



Differentiated Learning Approach Model in Inclusive Classrooms Based on Social Emotional Learning in Elementary School

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ABSTRACT

Inclusive education in elementary schools requires instructional practices that accommodate students' diverse characteristics, both in academic and social emotional aspects; however, classroom practices indicate that the implementation of differentiated instruction remains suboptimal and is still predominantly focused on cognitive outcomes without systematically integrating Social Emotional Learning (SEL). This study aims to develop a differentiated instruction model for inclusive classrooms based on Social Emotional Learning that is valid, practical, and applicable in elementary schools. The research employed a Research and Development (R&D) method using a Design-Based Research (DBR) approach through three stages: analysis and exploration, design and construction, and evaluation and reflection. The participants involved principals and teachers from inclusive elementary schools in Bogor Regency and Bogor City selected through purposive sampling. Data were collected through semi-structured interviews, observations, document analysis, expert validation, and practicality questionnaires, and were analyzed using thematic analysis, needs analysis, content validity analysis, and descriptive quantitative analysis. The findings revealed that teachers encountered difficulties in mapping students' characteristics and integrating social-emotional aspects into instructional practices; therefore, a model was developed incorporating holistic academic and social-emotional needs assessment, differentiation of content, process, and product, and the establishment of an inclusive and supportive classroom climate. Expert validation and limited field testing indicated that the model met the criteria of validity and practicality and assisted teachers in designing more systematic and responsive instruction for diverse learners. In conclusion, the developed model offers both a conceptual and operational solution to strengthen holistic, equitable, and humanistic inclusive teaching practices in elementary schools.



1. Introduction

Inclusive education in elementary schools is an educational approach that emphasizes equal access to learning for all students, regardless of differences in ability, social background, or individual developmental conditions (Phytanza et al., 2023). The success of its implementation is largely determined by the quality of classroom instruction that is able to accommodate the diverse characteristics of students, including students with disabilities, both in academic and socio-emotional aspects. Therefore, in realizing effective learning in inclusive classrooms, teachers are not only focused on cognitive achievement but must also integrate social and emotional competencies such as emotional regulation, behavioral control, interpersonal skills, and active engagement in a safe and conducive learning environment, so that learning objectives can be achieved (Bilqis et al., 2025). This highlights that the socio-emotional dimension is a fundamental foundation for the success of inclusive learning in elementary schools.

Efforts to achieve this success involve pedagogical approaches, one of which is differentiated instruction. Differentiated learning is an instructional approach in inclusive classrooms that integrates all necessary aspects of learning. This approach allows teachers to adapt instruction based on the diversity of students' needs through differentiation in content, process, product, and learning environment, ensuring that each student has optimal learning opportunities according to their characteristics (Afifah & Ulia, 2025). Conceptually, differentiated instruction aligns with both global and national principles of inclusive education, which emphasize responsive, flexible, and non-discriminatory learning (Gunawan et al., 2025).

Based on this phenomenon, a fundamental problem arises regarding how to design learning that accommodates diverse academic needs while simultaneously developing students' socio-emotional competencies in inclusive classrooms. Teachers face challenges in mapping student characteristics, adjusting instructional strategies, and integrating socio-emotional development into learning activities (Vienlentina & Katrin, 2025). In addition, limited understanding of differentiated instruction and the implementation of social emotional learning (SEL) has resulted in suboptimal teaching practices. This issue indicates the need for a structured, applicable, and contextual learning model to support the more effective implementation of inclusive education in elementary schools.

Several previous studies have emphasized the importance of integrating socio-emotional aspects into inclusive learning. McCall et al., (2023) highlight the importance of an equity-focused social-emotional learning approach that not only develops students' socio-emotional competencies but also explicitly considers dimensions of equity, diversity, and social context in its implementation. The study shows that equity-oriented SEL can strengthen inclusivity and reduce disparities in students' learning experiences. Meanwhile, research by Zweers et al., (2021) on the socio-emotional development of students with social, emotional, and behavioral difficulties indicates that structured and responsive pedagogical support significantly improves self-regulation, social relationships, and student engagement in school environments. These studies affirm that strengthening the socio-emotional dimension is an essential component in creating inclusive and equitable learning.

However, these studies have not specifically integrated SEL approaches with differentiated instruction models within a comprehensive operational framework in

inclusive elementary classrooms. In other words, there remains a research gap in the absence of a learning model that systematically combines instructional differentiation strategies with equity-based socio-emotional development in daily classroom practice. The novelty of this study lies in the development of a differentiated learning model in inclusive classrooms based on social emotional learning, designed in an integrated and contextual manner. This model is expected not only to accommodate students' academic diversity but also to strengthen socio-emotional dimensions in a structured and targeted way.

Based on the background and identified gap, this study aims to develop and produce a differentiated learning model for inclusive classrooms based on social emotional learning that is valid, practical, and effective for implementation in elementary schools. Additionally, this study seeks to describe the characteristics of the developed model and analyze its contribution to improving the quality of inclusive learning that is holistic, equitable, and humanistic.

2. Methods

This study employs a Research and Development (R&D) approach using the Design-Based Research (DBR) model, aimed at developing a differentiated learning model for inclusive classrooms based on social emotional learning (SEL) at the elementary school level (Sugiyono, 2019). The selection of the DBR method is based on the nature of the study, which focuses on the development of an educational product in the form of a learning model that is systematically designed, contextual, and applicable. This approach enables researchers to bridge the gap between theory and practice through iterative processes of needs analysis, design, testing, and reflection, resulting in a final model that is valid and feasible for implementation (Puntambekar, 2018).

The research population consists of inclusive elementary schools in Bogor Regency and Bogor City, West Java. The research subjects include school principals and teachers from 10 inclusive elementary schools, with a total of 7 participants selected using purposive sampling based on their involvement in inclusive teaching practices (Ames et al., 2019). Data were collected through semi-structured interviews, classroom observations, school document analysis, expert discussions, and teacher response questionnaires. Data analysis techniques include thematic analysis, descriptive analysis, needs analysis, conceptual synthesis analysis, and content validity analysis to assess the feasibility of the developed model (Adelliani et al., 2023).

The research procedure was conducted in three main stages. The Analysis and Exploration stage aims to identify problems in differentiated learning within inclusive classrooms and to map the needs for model development through literature review and field data collection. The Design and Construction stage focuses on developing the conceptual model and its supporting tools based on the results of the needs analysis, including the preparation of expert validation instruments and evaluation tools. The Evaluation and Reflection stage involves validation by experts in inclusive education and psychology, limited trials in schools, model revision, and reflection on implementation results until a final, applicable, and feasible model is obtained (Waruwu, 2024).

The expected outcome of this study is the development of a validated final model of differentiated learning based on social emotional learning, complete with instructional tools and evaluation instruments that can be utilized by teachers in inclusive classroom practice. The resulting model is expected to serve as a practical guideline for teachers in creating learning environments that are responsive to students' diverse needs while supporting the integrated development of socio-emotional competencies. Additionally, this study aims to produce scientific publications in reputable journals as a means of disseminating the research findings.

3. Results & Discussion

3.1 Results

The findings of this study were obtained through the stages of Research and Development (R&D) using a Design-Based Research (DBR) approach, which includes the phases of analysis and exploration, design and construction, and evaluation and reflection.

In the analysis and exploration stage, data were collected through semi-structured interviews, observations, school document analysis, and needs assessment involving principals and teachers from seven inclusive elementary schools in Bogor Regency and Bogor City. The results of thematic analysis indicate that the implementation of differentiated instruction in inclusive classrooms has not yet been optimal. Teachers still face difficulties in comprehensively understanding student characteristics, particularly in socio-emotional aspects, as well as in mapping differentiation across content, process, product, and learning environment.

Furthermore, teaching and assessment practices remain predominantly focused on cognitive domains and are not yet systematically integrated with the development of students' socio-emotional competencies. These findings highlight the urgency of developing a learning model that is not only responsive to academic diversity but also supports students' social and emotional development within inclusive classroom contexts.

Based on the results of the needs analysis, the design and construction stage focused on developing the conceptual foundation and structural framework of a differentiated learning model for inclusive classrooms based on social emotional learning. The developed model consists of several core components: (1) holistic mapping of student characteristics (academic and socio-emotional); (2) planning differentiation in terms of content, process, and learning products; (3) integration of social emotional learning competencies at every stage of instruction; and (4) the creation of an inclusive, equitable, and non-discriminatory classroom climate.

At this stage, expert validation instruments, interview guidelines, and practicality questionnaires were also developed as part of the evaluation process. The outcome of this phase was an initial conceptual model equipped with supporting instructional tools and measurable implementation indicators.

The evaluation and reflection stage involved validation by two experts one in inclusive education and one psychologist – as well as limited field trials conducted in three inclusive elementary schools in Bogor Regency and Bogor City. The results of expert validation indicate that the developed model demonstrates strong content

validity and is relevant to the needs of inclusive classroom learning, with several recommendations for improvement related to the systematic organization of components and the clarity of socio-emotional indicator integration within instructional tools.

Content validity analysis and descriptive quantitative analysis of practicality scores show that the model falls within the feasible and practical category for implementation. Field trials revealed that teachers became more systematic in mapping student needs, were able to design more adaptive instructional strategies, and began integrating the development of emotional regulation, empathy, and positive social interaction into the learning process.

Model refinement was carried out based on expert feedback and field trial results, resulting in a final model of differentiated instruction for inclusive classrooms based on social emotional learning that is more systematic, practical, and contextual. This final model not only provides a conceptual framework but also includes implementation guidelines consisting of operational learning steps, success indicators, and validated evaluation instruments.

Overall, the findings demonstrate that the developed model effectively addresses teachers' needs in managing diversity within inclusive classrooms while strengthening socio-emotional dimensions as the foundation for holistic, equitable, and humanistic learning in elementary schools.

3.2 Discussion

The findings of this study indicate that the development of a differentiated learning model for inclusive classrooms based on social emotional learning (SEL) makes a significant contribution to improving the quality of learning in elementary schools. The results demonstrate that integrating differentiated instruction with the strengthening of socio-emotional competencies creates a learning process that is more adaptive to the diverse characteristics of students. This condition underscores that effective inclusive learning is not limited to accommodating differences in academic abilities, but must also address students' social and emotional development as a prerequisite for optimal learning engagement (Rasmitadila et al., 2025). Therefore, the model developed in this study extends the paradigm of inclusive education from mere access to meaningful learning that is responsive to individual needs.

3.2.1 Differentiated Learning as a Responsive and Humanistic Approach

The findings reveal that teachers require systematic guidance in designing instruction that adapts content, process, product, and learning environment. This indicates that differentiated instruction functions as a pedagogical strategy that enables teachers to tailor learning design based on students' readiness, interests, and learning profiles. These results are consistent with the concept of differentiated instruction, which emphasizes instructional flexibility to ensure equal learning opportunities for all students (Goyibova et al., 2025). The integration of social emotional learning strengthens the model's function, as socio-emotional aspects such as emotional regulation, social interaction, and a sense of safety are proven to be critical factors in the success of learning in inclusive classrooms. Thus, this model not

only adjusts teaching strategies but also fosters an inclusive and supportive learning climate.

3.2.2 The Role of the Model in Enhancing Student Engagement and Participation

The implementation of the developed model shows that learning becomes more participatory and student-centered. Teachers reported that when instruction is designed with structured differentiation, students become more actively engaged in the learning process, more confident in expressing their opinions, and demonstrate increased motivation and self-confidence. These findings reinforce the view that active student engagement is a key indicator of meaningful learning. In inclusive classrooms, such engagement also indicates that a socio-emotional-based differentiated approach can minimize participation barriers often experienced by students with diverse learning needs (Ismi & Witasoka, 2025). In other words, this model serves as a pedagogical mechanism to ensure that no student is marginalized in the learning process.

3.2.3 Implications for Teacher Competency Development

The findings also show that the successful implementation of the model is highly influenced by teachers' competencies in understanding student characteristics and designing differentiated instruction. Limited teacher understanding of differentiation concepts and students' socio-emotional development remains a major barrier to effective inclusive learning. This highlights that instructional innovation cannot be separated from strengthening teachers' professional capacity. Teachers are not merely knowledge transmitters but facilitators who are capable of diagnosing learning needs, designing adaptive strategies, and fostering positive classroom interactions (Humaira et al., 2023). Therefore, the model developed in this study can function both as a practical guide and as a tool for enhancing teachers' pedagogical competence.

3.2.4 Supporting Factors, Challenges, and Implementation Strategies

Although the developed model is considered feasible and applicable, the study identifies several implementation challenges, including time constraints, limited teacher understanding, and the complexity of managing diverse classrooms. These challenges indicate that the implementation of differentiated learning based on socio-emotional approaches requires a supportive educational ecosystem, including school policies, continuous professional development, and collaboration among teachers (Yoshida, 2024). Nevertheless, the results of limited field trials demonstrate that with continuous reflection and revision, the model can be adapted to different school contexts and student characteristics. This suggests that the success of implementation depends not only on the design of the model but also on the readiness of the educational environment to support instructional innovation.

Overall, this discussion confirms that the differentiated learning model for inclusive classrooms based on social emotional learning represents a relevant pedagogical innovation for improving the quality of elementary education. The model contributes to the creation of learning environments that are equitable, adaptive, and

oriented toward students' holistic development, while also strengthening the role of teachers as agents of change in realizing effective and sustainable inclusive education.

4. Conclusion

This study developed a differentiated learning model for inclusive classrooms based on social emotional learning (SEL) through a Research and Development (R&D) approach using the Design-Based Research (DBR) framework. Based on the stages of needs analysis, model design, expert validation, and limited field trials, the developed model has demonstrated strong content validity and a high level of practicality for implementation in inclusive elementary schools. The model integrates the mapping of students' academic and socio-emotional needs, the planning of differentiation across content, process, and product, and the creation of a supportive, equitable, and non-discriminatory classroom climate. Therefore, the model not only addresses teachers' needs in managing student diversity but also strengthens socio-emotional dimensions as the foundation of holistic and humanistic learning.

Theoretically, this study contributes to the advancement of inclusive education by offering an integrative framework that combines differentiated instruction and social emotional learning – two approaches that have often been examined separately. This integration broadens the perspective that the success of inclusive learning depends not only on academic adaptation but also on the enhancement of students' well-being and socio-emotional competencies. Practically, the model can serve as an implementative guide for elementary school teachers in designing adaptive and responsive instruction that accommodates diverse student needs, including those of students with disabilities. From a policy perspective, the findings highlight the importance of continuous teacher professional development in differentiated instruction and socio-emotional learning, as well as the need for institutional support to foster an inclusive and equitable school culture. Future research is recommended to test the effectiveness of this model on a larger scale in order to generate stronger empirical evidence regarding its impact on students' learning outcomes and socio-emotional development.

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