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Implementation of Deep Learning as Learning Activities in Elementary Education

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Abstract: This article examines the implementation of deep learning as learning activities at SD Negeri 15 Banyuasin I. The study was developed from a qualitative case study that explored how deep learning was understood, planned, implemented, evaluated, and followed up by teachers in daily classroom practice. Data were obtained through interviews, observation, and documentation involving the principal, teachers, and students. The findings indicate that the school has begun to implement deep learning through student-centered planning, contextual learning activities, collaborative discussion, problem-based tasks, reflection, formative assessment, and follow-up activities in the form of remedial support and enrichment. Teachers have attempted to design meaningful learning by considering students' needs, interests, and abilities, although the quality of planning still varies among teachers. Classroom implementation has also moved toward active and contextual learning, yet several challenges remain, including uneven student readiness, limited learning resources, inconsistent documentation, and variations in teachers' pedagogical competence. Evaluation practices have begun to include reflection, feedback, and analysis of learning outcomes, but a more systematic documentation system is still needed to strengthen data-based decisions. The article concludes that deep learning at SD Negeri 15 Banyuasin I has been implemented as a developing learning culture rather than as a fully established model. Strengthening teacher capacity, collaborative planning, authentic assessment, and continuous follow-up is necessary to make deep learning more consistent, meaningful, and sustainable in elementary education.

Keywords: Deep Learning, Elementary School, Learning Activities, Learning Management, Student Engagement

A. Introduction

Educational transformation in the era of digital society requires schools to move beyond the transmission of factual knowledge. Elementary education is expected to build learners who can think critically, collaborate with others, communicate ideas, create solutions, and show responsibility in their learning process. This expectation changes the meaning of classroom instruction. Learning can no longer be understood

only as the teacher's activity of explaining material and the student's activity of memorizing information. Learning must be organized as a meaningful experience through which students construct understanding, connect knowledge with daily life, and reflect on what they have learned (Wang et al., 2020).

Deep learning has become one of the approaches that can respond to this need. In educational discourse, deep learning does not refer to artificial intelligence, but to a pedagogical orientation that encourages students to understand concepts deeply and apply them in meaningful contexts. It emphasizes active engagement, conceptual understanding, problem solving, collaboration, communication, creativity, character, and reflection. For elementary school students, this orientation is important because the foundation of learning habits, curiosity, discipline, and social interaction is formed during the early years of schooling (Lu et al., 2022).

In the Indonesian school context, deep learning is relevant to the direction of curriculum development that emphasizes mindful, meaningful, and joyful learning. These three principles require teachers to create learning situations in which students are aware of the purpose of learning, can relate learning to their lives, and feel emotionally safe to participate. However, the shift toward deep learning is not simple. Teachers need conceptual understanding, pedagogical skill, time management, classroom management, media literacy, and institutional support (Van Den Beemt et al., 2020). Students also need gradual adaptation because many of them are accustomed to teacher-centered instruction and routine exercises.

The thesis that became the basis for this article focused on SD Negeri 15 Banyuasin I, an elementary school located in Banyuasin Regency. The school represents a real context of elementary education with diverse student backgrounds, varying levels of academic ability, and different forms of family support. The school has approximately fourteen teachers and around 168 students from grade I to grade VI. Most students come from lower-middle socio-economic backgrounds, and many parents work as farmers, laborers, small traders, or workers in the informal sector. This context creates both opportunities and limitations for the implementation of deep learning (S. F. Ahmed et al., 2023).

Initial conditions at the school showed that teachers had begun to apply active learning activities that were in line with deep learning principles. Students were encouraged to participate in discussion, solve contextual problems, and engage in reflective activities. The school also had basic facilities such as classrooms, boards, reading corners, simple learning media, and digital television as a learning tool (Hillman et al., 2020). Nevertheless, several obstacles were also identified, including variations in teacher discipline, uneven student involvement, limited internet access, and the frequent use of local language during classroom interaction, which sometimes affected academic communication.

The research problem emerged from the gap between the ideal concept of deep learning and its practice in the classroom (Kovač et al., 2025). Deep learning is often discussed as an approach that can improve the quality of learning, yet its implementation at elementary school level is not always clear. Many discussions focus on learning outcomes, while fewer studies explore how teachers plan, implement, evaluate, and follow up deep learning in natural classroom settings. Therefore, this article asks how deep learning is implemented as learning activities at SD Negeri 15 Banyuasin I and how the stages of planning, implementation, evaluation, and follow-up are connected to one another.

This article contributes to the discussion of learning management in elementary schools by showing that deep learning is not a single method, but a cycle of pedagogical decisions. It begins with teacher understanding and readiness, continues with learning planning, appears in active classroom interaction, is strengthened by evaluation and reflection, and becomes sustainable through follow-up. The novelty of this article lies in its focus on deep learning as a lived classroom activity in an elementary school context with practical constraints, rather than as an abstract concept or a purely quantitative learning outcome (Tang et al., 2025).

Based on the background above, this study is guided by the following research question: How is deep learning implemented as a learning activity in elementary education, particularly in relation to planning, implementation, evaluation, and follow-up of learning? This question is directed to understand how teachers interpret and apply deep learning principles in classroom practice, how students are involved in meaningful learning activities, and what factors support or hinder the continuity of deep learning implementation. Since this study uses a qualitative case study approach, the research does not propose a hypothesis, but seeks to describe the implementation process contextually and comprehensively (B. Kim et al., 2020).

Literature Review

Deep learning in education can be understood as learning that moves students from surface recognition to meaningful understanding. Surface learning tends to emphasize repetition, memorization, and short-term recall. Deep learning requires students to connect new knowledge with prior experience, ask questions, compare ideas, analyze information, test possible answers, and explain their reasoning. In the elementary school context, deep learning must be designed in ways that are concrete, age-appropriate, and close to students' everyday experiences (Kajiwara et al., 2023). It does not demand that young learners think like adults; rather, it provides structured opportunities for them to observe, discuss, experiment, and reflect.

A key aspect of deep learning is student engagement. Engagement is not limited to physical attendance in the classroom. It includes cognitive, emotional, and behavioral dimensions. Cognitive engagement appears when students try to understand ideas,

solve problems, and connect concepts. Emotional engagement appears when students show curiosity, interest, enjoyment, and confidence. Behavioral engagement appears when students ask questions, participate in group work, complete tasks, and help peers. A classroom can be considered closer to deep learning when these three forms of engagement appear together in the learning process (Weng et al., 2023).

Teacher understanding is central to the implementation of deep learning. Teachers who understand deep learning do not only prepare lesson plans as administrative documents. They design learning experiences. They identify the purpose of learning, select meaningful problems, prepare media, organize groups, guide discussion, provide feedback, and create opportunities for reflection (Sistermans, 2020). When teacher understanding remains partial, deep learning may be reduced to group work, games, or classroom activity without conceptual depth. Therefore, deep learning requires both conceptual clarity and practical pedagogical skill.

Planning is the first managerial stage in deep learning. Effective planning connects learning objectives, success criteria, learning activities, assessment, and follow-up. In elementary schools, planning should consider students' readiness, interests, language background, available media, and local context. It should also anticipate time allocation, classroom arrangement, and possible learning difficulties. A plan that supports deep learning is flexible enough to respond to students' needs but clear enough to guide the teacher's actions. Planning becomes the foundation for meaningful implementation (Smith et al., 2020).

Implementation is the stage in which deep learning becomes visible in classroom life. Teachers facilitate exploration, questioning, discussion, problem solving, project activities, and reflection. Students are not treated as passive recipients of information. They are encouraged to examine objects, read texts, discuss local issues, present ideas, compare answers, and learn from mistakes. The teacher still plays an important role, but the role shifts from dominant speaker to facilitator, guide, and learning manager. This shift is important because deep learning needs space for students to think and interact (Murphy et al., 2025).

Evaluation in deep learning is not only a final test. It includes formative assessment, observation, feedback, performance tasks, reflective questions, portfolios, and analysis of student progress. The purpose of evaluation is to understand how far students have learned, what misconceptions remain, what kind of support is needed, and what changes the teacher should make. Evaluation also helps students become aware of their own learning process. For this reason, evaluation should be integrated into daily activities rather than separated from learning (Rapanta et al., 2021).

Follow-up is the stage that determines whether deep learning becomes sustainable. After evaluation, teachers need to provide remedial support for students who have not achieved the expected understanding and enrichment for students who are ready

to extend their learning. Follow-up may include re-explanation, additional practice, small group guidance, peer tutoring, project extension, or reflection on learning strategies. Without follow-up, evaluation only produces scores. With follow-up, evaluation becomes a tool for improvement (Garrard et al., 2020).

From the perspective of learning management, deep learning can be seen as a continuous cycle. It includes planning, organizing classroom interaction, implementing learning activities, evaluating process and outcomes, and improving the next learning experience. This cycle requires school leadership, teacher collaboration, supportive facilities, and a culture of reflection. Deep learning is more likely to grow when the school creates a professional environment in which teachers discuss learning problems, share strategies, document progress, and improve practice together (Sliwka et al., 2024).

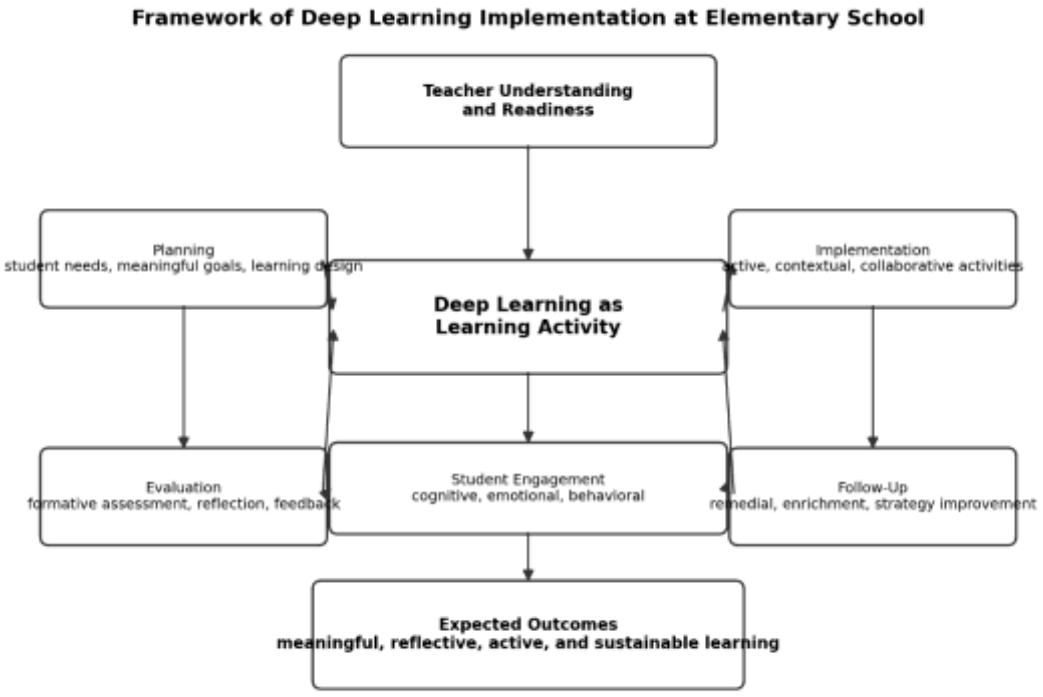

Figure 1. Framework of deep learning implementation as learning activities

B. Methods

This article was developed from a qualitative case study conducted at SD Negeri 15 Banyuasin I. A qualitative design was appropriate because the study aimed to understand the implementation of deep learning in a natural school setting. The focus was not to test a treatment or measure statistical influence, but to describe how teachers and students experienced deep learning in daily classroom activities. The case study design enabled the researcher to examine the school context, teacher

practices, student responses, and supporting documents as an integrated phenomenon (Capone, 2022).

The research setting was selected because the school had begun to introduce learning practices that were in line with deep learning principles. The school also provided a rich context for analysis because it had diverse students, limited but developing facilities, and teachers who were gradually adapting to curriculum changes. These conditions made the school relevant for exploring how a new pedagogical orientation is implemented in realistic elementary school conditions rather than in an idealized setting (Rudd et al., 2021).

The sources of data consisted of the principal, teachers, and students. The principal provided information about school policy, teacher development, facility support, and the general direction of learning improvement. Teachers provided information about planning, classroom implementation, evaluation, and follow-up. Students provided information about their learning experiences, participation, motivation, and difficulties in classroom activities. Documentation was used to examine lesson plans, teaching materials, assessment notes, reflection records, and school learning programs (Cevikbas et al., 2024).

Data were collected through interviews, observation, and documentation. Interviews were used to obtain participants' explanations and reflections. Observation was used to see how learning activities were conducted in the classroom, including teacher-student interaction, student participation, use of media, time management, and forms of reflection. Documentation was used to strengthen and compare the information obtained from interviews and observation. The use of these three techniques allowed the researcher to triangulate the data and reduce dependence on a single source of information (S. K. Ahmed, 2024).

The data were analyzed through a qualitative analysis process that included data collection, data reduction, data display, and conclusion drawing. Data reduction was carried out by selecting information related to the research focus and sub focus. The data were then organized into four main categories: planning, implementation, evaluation, and follow-up. Data display was conducted through narrative explanation, matrices, and tables. Conclusions were drawn by identifying patterns, comparing data across sources, and verifying the consistency of findings (Bingham, 2023).

Trustworthiness was strengthened through triangulation of sources and techniques. Information from the principal was compared with information from teachers and students. Interview data were compared with observation notes and documentation. This process helped ensure that the findings reflected the actual learning situation at the school. The analysis emphasized meaning, context, and process, so that the article

could describe not only what was done, but also why the practice occurred and what challenges accompanied it (Herrmann & Pfeiffer, 2023).

C. Results and Discussion

The results show that SD Negeri 15 Banyuasin I has begun to implement deep learning as part of daily learning activities. The implementation appears in the way teachers plan learning based on student needs, organize active classroom activities, evaluate learning through reflection and feedback, and conduct follow-up through remedial and enrichment activities. However, the implementation is still developing. It has not yet become fully consistent across all teachers and all classes. The school is in a transition phase from conventional teaching toward more active, contextual, and reflective learning (El Nagdi & Roehrig, 2020).

Table 1. Research Focus, Data Sources, and Operational Indicators

Research Focus	Key Question	Data Source	Operational Indicator
Planning	How is learning planned?	Principal, teachers, lesson plans	Student needs, contextual goals, media, assessment
Implementation	How is learning conducted?	Teachers, students, observation	Discussion, problem solving, collaboration, facilitation
Evaluation	How are process and outcomes assessed?	Teachers, student work, notes	Formative assessment, reflection, feedback
Follow-up	How is learning improved after evaluation?	Teachers, principal, documentation	Remedial, enrichment, reflection, strategy improvement

In the planning stage, teachers have attempted to design learning that is centered on students. Planning is no longer limited to selecting material and preparing routine exercises. Teachers are encouraged to consider students' needs, interests, learning abilities, and classroom conditions. The principal also supports teachers by encouraging professional development through training, workshops, and learning communities. These activities are expected to improve teachers' ability to design active learning, use authentic assessment, and integrate technology into learning (Ajjawi et al., 2020). Planning also reflects the school's effort to create a supportive learning environment. Reading corners, simple learning media, discussion spaces, and digital television are used to support classroom activities. Although the facilities are still limited, they show the school's awareness that deep learning requires more than verbal explanation. Students need concrete media, visual support, and opportunities to explore learning materials. The availability of facilities helps teachers design learning that is more meaningful and enjoyable (Rapanta et al., 2020).

Nevertheless, planning quality still varies among teachers. Some teachers are able to prepare contextual learning activities and assessment strategies, while others still rely on conventional lesson planning. This variation shows that teacher understanding of

deep learning is not yet uniform. Some teachers understand deep learning as active learning, while others have begun to understand it as a more complete process involving meaning-making, reflection, collaboration, and follow-up. This difference influences the depth and consistency of classroom implementation (Combs et al., 2022). In the implementation stage, learning activities have begun to show the characteristics of deep learning. Teachers use discussion, questioning, group work, contextual examples, and problem-based tasks. Students are given opportunities to express ideas, discuss with peers, and present results. These activities help students become more active in the learning process. Students do not only listen to teacher explanations; they are invited to participate, think, and communicate. Such practices indicate a shift from teacher-centered learning to student-centered learning (Woods & Copur-Gencturk, 2024).

Problem-based learning is one of the strategies that appears in classroom implementation. Teachers provide real problems as learning stimuli, and students are guided to identify information, discuss possible solutions, and present their conclusions. This strategy helps students connect learning materials with real situations. It also encourages critical thinking, cooperation, and confidence. In elementary school, problem-based learning is most effective when the problem is close to students' daily life and when the teacher provides clear guidance (Anugraheni et al., 2025). Observation also showed that student engagement increased when activities were concrete, collaborative, and contextual. Students became more enthusiastic when they were asked to observe objects, discuss in groups, answer reflective questions, or relate learning to their environment. However, student engagement was not always even. Some students were active and confident, while others needed more guidance. Students who were accustomed to passive learning sometimes found it difficult to express opinions or solve open-ended problems. This condition shows that deep learning requires gradual habituation (Gryshchuk et al., 2022).

Language use also became a contextual issue in classroom interaction. Some students used local language in informal communication, which helped them feel comfortable but sometimes limited academic expression. Teachers needed to manage this situation carefully. Local language could be used as a bridge to understanding, but students also needed support to express ideas in more formal academic language. This finding indicates that deep learning in elementary schools must be sensitive to students' linguistic and cultural backgrounds (D. Kim, 2020).

The evaluation stage has begun to include formative and reflective practices. Teachers assess students not only from final answers but also from participation, discussion, tasks, and the learning process. Reflection is conducted through teacher questions, class discussion, and student responses at the end of learning. Feedback is given orally during discussion or after students' complete tasks. This evaluation practice supports deep learning because it helps students understand their progress and helps teachers identify learning difficulties (Webb et al., 2021). However, evaluation documentation

is still not optimal. Some assessment results, reflection notes, and feedback records are not yet systematically organized. This condition limits the use of data for planning follow-up. When documentation is weak, teachers may know students' difficulties in general but lack detailed evidence to design specific support. Therefore, the evaluation system needs to be strengthened through simple, consistent, and practical recording tools that can be used by teachers without increasing administrative burden (DeCoito & Estaiteyeh, 2022).

Follow-up has been conducted through remedial support, enrichment, and improvement of teaching strategies. Remedial activities are provided for students who still have difficulty understanding the material. Enrichment is given to students who have achieved the expected level of understanding. Teachers also reflect on classroom activities and adjust their strategies for the next lesson. This follow-up shows that evaluation is not treated as the end of learning, but as a basis for continuous improvement. The main obstacles in follow-up include limited time, teacher workload, variation in teacher competence, and incomplete evaluation documentation. These obstacles make it difficult for teachers to provide intensive support to all students. Some follow-up activities are still general rather than individualized. Even so, the existence of remedial and enrichment practices indicates that teachers have begun to apply adaptive learning principles. With stronger documentation and collaborative planning, follow-up can become more systematic and effective (Schichtel et al., 2020).

Table 2. Summary of Findings and Improvement Directions

Aspect	Current Practice	Main Challenge	Improvement Direction
Teacher understanding	Teachers begin to understand deep learning as meaningful and active learning.	Understanding is not uniform among teachers.	Strengthen shared training, mentoring, and teacher learning communities.
Planning	Lesson planning considers student needs, contextual activities, and available media.	Planning quality varies and is sometimes administrative.	Use collaborative planning and practical design templates.
Implementation	Classroom activities include discussion, problem-based tasks, and group work.	Student readiness and participation are uneven.	Use scaffolding, clear instructions, and gradual habituation.
Evaluation	Teachers use reflection, feedback, and formative assessment.	Documentation of assessment is incomplete.	Develop simple progress notes, reflection sheets, and assessment matrices.
Follow-up	Remedial, enrichment, and strategy improvement have been conducted.	Limited time and teacher workload reduce consistency.	Link follow-up to evaluation data and organize small-group support.

Discussion

The findings indicate that deep learning at SD Negeri 15 Banyuasin I should be understood as an emerging learning culture. It is not yet a fully established system,

but the direction of change is visible. The school has begun to move from routine instruction toward learning that is more student-centered, contextual, reflective, and adaptive. This movement is important because educational change in elementary schools often begins with small shifts in teacher practice rather than with immediate transformation of the entire system (Zhao & Watterston, 2021).

The first important point is that teacher understanding shapes the quality of implementation. Teachers who understand deep learning as meaningful learning are more likely to design activities that involve exploration, problem solving, and reflection. Teachers who understand it only as active learning may focus on group work or classroom activity without ensuring conceptual depth. Therefore, professional development should not only introduce terminology, but also provide concrete examples of lesson design, classroom facilitation, assessment, and follow-up (Brand, 2020).

The second point is that planning must connect administrative requirements with pedagogical meaning. Lesson plans are often prepared to fulfill formal obligations, but deep learning requires planning that functions as a learning design (J. Kim et al., 2022). Teachers need to identify what students should understand, why the concept matters, what real context can be used, how students will interact, what evidence of understanding will be collected, and how learning will be followed up. This type of planning helps teachers avoid activities that are lively but shallow.

The third point is that classroom implementation must balance structure and student autonomy. Elementary students need opportunities to explore and express ideas, but they also need clear instructions, scaffolding, and time boundaries (Fiorella, 2023). If the teacher gives too much control, students may return to passive learning. If the teacher gives too little guidance, students may become confused. The role of the teacher is therefore to create guided independence. Students are encouraged to think and collaborate, while the teacher ensures that learning remains focused and meaningful.

The fourth point is that deep learning is closely related to language development. In multilingual or local-language contexts, students may understand a concept but struggle to express it in formal classroom language. Teachers should not treat local language only as a problem. It can serve as an entry point to meaning. However, teachers also need to gradually develop students' academic vocabulary, sentence patterns, and confidence in communicating ideas. Deep learning requires students not only to know, but also to explain, discuss, and reflect (Sølvik & Glenna, 2022).

The fifth point is that assessment must become a learning tool. The findings show that teachers have begun to use reflection and feedback, yet documentation remains weak. In deep learning, assessment should help teachers and students answer three questions: what is the learning goal, where are students now, and what should be

done next. If assessment is not documented, the next step becomes less precise. Simple assessment matrices, reflection sheets, and student progress notes can help teachers make better decisions without creating excessive administrative work (Rahman et al., 2021).

The sixth point is that follow-up determines sustainability. Many learning innovations stop at the implementation stage. Teachers conduct active learning activities, but the results are not used to improve the next lesson. At SD Negeri 15 Banyuasin I, follow-up has begun through remedial, enrichment, and teacher reflection. This is a positive sign. However, the practice should be strengthened by connecting follow-up with specific evidence from evaluation. Students who need support should receive targeted assistance, while students who are ready for enrichment should receive more challenging tasks (Yeung & Yau, 2022).

The seventh point concerns school leadership and institutional culture. Deep learning cannot depend only on individual teacher initiative. The principal's support through training, workshops, learning communities, and facility improvement is important. A collaborative school culture can help teachers discuss lesson plans, share classroom problems, develop common assessment tools, and reflect on student progress. When teachers work alone, variation in competence becomes wider. When teachers collaborate, good practices can spread across classes. The eighth point is the importance of realistic implementation. The school context includes limited facilities, limited internet access, varied parental support, and diverse student readiness. These limitations should not prevent deep learning, but they require adaptation. Deep learning does not always require sophisticated technology. It can be implemented through local problems, simple observation, group discussion, student reflection, reading corners, concrete media, and teacher feedback. Technology can enrich learning, but the essence of deep learning lies in meaning, engagement, and reflection. The framework developed in this article shows that deep learning implementation begins with teacher understanding and readiness. From this foundation, teachers design planning, conduct implementation, evaluate learning, and provide follow-up. Student engagement becomes the center of the process because deep learning can only occur when students are cognitively, emotionally, and behaviorally involved. The expected outcome is meaningful, reflective, active, and sustainable learning. This framework can be used by elementary schools as a practical guide for improving learning management (Ng et al., 2025).

The findings also imply that deep learning should be implemented progressively. Schools do not need to wait until all facilities are complete or all teachers are experts. The first step is to strengthen shared understanding. The second step is to develop simple but meaningful lesson plans. The third step is to practice active and contextual learning in the classroom. The fourth step is to document evaluation and feedback. The fifth step is to provide systematic follow-up. Through repeated cycles, deep learning can become part of school culture. Overall, the study confirms that

implementing deep learning at elementary school level requires alignment between pedagogy and management. Pedagogically, teachers need to create learning experiences that encourage thinking, collaboration, communication, and reflection. Managerially, schools need to organize planning, supervision, resources, evaluation, and professional learning. The integration of these two dimensions is necessary because deep learning is both a classroom practice and a school improvement agenda (Darling-Hammond et al., 2020).

Implications for Learning Management

The implementation of deep learning in SD Negeri 15 Banyuasin I has implications for how elementary schools manage learning improvement. First, learning management should be understood as a cycle rather than a set of separate administrative tasks. Planning, implementation, evaluation, and follow-up must be connected. A lesson plan should indicate the activity to be conducted, the expected form of student engagement, the evidence that will be collected, and the follow-up that may be needed. When these elements are disconnected, teachers may conduct attractive activities but fail to ensure deep conceptual understanding (Fries et al., 2021).

Second, teacher professional development should be organized around classroom problems. General workshops are useful for introducing concepts, but deep learning becomes stronger when teachers discuss real cases from their own classes. For example, teachers can bring examples of student work, reflection notes, or classroom difficulties to the learning community. Together they can identify why students were passive, why a problem-based activity did not work, or why feedback was not understood. This kind of professional learning makes improvement more grounded and practical (Patfield et al., 2023).

Third, school supervision should focus not only on document completeness but also on the quality of learning interaction. Supervision can examine whether students are given opportunities to ask questions, explain ideas, collaborate, use evidence, and reflect. The principal or senior teachers can observe short classroom segments and provide constructive feedback. This approach helps teachers see supervision as support for professional growth rather than as an administrative inspection.
Fourth, deep learning requires simple and useful documentation. Teachers often face heavy workloads, so documentation tools should not be too complex. A one-page reflection sheet, a student progress checklist, a group discussion rubric, and a remedial-enrichment record can be sufficient as initial tools. The purpose is not to create more paperwork, but to help teachers make decisions based on evidence. When documentation is practical, teachers are more likely to use it consistently (Albin-Clark, 2020).

Fifth, learning resources should be expanded by using the local environment. Limited facilities should not be seen only as barriers. The school yard, community activities,

local occupations, family experiences, and environmental issues around students can become meaningful learning resources. Teachers can design observation tasks, interviews, simple projects, and reflective discussions based on these resources. This strategy makes deep learning more affordable, contextual, and relevant to students (Lin et al., 2025).

Sixth, the implementation of deep learning should involve students as active partners in classroom improvement. Students can be asked what activities help them understand, what difficulties they experience, and what kind of support they need. Their responses can help teachers adjust instruction. In elementary school, this process can be conducted through simple reflection questions, smiley cards, learning journals, or short oral sharing. When students are invited to reflect on learning, they gradually develop responsibility for their own progress (Yang et al., 2020).

Seventh, parental communication should also be strengthened. Many students at SD Negeri 15 Banyuasin I come from families with limited learning support at home. Schools do not need to demand complex academic assistance from parents. Instead, teachers can provide simple messages about what children are learning, what questions parents can ask at home, and what habits can support learning. This communication helps connect school learning with home experience and supports the continuity of meaningful learning (Francom et al., 2021).

Finally, deep learning should be implemented as a gradual school movement. The school can begin with one or two priority practices, such as reflective closing questions, contextual problem tasks, or simple formative feedback. After teachers become familiar with these practices, the school can expand to project-based activities, peer assessment, portfolios, and more systematic enrichment. A gradual approach reduces resistance and allows teachers and students to build new habits step by step (Egitim & Watson, 2024). This is especially important in elementary schools because learning culture is built through repeated routines. When students repeatedly experience questioning, discussion, feedback, and reflection, they begin to see learning as a process of understanding rather than merely completing tasks.

D. Conclusions

This study concludes that the implementation of deep learning as a learning activity in elementary education has been carried out through a gradual and contextual learning management process. The findings show that deep learning is not only understood as an active learning strategy, but also as an approach that encourages students to build meaning, connect learning materials with real-life experiences, and participate more consciously in classroom activities. Teachers play an important role in translating the concept of deep learning into daily teaching practices through planning, implementation, evaluation, and follow-up activities. In the planning stage, teachers attempted to design learning activities that were student-centered,

meaningful, and relevant to students' needs. Learning objectives, teaching materials, media, and assessment strategies were prepared to support students' cognitive, emotional, and behavioral engagement. In the implementation stage, deep learning was reflected through discussion, questioning, group work, contextual tasks, reflection, and teacher-student interaction. These activities encouraged students to be more active, confident, collaborative, and responsible in the learning process. The evaluation process showed that assessment in deep learning should not only focus on final learning outcomes, but also on students' participation, understanding, reflection, and learning progress. Teachers used evaluation results as a basis for providing feedback, improving learning strategies, and determining follow-up actions. The follow-up stage becomes an important part of maintaining the continuity of learning through reinforcement, enrichment, remedial activities, and reflective guidance. Overall, deep learning can support the development of meaningful learning activities in elementary schools when it is implemented consistently and supported by teacher readiness, classroom management, learning media, school facilities, and a positive school culture. However, several challenges still need attention, such as differences in teacher understanding, limited learning resources, student language habits, and consistency in classroom practice. Therefore, deep learning should be strengthened through teacher training, collaborative reflection, and continuous school support.

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