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Management of the Deep Learning Approach to Developing the Character of Elementary School Students

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Keywords
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ABSTRACT
This study aims to describe and analyze the management of deep learning approach to develop the character of elementary school students. The focus of this study is on the plan, do, check and act of learning that integrates deep learning with meaningful projects as the main strategy. The study was conducted qualitatively with a case study approach in two public elementary schools in Cianjur Regency, namely SDN Sayang 4 Cianjur Subdistrict and SDN Cinawala Cikalongkulon Subdistrict. Data collection was carried out through observation, in-depth interviews, and documentation study. The results of the study indicate that learning management with a deep learning approach can increase active student participation, encourage reflective thinking, and strengthen character values such as responsibility, mutual cooperation, and integrity. The main supporting factors for successful implementation are the leadership of the principal, teacher collaboration, and parental involvement. The challenges faced include limited time, resources, and teacher readiness in designing projects that are appropriate to the local context. The conclusion of this study is that the application of learning management with a deep learning approach can be an effective strategy in building the character of elementary school students contextually and sustainably. Recommendations are given to schools and policy makers to strengthen teacher training and curriculum development that supports this approach.

INTRODUCTION

The dynamics of the times and the challenges of globalization today have made character education a key pillar in achieving the national education goal of producing a generation that is not only intellectually intelligent, but also morally and spiritually strong. Education is not enough to produce students who are smart, but also those who are faithful, pious, have noble character, and are able to behave in accordance with the values of Pancasila. Character is a foundation, not merely a supplement, that must be instilled from the elementary level of education. Elementary school is a crucial phase in the process of shaping a child's identity. It is during this period that values such as responsibility, honesty, tolerance, and love for the country need to be introduced and instilled consistently. Deep learning is a learning approach that emphasizes a complete, meaningful, and sustainable understanding of concepts, rather than simply memorizing or repeating information. The focus is on enabling students to connect knowledge with real-life experiences, integrate critical, creative, collaborative, and communicative thinking skills, and ultimately develop character and competencies that are relevant to life.

This is in line with the Academic Paper on Deep Learning compiled by the Ministry of Primary and Secondary Education as a reference for the implementation of deep learning in the Merdeka Curriculum. Deep learning is an approach that emphasizes the creation of a learning

environment and learning process that is mindful, meaningful, and joyful through intellectual, ethical, aesthetic development, and kinesthetic development in a holistic and integrated manner (Kementerian Pendidikan Dasar dan Menengah Pusat Kurikulum dan Pembelajaran (BSKAP), 2025). This document emphasizes five main foundations, namely: Philosophical, Pedagogical, Theoretical, Sociological, and Juridical. The framework covers the dimensions of graduate profiles, learning principles, learning experiences, and implementation strategies integrated with assessment and the education ecosystem. Thus, the deep learning approach in the independent curriculum aims to create learning that is more in-depth, relevant, and adaptive to the needs of students in the digital age. This integration is expected to produce graduates who are not only academically competent but also have strong character and 21st-century skills.

In order for this approach to be implemented effectively, planned, systematic, and collaborative learning management is required. Good management includes planning, implementation, evaluation, and follow-up of learning that can guide teachers in optimally integrating the deep learning approach. Therefore, it is important to explore how this approach is managed in elementary schools, including supporting factors, obstacles, and its impact on student character development. Managing the deep learning approach is one of the strategies that teachers can use in carrying out their duties and responsibilities in classroom learning, starting from planning, implementation, evaluation, and follow-up. This is in line with the Plan, Do, Check, Act (PDCA) cycle, which has been widely adopted as a framework for continuous improvement in educational quality management. Recent studies show that PDCA provides a systematic cycle of planning, implementation, evaluation, and corrective action that supports sustainable improvement in school processes and outcomes. Therefore, the PDCA model can be used as an approach that supports the implementation of deep learning strategies to develop students' character through reflective planning and continuous refinement of learning practices (Dwisusanti & Mukhroji, 2025).

This step is aimed at developing student character in elementary school. Student character is a distinctive trait, disposition, and personality values formed through the process of education, experience, habit formation, and role modeling, so that students have attitudes, behaviors, and habits that are in accordance with prevailing religious, social, cultural, and moral norms. The character of elementary school students is still in the early stages of formation, so it is very important to instill basic values such as discipline, responsibility, honesty, respect, care, and cooperation. Developing character is an educational process that is consciously, systematically, and continuously designed to instill moral, ethical, and virtuous values so that individuals become faithful, noble, disciplined, responsible, honest, caring, and able to live in harmony with their social environment and nature. This is consistent with recent studies on character education that adopt Thomas Lickona's framework, which identifies three interrelated components of character development, namely moral knowing, moral feeling, and moral action (Hafizallah, 2024). Research indicates that these three dimensions form the foundation of effective character education in elementary school contexts, where students integrate moral knowledge, emotional engagement, and concrete moral actions in daily learning practices (Khosiyono et al., 2022). This perspective aligns with the profile of elementary school graduates that emphasizes the integration of knowledge, attitudes, and behavior as core elements of noble character.

However, in practice, the deep learning approach in learning is often still stuck in conventional methods that focus on memorization and lectures. This approach tends to ignore the affective aspects and applicable skills of students in real life. Students understand values theoretically, but are not necessarily able to internalize and practice them in their daily behavior. Obstacles in implementing the deep learning approach in learning to develop the character of elementary school students include limited structured modules, limited pedagogical training, weak parental involvement, and limited character assessment. This is in line with Zahrudin & Bahij (2025), Obstacles include unstructured learning modules, lack of deep learning pedagogical training, minimal parental support, and the absence of authentic character assessment.

The urgency of this research is driven by the low quality of character education implementation in elementary schools, as reflected in PISA scores and field observations showing that deep learning approaches remain suboptimal. Without systematic management, deep learning cannot effectively develop student character. Preliminary research in several elementary schools in Cianjur Regency shows that the deep learning approach still faces various obstacles in planning, implementation, evaluation, and follow-up, hindering character development as expected. Therefore, further research is needed to obtain valid data and find solutions to these problems. The novelty of this study lies in integrating the PDCA management framework with the deep learning approach specifically for character development in elementary schools, comparing two schools with different resource capacities (SDN Sayang 4 with better infrastructure and SDN Cinawala with limited resources), and providing a holistic analysis of planning, implementation, evaluation, and follow-up based on empirical data.

Based on the reality in the field, the deep learning approach to developing student character has not been optimally implemented. This reality is reinforced by the results of the Programme for International Student Assessment (PISA) in 2019, which ranked Indonesia 74th out of 79 countries in literacy and mathematics. These findings reflect that the Indonesian education system still faces major challenges, including in terms of strengthening critical thinking, literacy, and character. In response to this, the Ministry of Education, Culture, Research, and Technology, through Minister Nadiem Anwar Makarim, rolled out the Merdeka Curriculum, which emphasizes the importance of contextual, participatory learning that is student-centered. One of its breakthroughs is the redefinition of literacy, which is not only the ability to read texts, but also the ability to analyze meaning, understand concepts, and apply values in real contexts.

A learning approach that only focuses on memorizing concepts or theoretical understanding without involving real experiences results in low emotional and social engagement of students in the learning process. As a result, students tend to have difficulty internalizing character values in their daily lives. This is where the importance of innovative learning approaches that are deep and contextual lies, one of which is through integration with the project-based learning (PjBL) model. This approach emphasizes a learning process that fosters critical thinking, problem solving, collaboration, and social responsibility in students through project activities that are relevant to their lives.

Preliminary research conducted in several elementary schools in Cianjur Regency shows that the deep learning approach still faces various obstacles in terms of planning, implementation, evaluation, and follow-up, thereby hindering the development of elementary

school students' character as expected. Further research is needed to obtain valid data and find solutions to these problems.

RESEARCH METHOD

This study uses a qualitative method with a case study design. This design was chosen based on the research objective, which is to gain an in-depth understanding of the management of the deep learning approach to develop the character of elementary school students. A case study design was chosen because it enables researchers to explore real-life educational practices and interactions within their natural context, allowing for an in-depth understanding of phenomena as they unfold in real situations (Torres et al., 2023). In educational research, case study research provides a holistic examination of specific practices, processes, and experiences without manipulating variables, making it well-suited for understanding the complex interactions between teachers, students, and school environments. The purpose of this activity is to better understand the attitudes and individuality of many students and to assist in their further development. The conclusion of the definition of a case study is that it is a method that involves data collection, covering several physical and psychological aspects, with the aim of gaining a deeper understanding. This case study method aims to collect and analyze data on the planning, implementation, assessment, and follow-up of in-depth learning to develop the character of students at SDN Sayang 4 and SDN Cinawala Cianjur.

The research was conducted in two public elementary schools in Cianjur Regency, namely SDN Sayang 4 and SDN Cinawala. The location was selected purposively by considering the implementation of the independent curriculum, variations in classroom management practices, and the representation of diverse learning environment characteristics. The research participants consisted of the principal, classroom teachers, and students as additional sources of information about their learning experiences. Participants were selected purposively based on their direct involvement and relevance to the research focus. To facilitate data processing, each data source was coded, namely the principal (A), teacher (B), and student (C).

Data collection was conducted using a triangulation method, including in-depth interviews, participatory observation, and documentation studies. Semi-structured interviews were used to explore information related to the implementation of the deep learning management function, involving school principals, teachers, and students. Observations were conducted directly during classroom learning to record teacher behavior, student interactions, and classroom dynamics. Meanwhile, the documentation study included analysis of documents such as lesson plans, syllabi, class rules, attendance records, learning evaluation reports, and other relevant administrative documents. These three techniques complemented each other to produce more comprehensive and in-depth data.

The research process was carried out in three main stages: preparation, implementation, and analysis. In the preparation stage, the researchers developed a research design and data collection instruments and coordinated with the school. The implementation stage involved data collection through in-depth interviews, participatory observation, and documentation studies. The interviews were semi-structured so that the researchers could explore relevant information flexibly. Observations were conducted directly during lessons to capture authentic interactions between teachers and students. Documentation in the form of lesson plans,

attendance records, teachers' daily journals, and class rules were used to supplement the primary data. The final stage was analysis, which was conducted simultaneously with the data collection process so that researchers could adjust their focus according to their findings in the field.

Data analysis was conducted qualitatively using an interactive model of qualitative data analysis, which involves iterative processes of data reduction, data display, and conclusion drawing/verification to organize and interpret qualitative information systematically (Agustin et al., 2025). This model supports comprehensive understanding of educational practices by continuously refining and presenting data in a meaningful way before drawing conclusions that reflect the research context. Data reduction was carried out by selecting, coding, and categorizing data according to the main themes related to classroom management. The final stage is inductive conclusion drawing by connecting field findings with the theoretical framework used. The validity of the findings is strengthened through triangulation of sources, methods, and confirmation of results with informants.

Data validity was maintained by ensuring the trustworthiness of qualitative data, which encompasses four main criteria: credibility, transferability, dependability, and confirmability. These criteria guide researchers in demonstrating that findings accurately represent participant experiences and contexts by using strategies such as prolonged engagement, triangulation, audit trails, and peer feedback (Ahmed, 2024). Credibility is obtained through triangulation of methods and sources, member checks, and repeated observations. Transferability is ensured by describing the research context in detail so that the results can be considered for application in other contexts. Dependability is maintained through systematic documentation of the entire research process and peer discussion, while confirmability is ensured through audit trails and reflective notes that show the traceability of the data analysis process.

RESULT AND DISCUSSION

1. Planning a deep learning approach to develop student character

Planning is a very important initial stage because it forms the basis for the implementation, evaluation, and follow-up of deep learning approach management. Therefore, this study only examines the extent to which elementary school principals in Cianjur Regency develop targeted learning management to improve the performance of elementary school teachers. Teachers design learning by considering student needs, learning objectives, strategies, methods, and evaluation tools. In the deep learning approach, planning must include project designs that encourage critical thinking, collaboration, and character development. The results show a significant difference between the planning carried out at SDN Sayang 4 and SDN Cinawala. A comparison of the research results regarding learning planning at the two schools can be seen in Table 1.

Table 1. Comparison of Deep Learning Approach Planning to Develop Student Character at SDN Sayang 4 and SDN Cinawala

Aspect	SDN Sayang 4	SDN Cinawala
Basic Considerations	The Merdeka Curriculum is integrated with school programs, focusing on character development as well as academic	The need for holistic improvement of student character, limited student interaction in conventional learning,

Aspect	SDN Sayang 4	SDN Cinawala
	achievement, with adequate school technology support.	national regulations related to character education.
Objectives	Developing students' character comprehensively, including creativity, innovation, discipline, and academic readiness through project-based Deep Learning.	Shaping character traits such as discipline, responsibility, cooperation, and caring through Deep Learning-based learning.
Field of Work	Development of soft skills and hard skills, integration of collaborative projects, learning simulations, and extracurricular activities that emphasize character and achievement.	Habituation of discipline, responsibility in individual and group tasks, simple collaboration, character building through daily learning activities..
Media	Interactive digital media, Deep Learning applications, online collaborative platforms, complex learning videos, and media for characters.	Simple and creative media (simple digital flashcards, short videos, simple educational animations, manipulative media). Lesson plans, daily journals.
Methods	Deep Learning-based Project-Based Learning, collaborative discussions, digital simulations, problem solving, individual and group reflection.	Demonstrations, educational games, small group discussions, simple scenario-based learning.
Human Resources	Classroom teachers, subject teachers, principals, and IT support involved, intensive training in the use of Deep Learning and interactive media.	Classroom teachers and assistant teachers active, minimal support from principals, little technology training.
Program and Activity Schedule	Monthly to semester activity plans, integration of character activities into various learning projects, weekly reflections & final project evaluations.	Simple weekly plans, character activities integrated into core subjects, brief daily reflections.
Facilities and Infrastructure	Sufficient laptops/PCs, stable internet connection, creative space, digital library, AR/VR devices.	Limited laptops, unstable internet connection, standard classrooms, minimal supporting media.
Cost	Regular BOS, Performance BOS, plus contributions from committees/parents, costs for digital media and learning software, are sufficient.	Sourced from BOS, some media is created independently by teachers.

Based on Table 1, it can be seen that SDN Sayang 4 has a more comprehensive plan. This can be seen from the integration of the Merdeka Curriculum with the school program, support for digital infrastructure, and the involvement of more diverse human resources. Technological support and project-oriented character development programs make the planning at SDN Sayang 4 more structured and long-term oriented.

In contrast, SDN Cinawala still faces various limitations, both in terms of infrastructure, human resources, and planning strategies. Its focus is still on instilling basic character traits such as discipline, responsibility, and cooperation through simple classroom activities. However, this approach remains relevant because it is tailored to the school's limited conditions, thereby enabling the gradual optimization of student character building.

Differences are also evident in the media and methods used. The media aspect shows significant differences. SDN Sayang 4 already uses interactive digital media such as learning

applications, online collaborative platforms, complex learning videos, and technology-based character support tools. Meanwhile, SDN Cinawala relies more on simple media such as digital flashcards, short videos, educational animations, manipulative media, as well as lesson plans and daily journals.

In terms of methods, SDN Sayang 4 integrates project-based learning based on deep learning with collaborative discussions, digital simulations, problem solving, and individual and group reflections. In contrast, SDN Cinawala uses more traditional and simple methods such as demonstrations, educational games, small group discussions, and simple learning scenarios. However, both schools continue to instill good habits in order to foster character, because the goal of education is to develop the potential of students to become people who are faithful, pious, noble, healthy, knowledgeable, skilled, creative, independent, and democratic and responsible citizens (Pemerintah Republik Indonesia, 2003).

2. Implementation of the deep learning approach to develop student character

Implementation is a core stage in the management of the deep learning approach to develop student character. Teachers carry out the learning process according to plan. At this stage, the learning approach must encourage active student involvement in completing real projects and integrate character values such as responsibility, cooperation, and social awareness. The results of the study show variations in implementation strategies at SDN Sayang 4 and SDN Cinawala, which are influenced by the availability of facilities, institutional support, and teacher creativity. A comparison of the implementation of learning in both schools is shown in Table 2.

Table 2. Comparison of the Implementation of The Deep Learning Approach to Develop Student Character at SDN Sayang 4 and SDN Cinawala

Aspect	SDN Sayang 4	SDN Cinawala
Initial Activities	The teacher greets the students and checks attendance. Group prayer. Mental and physical warm-up (ice breaking and brief reflection). Introduction to the topic of deep learning and the character goals to be developed. Brief motivation to encourage active participation.	The teacher greets the students and checks attendance. Group prayer. Brief warm-up, simple ice breaking. Introduction to the topic of Deep Learning, but character motivation is only mentioned briefly.
Core Activities	Project-based activities using deep learning: students work in groups to complete character project assignments. Collaborative discussions and brainstorming. Use of simple interactive digital media (videos, animations, flashcards). Teachers provide personalized guidance according to each student's character. Integration of character learning: discipline, responsibility, cooperation, caring.	Deep learning project-based activities in groups, but more focused on completing academic tasks. Group discussions, but minimal character interaction. Standard digital media is used, less interactive. Teacher guidance is more general, not personalized to each student's character.
Closing Activities	Individual and group daily reflections on learning and character development. Teachers provide specific feedback on student behavior and character achievements. Summarize the day's lessons and relate them to long-term character goals. Group prayer	Brief group reflection, focusing on project results. Teachers provide general feedback on assignments, with less emphasis on character. Brief conclusion without specific reference to character development. Group prayer

Based on Table 2, at the beginning of the activity, SDN Sayang 4 implemented a more structured learning process. Teachers not only greeted students and checked attendance, but also led a group prayer, mental and physical warm-ups through ice breaking, and a brief reflection. In addition, teachers introduced the topic of Deep Learning and emphasized the character development goals to be achieved. Brief motivational talks were also given to encourage active student participation from the start of the activity. In contrast, SDN Cinawala only carried out simple initial activities, namely greetings, group prayer, and a brief icebreaker. An introduction to the topic was given, but the emphasis on character goals was only touched upon briefly.

In the core activities, SDN Sayang 4 placed more emphasis on project-based activities integrated with character building. Students are directed to work in groups to complete tasks oriented towards strengthening the values of discipline, responsibility, cooperation, and caring. Collaborative discussions and brainstorming are carried out to foster positive interactions between students, while simple interactive digital media such as videos, animations, and flashcards are used to support the learning process. Another advantage of SDN Sayang 4 is the personal guidance provided by teachers, which is tailored to each student's character. In contrast, at SDN Cinawala, core activities focus more on completing academic tasks. Group discussions do take place, but interactions that lead to character building are still limited. The media used tends to be standard and less interactive, while teacher guidance is more general in nature without personalization according to student character.

In the closing activity, SDN Sayang 4 prioritized daily reflection, both individual and group, aimed at evaluating learning and character development. Teachers provided specific feedback on behavior and character achievement, then concluded with a summary of learning related to long-term character goals. After that, the activity was closed with a prayer together. Meanwhile, at SDN Cinawala, reflection was carried out briefly and focused more on project results than on the character-building process. Feedback from teachers was general and did not emphasize character aspects, while the conclusion was only a summary of the material without linking it to character-building goals.

Thus, it can be concluded that the implementation of deep learning at SDN Sayang 4 is more comprehensive and consistent in integrating character development aspects at every stage of the activity (Pemerintah Republik Indonesia, 2003). Meanwhile, SDN Cinawala still places character development as an addition that is not yet the main focus, because it emphasizes academic aspects and project achievements.

3. Evaluation of the Deep Learning Approach to Developing Student Character

Evaluation is an important part of classroom management that aims to assess the achievement of learning objectives while providing feedback to teachers and students. The results of the study show that the evaluation practices at SDN Sayang 4 and SDN Cinawala are similar in that they refer to the Merdeka Curriculum, which emphasizes holistic assessment of cognitive, affective, and psychomotor aspects. However, there are fundamental differences in the evaluation strategies and instruments used in the two schools. This comparison is presented in Table 3.

Table 3. Comparison of Deep Learning Approach Evaluations to Develop Student Character at SDN Sayang 4 and SDN Cinawala

Aspect	SDN Sayang 4	SDN Cinawala
Basic assessment/ evaluation	Cognitive, affective, and psychomotor skills in accordance with the Merdeka Curriculum, national regulations, and student character indicators (discipline, responsibility, cooperation, caring) and the 8 dimensions of graduate profiles.	Cognitive, affective, psychomotor skills, based on the Merdeka Curriculum, with a greater focus on academic achievement and a general mention of character.
Objectives	Assessing the achievement of deep learning as well as the holistic development of student character.	Assessing the achievement of deep learning project tasks, character is only assessed globally.
Aspect	Cognitive (understanding of material), Affective (attitude and character), Psychomotor (project tasks and collaborative activities).	Cognitive (knowledge of material), Psychomotor (project completion), and Affective.
Type	Daily formative assessments, final summative assessments, personal reflections, character portfolio assessments.	Formative project, final summative project, simple group reflection.
Evaluation Techniques	Direct observation of student behavior, deep learning-based project assessment, brief interviews, self-assessment, peer-assessment.	Project observation, final project test, simple group evaluation.
Criteria	Specific criteria per character: in accordance with the 8 dimensions of the graduate profile.	Criteria for project completion on time, quality of results, group participation.
Techniques for Processing Evaluation Results	Simple narrative and quantitative analysis, character behavior coding, teacher reflections for follow-up, triangulation with documentation and interviews.	Simple analysis of project task completion and attendance records, general feedback from teachers.

Based on Table 3, in terms of basic assessment/evaluation, SDN Sayang 4 refers to the cognitive, affective, and psychomotor domains in accordance with the Merdeka Curriculum. The evaluation not only assesses academic results but also student character indicators such as discipline, responsibility, cooperation, and caring, which are integrated with the 8 dimensions of the Pancasila Student Profile. In contrast, SDN Cinawala also uses the Merdeka Curriculum with cognitive, affective, and psychomotor domains, but its implementation places more emphasis on academic achievement. Character aspects are still present, but are only mentioned in general terms.

In terms of objectives, SDN Sayang 4 uses evaluation as a means of assessing the achievement of Deep Learning as well as the holistic development of student character. Meanwhile, at SDN Cinawala, the evaluation objective is simpler, namely to assess the achievement of the Deep Learning project, while character is only a complementary aspect of the assessment.

Differences are also seen in the aspects being assessed. SDN Sayang 4 consistently assesses material comprehension (cognitive), attitude and character (affective), as well as

project tasks and collaborative activities (psychomotor). Meanwhile, SDN Cinawala clearly assesses cognitive and psychomotor aspects, but affective aspects are only mentioned without detailed indicators.

In terms of evaluation types, SDN Sayang 4 conducts daily formative assessments, final summative assessments for projects, personal reflections, and character portfolios. This model provides continuous evaluation based on authentic evidence. On the other hand, SDN Cinawala only conducts formative assessments for projects, summative assessments at the end of projects, and simple reflections in groups, so the scope of its evaluation is more limited.

The evaluation techniques at SDN Sayang 4 are more varied, namely direct observation, Deep Learning-based project assessment, brief interviews, self-assessment, and peer-assessment. This allows for evaluation from various perspectives. Meanwhile, SDN Cinawala is still limited to project observation, end-of-project tests, and simple group evaluations, so the assessment results tend to be less in-depth.

In terms of criteria, SDN Sayang 4 formulates specific indicators tailored to the 8 dimensions of the Pancasila Student Profile, so that each character value can be clearly measured. Meanwhile, SDN Cinawala only sets general criteria, namely the timeliness of project completion, quality of results, and group participation.

Finally, in terms of the technical aspects of processing evaluation results, SDN Sayang 4 uses simple narrative and quantitative analysis with character behavior coding. The results are combined with teacher reflections and triangulation from documentation and interviews. This model makes the evaluation results richer in data and actionable. In contrast, SDN Cinawala is simpler, only recording project task achievements, attendance, and general feedback from teachers without in-depth analysis. Overall, SDN Sayang 4 is more systematic and comprehensive in its evaluation, while SDN Cinawala tends to be simpler and focuses on academic aspects. This difference reflects how school context and institutional strategies influence the approaches teachers take to assessment and evaluation practices in schools (Manigbas & Luna, 2023).

4. Follow-Up on the Deep Learning Approach to Develop Student Character

Based on the evaluation results, teachers made improvements in the next learning process. These actions included adjusting strategies, strengthening aspects of character that were not yet optimal, or revising project designs to be more effective in the future. The results of the study show a significant difference between SDN Sayang 4 and SDN Cinawala in terms of follow-up, through remedial or enrichment. This comparison is shown in Table 4.

Table 4. Comparison of Follow-Up on The Deep Learning Approach to Develop Student Character at SDN Sayang 4 and SDN Cinawala

Aspect	SDN Sayang 4	SDN Cinawala
Remedial	Remedial teaching is conducted individually and in groups. Teachers adjust their strategies according to the character and needs of students. The focus is on strengthening discipline, responsibility, cooperation, and caring. Methods: repetition of project activities, special guidance, character coaching. Media:	Remedial teaching is conducted in groups. The focus is more on completing unfinished projects. The emphasis is on academic aspects, with only a passing mention of character. Methods: repetition of simple project tasks. Media: standard worksheets.

	digital modules, project worksheets, learning videos.	
Enrichment	Enrichment is provided for students who have achieved the standard, in the form of additional projects to further develop character. Activities are based on collaboration and healthy competition. Teachers provide character challenges, such as leading a group, taking initiative, and creativity. Media: videos, animations, interactive modules. The schedule is flexible to suit the abilities and development of students.	Enrichment is provided to complete additional academic projects. More focus on project outcomes and cognitive skills. Student character is not the main focus. Media: additional worksheets, project guides. Schedule follows regular class activities.

Based on Table 4, the follow-up learning with the deep learning approach at SDN Sayang 4 and SDN Cinawala showed significant differences, especially in emphasizing character aspects. In the remedial process, SDN Sayang 4 implemented it individually and in groups with strategies that adjusted to the needs and characters of the students. The focus was not only on academic achievement but also on strengthening the values of discipline, responsibility, cooperation, and caring. The methods used included repeating project activities, special guidance, and character coaching, which made the remedial process more meaningful. The media used were quite varied, ranging from digital modules and project worksheets to educational videos, thus supporting diverse learning styles. In contrast, at SDN Cinawala, remedial teaching is carried out in groups with an emphasis on completing unfinished projects. Student character is only touched upon in general terms, so the orientation of the activities is more academic. The method is simple, namely repeating project assignments, with media in the form of standard worksheets that are limited to cognitive aspects.

Meanwhile, during the enrichment process, SDN Sayang 4 provides opportunities for students who have reached the standard to work on additional projects aimed at character development. Enrichment activities are based on collaboration and healthy competition, so that students not only hone their academic skills, but are also trained to take initiative, lead groups, and foster creativity. Teachers provide targeted character challenges, such as training students to have the courage to lead discussions or become group leaders. The media used are more modern and varied, such as videos, animations, and interactive modules, with a flexible schedule that adapts to student development. In contrast, enrichment at SDN Cinawala is more academic in nature, in the form of additional projects that emphasize the completion of cognitive tasks. Student character is not the main focus, but rather an addition. The media used are limited to additional worksheets and project guides, with a schedule that follows regular class activities without much flexibility.

Overall, SDN Sayang 4 and SDN Cinawala place follow-up, including both remedial and enrichment, as an integral part of deep learning for student character development. Remedial and enrichment are implemented not only for cognitive aspects, but also for attitudes and skills, in line with the procedures of authentic assessment that cover cognitive, affective, and psychomotor domains as mandated in Permendikbud No. 23 of 2016 on Education Assessment Standards (Muliya, 2020).

CONCLUSION

This study finds that teachers play a central and strategic role in implementing deep learning approaches to develop student character at SDN Sayang 4 and SDN Cinawala, with effective practices including integrating character values into lesson planning through project-based learning and case studies, using reflective and contextual teaching methods, and applying holistic assessments such as observation, reflection journals, and self-assessment. Teachers act not only as instructors but also as facilitators, motivators, and role models, successfully fostering values like responsibility, honesty, cooperation, and empathy while overcoming challenges such as limited time and resources through innovation, collaboration, and personalized approaches. The study highlights the need for ongoing improvement in teachers' pedagogical and personal competencies through training and workshops, as well as strong institutional support in terms of facilities, time, and policies that promote character-based learning environments. For future research, it is suggested to expand similar studies across different education levels or subjects and to employ quantitative methods to more precisely measure the effectiveness of deep learning approaches in enhancing student character.

REFERENCES

Agustin, F. T., Sa'diah, H., Salsabila, N., & Dzulqadri, A. (2025). Analisis Permasalahan Pembelajaran IPAS Kelas IV SDN 182/I Hutan Lindung. *Jurnal Tunas Pendidikan*, *7*(2), 545–555. https://doi.org/10.52060/pgsd.v7i2.1986

Ahmed, S. K. (2024). The pillars of trustworthiness in qualitative research. *Journal of Medicine, Surgery, and Public Health*, *2*, 100051. https://doi.org/10.1016/j.glmedi.2024.100051

Dwisusanti, R., & Mukhroji, M. (2025). Siklus TQM dalam Pendidikan: Planning, Do, Check, Act dalam Dunia Pendidikan, Prinsip Kaizen pada TQM. *MANAJERIAL : Jurnal Inovasi Manajemen Dan Supervisi Pendidikan*, *5*(2), 328–338. https://doi.org/10.51878/manajerial.v5i2.5381

Hafizallah, Y. (2024). The Relevance of Thomas Lickona's Character Education Concept and its Implication for Islamic Education in Schools. *Indonesian Journal of Character Education Studies*, *1*(1), 50–63. https://doi.org/10.64420/ijces.v1i1.73

Kementerian Pendidikan Dasar dan Menengah Pusat Kurikulum dan Pembelajaran (BSKAP). (2025). *Naskah Akademik Pembelajaran Mendalam: Menuju Pendidikan Bermutu untuk Semua*. https://gurudikdas.dikdasmen.go.id/storage/users/3/Berita/2025/PDF/Pembelajaran Mendalam.pdf

Khosiyono, B. H. C., Rochmiyati, S., Ghozali, I., Temitope, S. J., Fajarudin, M., & Suharyanto, A. M. (2022). Representation of Character Education Values Based on Lickona's Perspective in English Textbooks at Indonesian Elementary Schools. *Tamansiswa International Journal in Education and Science*, *4*(1), 53–59. https://doi.org/https://doi.org/10.30738/tijes.v4i1.13518

Manigbas, J. I., & Luna, Y. V. De. (2023). Factors Influencing the Assessment Practices of Senior High School Teachers in Goa District, Philippines. *Psychology and Education: A Multidisciplinary Journal*, *14*, 998–1005. https://doi.org/10.5281/zenodo.10045830

Muliya, A. P. (2020). Pelaksanaan penilaian autentik berdasarkan Permendikbud Nomor 23 Tahun 2016 pada Mata Pelajaran Pendidikan Agama Islam dan Budi Pekerti di SMP Kota Batusangkar. *El -Hekam*, *5*(1), 15–30. https://doi.org/10.31958/jeh.v5i1.2290

Pemerintah Republik Indonesia. (2003). *Undang-undang Republik Indonesia Nomor 20 Tahun*

2003 tentang Sistem Pendidikan Nasional. https://peraturan.bpk.go .id/Home/Details/43920/uu-no-20-tahun-2003

Torres, K. M., Tackett, S., & Arrastía-Chisholm, M. C. (2023). Case Study Method to Increase Preservice Teachers' Experience with English Language Learners: Accommodations and Self-Efficacy. *Journal of Educational Research and Practice*, *13*(1), 220–236. https://eric.ed.gov/?id=EJ1403960

Zahrudin, D., & Bahij, A. Al. (2025). A Deep Learning-Based ISMUBA Instructional Model to Foster Integrity Character in Elementary Islamic Education. *International Journal of Research and Innovation in Social Science*, *IX*(IIIS), 5602–5609. https://doi.org/10.47772/IJRISS.2025.903SEDU0409