foundation for creating an inclusive and sustainable learning environment. It allows students with special needs and regular students to learn together in harmony, with each individual receiving the necessary support to reach their full potential.

METHOD

The research methodology used in this study is a research and development (R&D) model with the ADDIE (Analyze, Design, Develop, Implement, Evaluation) approach (Creswell, 2018). The ADDIE method was chosen because it is suitable for developing and testing a differentiated assessment model based on Teaching at the Right Level (TaRL) in inclusive primary schools, as well as for conducting research systematically and continuously. Following is the research design in the ADDIE method:

Analyze, identifying existing problems in primary schools related to the assessment of children with special needs. The steps taken: Surveys and interviews with teachers, students and parents to identify problems faced by children with special needs in the assessment process, Assessment of special needs in the context of inclusive education in Tanah Sareal Public Elementary School, Bogor City. Analyze the existing curriculum and assessment standards to ensure the importance of the model to be developed with the prevailing education system.

Design a TaRL-based differentiated assessment model that is appropriate for students' ability levels in inclusive primary schools. The implemented steps: Designing assessment tools that are flexible and appropriate to the different ability levels of students, especially for children with special needs, Design learning methods that use the TaRL approach, where learning materials and activities are adjusted to the ability levels of students, Design instructions for teachers to implement this differentiated assessment model in inclusive classrooms.

Develop the differentiated assessment model prototype and organize it into an implementation guide. *Implementation* steps: To develop a TaRL-based assessment model consisting of relevant assessment tools and an implementation guide for teachers in inclusive classrooms, Trial the assessment tools on a small number of students to obtain feedback on suitability and ease of use, Adjust the differentiated evaluation model based on the results of the initial trial. Implementation apply tarl-based differentiated rating model to inclusion class to see its effectiveness.

Implementation steps: The implementation of the developed assessment model in inclusive classrooms in primary schools in Tanah Sareal, Bogor City, the implementation of differentiated assessments during specific learning periods, and the inclusion of students with special needs and regular students in the assessment process, monitoring the implementation of assessments and recording student and teacher responses to the implemented model.

Evaluate assess the success and effectiveness of the TaRL-based differentiated rating model. *Implemented steps:* Assess the students' assessment results, their engagement and motivation during implementation, Analyze whether the differentiated assessment model improved the learning outcomes and motivation of students with special needs, collect feedback from teachers, students, and parents to assess the success of this model and its potential for improvement, identify challenges you faced during implementation, and provide recommendations for further improvement. The respondents are the participants or respondents in this study:

Tabel 1. The number of research respondents

No	School Name	Teacher	Children with Special Needs
1	SDN Julang	22	16
2	SDN Tanasareal 2	14	3
3	SDN Dewi Sartika 2	9	5
4	Yapis Elementary School	12	6
5	SD Sentana Montessori	7	2
6	SDS BCT	15	1
7	SDIT Al Munawar	12	1
8	SDIT Azhar	12	2
Total		105	37

Table 2. Distribution of ABK types at the Sareal Land Inclusion School, Bogor City

No	School Name	Number of crew members	Hyperactive	Slow Learner	Deef	Speech Impaired
1	SDN Julang	16	7	5	3	1
2	SDN DEWI Sartika 2	5	4	1	1	0
3	Yapis Elementary School	6	3	2	1	0
4	SD Sentana Montessori	2	1	1	0	0
5	SDS BCT	1	0	1	0	0
6	SDIT Al Munawar	1	0	0	1	0
7	SDIT Azhar	2	0	1	1	0
Total		37	16	12	8	1

Data collection was conducted by conducting interviews: conducted on principals and teachers in 6 primary schools in Tier 1 of Tanahsareal district, Bogor City. Observation: direct observation during the implementation of the lesson, survey: distribution of questionnaires to measure the interest and motivation of teachers in the schools of inclusion, validation of experts of assemen instruments: testing the feasibility of tools used in the implementation of differentiated assessments of teaching at the appropriate level, documentation: initial data on the number of children with special needs and types of special needs.

The data analysis performed was tailored using R&D methodology with the ADDIE approach. The data analysis conducted in the study consisted of quantitative data analysis and qualitative data analysis. Quantitative data analysis, i.e. descriptive statistical analysis, will be used to describe pupil and teacher satisfaction scores with the differentiated rating model. Meanwhile, qualitative data analysis is used to analyze interview and observation data, where researchers will identify key topics related to the impact of the assessment model on student engagement, motivation and learning outcomes.

The validity and reliability of the tools used for data collection to ensure that the data obtained, accurately reflects aspects that need to be measured and reliable for further analysis, will be considered in this study. The following is an explanation of the validity and reliability of the tools used in research with the ADDIE method and design for the model of differentiated assessment of teaching at the appropriate level in inclusive primary schools.

There are several validity tests carried out in this study: *Content* validation is carried out to ensure content validity, the tools developed (assessment tests, questionnaires and watch sheets) are consulted with experts in the field of inclusion education, educational assessment and education of children with special needs. These experts assess whether the tool covers all relevant dimensions and if there are any elements that need to be added or adjusted.

Construct Validity the validity of the build was tested by conducting a test of the assessment tool on a small sample of students before using it more widely. The results of this trial were analyzed to make sure the tool measures academic ability and student engagement as expected.

Criterion Validity to test the validity of the criteria, data from student assessment scores were compared with external assessment scores or direct observations related to increased student engagement.

External Validity to increase external validity, research was conducted in several elementary schools of inclusion with different characteristics, so that the study results could be extended to a broader context of inclusive education.

Instrument reliability refers to instruments that produce consistent and consistent results when used in different cases with different samples. Test-taking tools refer to the consistency of test scores used to measure students' academic abilities. Test-taking tools such as quizzes and exams should produce consistent and consistent results when applied to the same student repeatedly. Reliability of the observation tool In this study, observation is used to measure student engagement during learning. The questionnaire was used to measure student and teacher satisfaction with the differentiated rating model. To ensure the validity of the data, data triangulation is carried out, namely the use of more than one data source (observation, interview, test and questionnaire) to verify the consistency of the findings. Then, the researcher holds detailed data of the data collection, analysis and interpretation process to allow others to follow and verify the steps taken during the study.

The findings in the implementation of the research are as follows: Analysis activities are carried out during preliminary research by conducting needs analysis, materials analysis and curriculum analysis. The analysis was carried out by distributing questionnaires to teachers and students. The results of the empirical data showed that the initial teacher knowledge level of 105 respondents received the following results: A total of 79 respondents (79%) knew about the tarl differentiated assessment model. Readiness to implement: Only 66 respondents (63.5%) felt willing to implement this model in the inclusion class, indicating the need to strengthen readiness. Training needs: A total of 93 respondents (89.5%) felt the need for further training, indicating an urgent need for improvement. Benefits for students with special needs: The majority (85 respondents or 81.8%) believe this model offers real benefits to students with special needs. Interest rate: The interest rate is quite high, with 84 respondents (78.9%) wanting to use this model. Effectiveness: Respondents

believe that differentiated assessments help identify students' strengths (89 respondents or 86.6%) and are more effective for students with different abilities (91 respondents or 87.5%).

Table 3. Tarl Differentiated Assessment

Aspects	Criterion	Evaluation Instruments	Observation Instruments	Interview Instruments
Behaviour	Hyperactive	Concentration test: Give short activities (5-10 minutes) that require focus, such as putting together a simple puzzle.	Observe the level of activity of students during the lesson: Do they change places often or lose focus?	Ask students, "What makes you feel bored or have trouble focusing while studying?"
	Slow Learner	Evaluate with simple questions (1-2 questions per topic) and allow additional time.	Observe the speed at which students complete the task: Does it require constant help?	Ask students, "Do you feel it takes longer to understand the lesson?"
	Deaf	Test with pictures or visual-based tasks: Match pictures with words.	Observe students' responses to visual instruction: Does it understand quickly?	Ask the teacher/companion, "How do students respond when instructions are delivered visually?"
	Speech Impaired	Simple reading comprehension test: Choose a word that matches the picture.	Observe how students use cues or communication aids.	Ask students (in writing/visually), "How do you usually express your opinions?"
Academic	Hyperactive	Reading or numeracy tests with short duration and variety of activities.	Observe whether students can complete academic assignments even with high distractions.	Ask students, "What can help you learn better?"
	Slow Learner	Evaluate through simple step-based tests and repetitive instructions.	Observe if students need a lot of repetition in the instruction.	Ask students, "Do you find it difficult with a particular lesson? If so, what is it?"
	Deaf	Visual-based academic tests, for example, matching pictures with words or numbers.	Observe the extent to which students rely on aids or companions to understand the material.	Ask the teacher/companion, "Did the student understand the material with visual aids?"
	Speech Impaired	Academic tests with multiple-choice answers or simple written answers.	Observe how students express understanding without using verbal communication.	Ask students, "What makes you find it difficult to complete your schoolwork?"
Social-Emotional	Hyperactive	Social problem-solving test: Provide social scenarios and have students choose appropriate actions.	Observe students' interactions with peers: Are there any disruptive impulsive behaviors?	Ask students, "How do you usually play or interact with friends?"
	Slow Learner	Give a simple test related to a social situation, such as choosing an emotion that matches the picture of the situation.	Observe if students tend to withdraw or have trouble understanding peer emotions.	Ask students, "How do you feel when you work with a friend?"
	Deaf	The test was carried out with the media of picture cards that depicted social situations.	Observe how students respond to non-verbal communication from peers.	Ask the teacher/companion, "How do students usually respond to social interactions?"
	Speech Impaired	The emotion recognition test uses facial images and asks students to choose a suitable word.	Observe how students use body language or aids in communicating.	Ask students (in writing/visually), "What makes you happy when you play with friends?"

The results of the design after being made were validated by learning assessment experts and elementary school teachers, the following results were obtained:

Table 4. Results of expert validation of differentiated learning assessment instruments

No	Aspects of Instrument Design	Score	
		Validator 1	Validator 2
1.	Clarity of objectives of the assessment instrument (operational, specific, realistic)	5	5
2.	Relevance of assessment objectives to curriculum aspects	4	4
3.	Scope and depth of assessment objectives	5	4
4.	Accuracy of the use of the aspects assessed for the purpose of the assessment	5	4
5.	The ability of assessment instruments to uncover students' strengths	4	4
6.	The ability of assessment instruments to reveal students' limitations	4	4
7.	Suitability of statement items to assessment purposes	4	4
8.	Clarity and detail of statement items	4	4
9.	<u>Representation</u> of instrument items to measure measured aspects	5	5
Total score		40	38
Average Score		4,45	4,23

The expert validation scores of the Differentiated Learning Assessment tool showed excellent quality with an overall score of 40 from Validator 1 and 38 from Validator 2, and an average grade of 4.45 and 4.23 respectively. The clearing aspect of the assessment objectives received perfect results from both validators, indicating that the objectives of the tool were operational, specific and realistic. The importance of the assessment objectives for the curriculum aspect and the depth coverage of the targets was rated as good, although there was a small difference in scores between validators, indicating the need for improvement to ensure full adherence to the curriculum. The tool is also very accurate in aligning the assessed aspects with the purpose of the assessment, as reflected in the perfect score in this category. The tool's ability to detect pupil strengths and limitations was rated as very good, but there was a small difference in scores in terms of pupil strength, indicating the need for adjustments to make the tool more stable. In addition, the consistency of the state object for the purpose of evaluation achieved a perfect result, indicating that the design of the item is relevant.

RESULTS AND DISCUSSION

However, aspects of the clarity and detail of the item, as well as the representative of the item to measure the aspect being evaluated, scored slightly below Validator 2, indicating the need for improvements in the detail and scope of the item to ensure the optimisation of the measurement. Overall, validation results show that this tool is effective for differentiated assessment of learning. However, adjustments need to be made in the detail and representation of items, as well as to strengthen their relevance to the curriculum, so that the tool meets the highest standards and is used optimally in different assessment contexts.

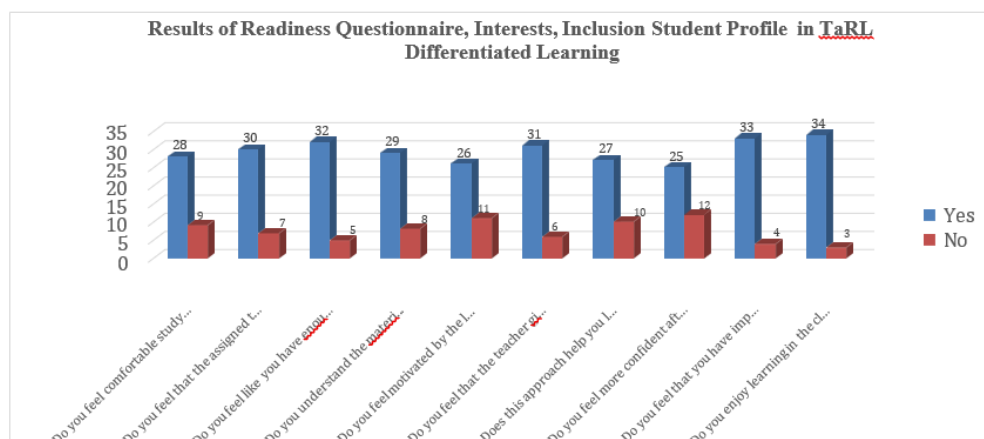


Figure 1. Survey of Readiness, Interests, Profile of Inclusion Students in TaRL Differentiated Learning

The survey results show Comfort in the classroom: A total of 28 students (75.7%) feel comfortable learning in an inclusion class, but there are still 9 students (24.3%) who feel uncomfortable. This shows the need to increase comfort for all students. Assignment fitness: Most students (30 students or 81.1%) felt that tasks were consistent with their abilities, suggesting that the assessment model was beginning to meet the individual needs of students. Teacher attention: A total of 25 students (67.6%) felt they were attracting enough attention, but 12 students (32.4%) felt they were not caring, suggesting teachers should increase interaction with pupils who feel understood. Understanding the material with TaRL: A total of 29 students (78.4%) felt that this model helped them understand the material, indicating it was effective, but there was still room for improvement. Learning Motivation: Most students (31 students or 83.8%) felt motivated, indicating that this method was quite successful in increasing motivation. Likelihood to ask/comment: A total of 27 pupils (73.0%) were given an opportunity by the teacher, but 10 pupils (27.0%) still felt it was missing, suggesting teachers should make sure all pupils have the same space. Effectiveness of access: A total of 32 students (86.5%) felt that this method helped them learn better, indicating that this approach was very effective in supporting learning. Student confidence: A total of 26 students (70.3%) felt more confident, suggesting there was progress, but some students' confidence needed to be improved. Improved understanding: A total of 28 students (75.7 %) felt there was an increase in learning comprehension, which showed that this model had a positive impact on material comprehension. A total of 33 students (89.2%) felt happy learning with this model, indicating that this model creates a positive learning atmosphere.

Evaluation, the results of the TaRL Differentiation Assessment for children with special needs in elementary schools in the bogor city sareal land include:

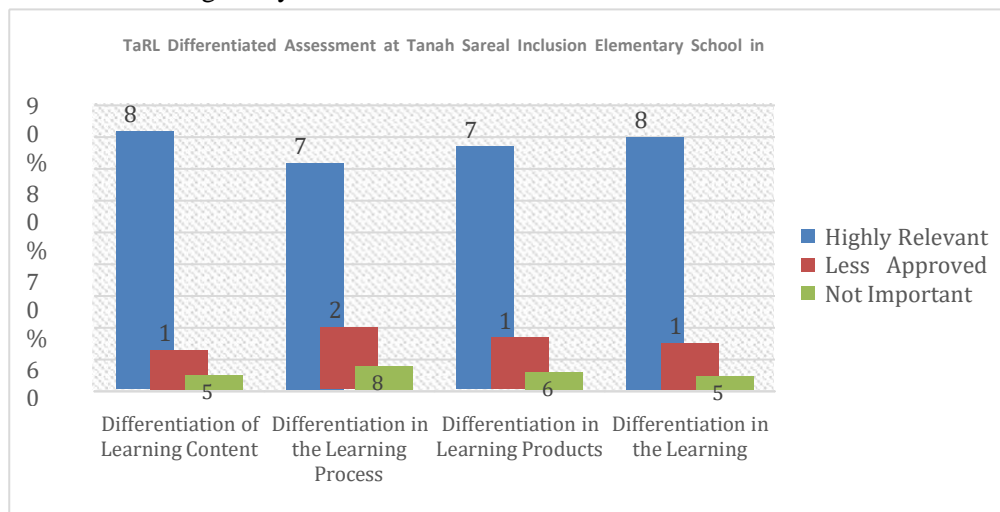


Figure 2. Results of TaRL Differentiated Assessment at Tanah Sareal Inclusion Elementary School in Bogor City

The results of the analysis showed that differentiated learning received high support from respondents, with a very important 77.7% average rating (HR), while the badly approved (LA) and non-important (NI) categories reached 16.3% and 6.0%, respectively. The aspect-by-aspect analysis illustrates the close relationship between differentiated dimensions of learning. In terms of differentiation of learning content, higher support (HR: 81.8%) is given to presentation of material according to students' needs, setting specific goals and providing motivation, although attention to individual differences and material adaptations has yet to be improved. In differentiating the learning process, the level of support (HRC: 71.9%) was lower, with a high rating for different strategies and learning resources, but providing special tasks and time for students with special needs was a challenge. Learning product differentiation received support of 77.0%, indicating appreciation for variation in learning outcomes as verbal, non verbal, written or achievement, although providing additional time to evaluate students with special needs scores should be improved to be more inclusive. Lastly, on the differentiation of the learning environment, 80.0% support emphasized the importance of classroom environments that support student diversity, particularly through heterogeneous groups and student responsibility training, although providing overtime for students with special needs remains an area that requires more attention.

Discussion

This study discusses the development and implementation of a differentiated assessment model based on *Teaching at the Right Level* (TaRL) to support inclusive education in primary schools. The results show that this model is effective in identifying students' individual needs, improving learning outcomes and encouraging the engagement of students with special needs in inclusion classes. Implementing TaRL in Inclusion Schools TaRL has proven to be effective in supporting learning in inclusion classes. The results of

the study by Gaitas et al. (2024) show that teachers applying the TaRL-based differentiation approach manage to create an inclusive learning environment by identifying each learner's needs through diagnostic assessments.

Research conducted by (Gaitas et al., 2024) highlights the importance of implementing differentiated guidelines to create an inclusive educational environment. This study explains that applying learning differentiation can help teachers understand and meet the different needs of students, including inclusion classes. This is supported by the findings of (Gaitas, Sarabando, et al., 2024), which show that teachers who implement adaptive teaching strategies and use peer support can meet the social and academic needs of pupils with special needs. Another study by (Gaitas, Sarabando, et al., 2024) in *frontiers in education* examines the impact of teacher practices on student well-being. The study highlights the importance of differentiated learning that supports not only academic development but also the emotional well-being of students. This perspective is consistent with (Gaitas, Silva, et al., 2024) who emphasized that differentiation in teaching is a key element in ensuring the success of inclusive education at the primary level, as discussed in *the international journal of studies in inclusive*.

Education, furthermore, (Langelane et al., 2024) in *Teaching and Teacher Education* underline the importance of educating teachers in differentiation to prepare them to face the challenges of an inclusive class. This study suggests that vocational training that focuses on adaptive teaching allows teachers to design relevant learning for students with different needs. Research by (Leite et al., 2024), in *the International Journal of Inclusive Education* expands on this discussion by examining how peer mediation can improve the integration of migrant students into inclusive schools. This study shows that learning strategies that actively engage other students can help build an inclusive and collaborative environment. In a broader context, (Navrátilová et al., 2024) stress the importance of consistency of topics and approaches to inclusive education, as discussed in *the European Journal of Special Needs Education*. This study provides a thematic insight into inclusion and the importance of differentiation of learning as the basis for the success of an equal education system.

The Educational Review provide students' perspectives on the effectiveness of differentiated learning. They found that this approach not only increases learning motivation, but also increases students' confidence in participating in the classroom. To complement this literature, (Hu, 2024) in *the Asia Pacific Education Review* provides a systematic review of the application of learning differentiation in grades K-12. The study concludes that the learning differentiation approach offers an important opportunity to create a fair and inclusive learning environment. Finally, (Nketsia et al., 2024) research in *Frontiers in Education* examines educators' perceptions of differentiated teaching. This study shows that teachers' knowledge and experience in differentiation mainly determine their effectiveness in supporting student diversity. (Park & Le, (2020) confirms this finding in the context of South Korea. Their study shows that the TaRL approach helps students with special needs significantly improve their math and reading skills. Furthermore, (Vavrus, 2020) in Kenya documented the effectiveness of TaRL in creating a more adaptive learning environment, for both regular and special needs students. (Meanwhile, Broderick et al., 2005) research highlights the importance of using differentiation strategies for students with disabilities in inclusion classes. This study recommends the use of assistive technology and accessible learning materials to support full student engagement.

The theory of differentiation in education, as explained by (Tomlinson, 2014) underlines the importance of adapting learning based on the needs of students to ensure maximum potential is achieved. This approach is supported by (K.- T. Lindner & Schwab, 2020), which emphasized that differentiated assessments allow teachers to replace the "one size fits all" strategy with a more inclusive approach.

The Differentiated Assessment Model based on *Teaching at the Right Level* (TaRL) is an innovative approach designed to tailor the learning process to the individual needs of learners in an inclusive environment. This model integrates the principle of differentiated assessment with the TaRL approach, which focuses on

assessing students' initial skills and adapting learning strategies to suit their level of competence. As revealed by (Marlina & Kusumastuti, 2023), a differentiated assessment model can increase the engagement of students with special needs in inclusion schools by paying particular attention to their individual needs. It's important to make sure every student feels valued and gets the support they need to thrive. Furthermore, (Gheysens et al., 2021) reinforce this theory by showing that applying differentiated assessment to inclusion classes can create a more adaptive learning environment, thus supporting the success of students from different skill backgrounds.

In addition, (Lindner & Schwab's research, 2020) notes that the TaRL-based differentiated assessment approach allows teachers to replace the "one size fits all" approach with a more individualized strategy. This approach provides opportunities for students with special needs to develop according to their level of cognitive ability, thereby encouraging the creation of a more inclusive and supportive learning environment.

This overall view shows that the TaRL-based differentiated assessment model not only supports students' individual needs, but also provides a solid foundation for creating an inclusive and sustainable learning environment. This approach allows students with special needs and regular students to learn together in harmony, with each individual receiving the necessary support to reach their maximum potential. This study supports these theories by showing that TaRL-based differentiated assessments not only provide a more personalized learning experience, but also increase student motivation and confidence.

Table 5. Data from Questionnaire Results on Readiness, Interest, Profile of Inclusive Students in TaRL Differentiated Learning

No	Question	Yes	No
1	Do you feel comfortable studying in an inclusion class?	28	9
2	Do you feel that the assigned tasks are in accordance with your abilities?	30	7
3	Do you feel like you have enough attention from the teacher?	32	5
4	Do you understand the material with the TaRL assessment model?	29	8
5	Do you feel motivated by the learning approach you take?	26	11
6	Do you feel that the teacher gives you the opportunity to ask questions/opinions?	31	6
7	Does this approach help you learn better at your own pace?	27	10
8	Do you feel more confident after using this approach?	25	12
9	Do you feel that you have improved your understanding of the lesson compared to before?	33	4
10	Do you enjoy learning in the classroom with this assessment model?	34	3
Total Score		295	75
Average Score		53.64	13.64

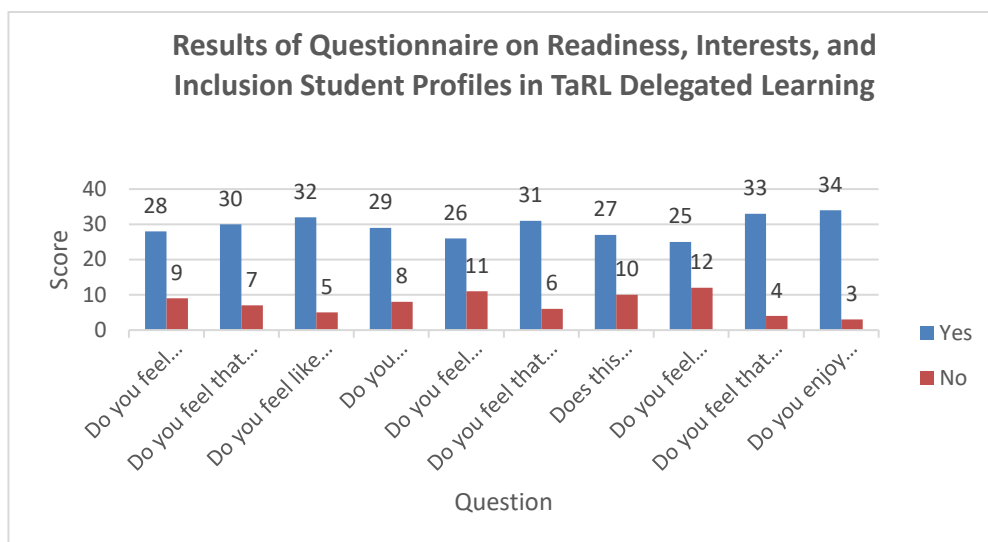


Figure 3. Results of Questionnaire on Readiness, Interests, and Inclusion Student Profiles in TaRL Delegated Learning

CONCLUSIONS AND RECOMMENDATION

This study confirms that the model of differentiated assessment based on Teaching at the Right Level (TaRL) has great potential to support inclusive education, especially at the primary school level. Based on expert validation scores, this assessment tool is rated as very good with an average validation score of 4.78 and 4.67 respectively. The excellence of the tool lies in clarity of purpose, the importance of the curriculum and the ability to discover pupil strengths and limitations, although improvements in detail and representation of the item are needed. The results of the implementation show a significant positive impact. A total of 86.5% of students felt this approach helped them learn better, 75.7% experienced a greater understanding and 83.8% felt more motivated. However, there are challenges in improving comfort for the 24.3% of students who feel uncomfortable, as well as in reinforcing attention for students who feel underwhelmed. Evaluation of differentiation in content, processes, products and learning environments showed strong support from respondents. The presentation of relevant materials and the variety of learning methods is assessed, although more attention to individual needs, especially children with special needs (ABC) needs to be improved. Overall, this model creates a positive atmosphere of learning, with pupils' happiness level reaching 89.2%. This research is consistent with international findings showing the success of the TaRL approach in India, Kenya and South Korea in improving learner learning outcomes and motivation. In addition, this study highlights the importance of evaluation flexibility in supporting the sustainability of inclusive education, as it is found this model is therefore relevant at local and global level and makes a significant contribution to the development of more adaptable and effective inclusive education.

Limitations

The limitations of this study lie in various aspects of implementing and developing a differentiated assessment model based on Teaching at the Right Level (TaRL). Although validation results show excellent instrument quality, there is still need for refinement of details and representatives of items to ensure optimal measurement. The implementation results also revealed the challenges of improving student comfort, where

24.3% of students felt uncomfortable, as well as the need to pay attention to students who felt unserved. Although this model has managed to create a positive learning atmosphere with a happiness level of 89.2%, more attention to the individual needs of children with special needs (ABC) in differentiating content, processes and learning environments is still a challenge. These limitations indicate the need for further adjustments to optimize the effectiveness of this model in different contexts of inclusive education.

Recommendations

This study shows that the TaRL method can still be used and improved, with particular attention to learning time to ensure that all students gain an optimal understanding. Respondents generally have a positive view of differentiated ratings and their benefits. However, there is a significant need for further training and adequate time for implementation. The use of technology in assessments also requires attention to improve teacher comfort.

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Conflict of Interest

In this investigation, there are no obstructions or conflicts of interest with either party. It is consistent with the cooperation the researcher has purposely built research.

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