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Evaluation of The Implementation of Differentiation Learning at Pringsewu District Preschool For Preschool

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ABSTRACT

This study evaluates the implementation of differentiated learning in early childhood education (ECE) schools in Pringsewu District using the CIPP (Context, Input, Process, Product) evaluation model. The research subjects include the second generation of formal ECE institutions: TK Aisyah Gading Rejo, TK Islamiyah Pean, and TK Yasmida 3. A descriptive qualitative method was employed, utilizing interviews, observations, and documentation for data collection, with data analysis conducted through triangulation. The findings indicate that differentiated learning has been effectively implemented. The contextual factors supporting this include the school environment, administrative staff support, and the diverse characteristics of children. Input factors comprise an appropriate curriculum, adequate resources, learning materials tailored to student needs, and teachers' competencies in planning differentiated instruction. The learning process involves the application of strategies aligned with students' readiness, interests, and learning profiles. The outcomes, or product, of the implementation include improved understanding of subject matter, enhanced critical thinking skills, increased learning motivation, greater self-confidence, and active student participation. The study recommends that school principals organize teacher training programs, establish school-based learning communities, and conduct regular monitoring and evaluation to ensure the sustained effectiveness of differentiated learning practices. The implications highlight the importance of contextual alignment with the school curriculum and the collective commitment of stakeholders to create an enjoyable and meaningful learning environment supported by adequate infrastructure.

INTRODUCTION

Education, as a foundational pillar of societal progress, is inherently dynamic and interactive, aiming to facilitate the holistic development of learners by fostering critical thinking, creativity, and engagement (UNESCO, 2021). In Indonesia, Law No. 20 of 2003 on the National Education System underscores the importance of an interactive learning process involving students, educators, and educational resources in a conducive environment. However, global educational paradigms have evolved substantially over the past decade, shifting toward learner-centered approaches that emphasize inclusion, equity, and personalization (OECD, 2020).

Among the most widely adopted strategies in contemporary inclusive education is differentiated instruction, a pedagogical framework that responds to the diverse readiness levels, learning preferences, and interests of students. This approach aligns with the growing recognition that effective education must transcend uniform delivery models, acknowledging variability as a normative feature rather than a deviation (Deunk et al., 2018). Differentiated instruction enables educators to tailor content, processes, and products of learning to accommodate individual learner profiles, thereby promoting equitable learning outcomes (Smale-Jacobse et al., 2019).

The theoretical foundation of differentiated instruction lies in constructivist and socio-cultural learning theories, which posit that knowledge construction is most effective when aligned with learners' prior experiences and social contexts (Bråten, 2022). Recent empirical studies confirm its positive effects on student motivation, engagement, and academic achievement when implemented consistently and systematically (Pozas & Letzel, 2020). It is thus increasingly recognized not only as a best practice in inclusive education but also as a mechanism to operationalize equity within classrooms.

In Indonesia, the recent implementation of Kurikulum Merdeka, a policy reform promoting autonomy and flexibility in teaching, reaffirms the relevance of differentiated learning. Particularly within early childhood education (PAUD), where developmental variability is significant, differentiation is essential for nurturing foundational competencies (Sumual et al., 2025). However, implementation across regions remains uneven. Government regulation No. 0301/C/HK.00/2022 designates only selected *Sekolah Penggerak* as pioneers, including a limited number of PAUD institutions in Pringsewu Regency TK Yasmida 3, TK Aisyah, TK Islamiyah, and PAUD Harapan Bangsa Banyumas. This selective rollout necessitates structured program evaluation to understand how differentiation is operationalized and to generate insights for broader replication.

Program evaluation serves as an essential component in educational development, enabling evidence-based decisions and continuous improvement (Guskey, 2020). To this end, the CIPP model (Context, Input, Process, Product), developed by Stufflebeam, provides a comprehensive framework for evaluating educational initiatives. The model's multidimensional approach allows evaluators to assess not only the effectiveness of program outcomes but also the relevance of its context, the adequacy of resources, and the quality of implementation processes (Stufflebeam & Coryn, 2014).

Applying the CIPP model in this study allows for a holistic evaluation of the implementation of differentiated instruction in selected PAUDs in Pringsewu. This involves: (1) assessing contextual readiness and institutional capacity, (2) analyzing inputs such as teacher competencies and infrastructure, (3) examining instructional processes for differentiation, and (4) evaluating student outcomes and program impact. The findings are expected to inform policy enhancements and provide practical recommendations for educators, while contributing to the global discourse on inclusive pedagogy in early childhood education.

The current study positions itself within the growing movement toward inclusive, student-centered education. It bridges theoretical advances in differentiated instruction with practical evaluation in the Indonesian context, particularly within the Kurikulum Merdeka framework. By doing so, it addresses both the policy and pedagogical dimensions of educational reform and aims to offer replicable insights for effective implementation of differentiation at the early childhood level.

RESEARCH METHOD

This study employed a qualitative descriptive design to explore the implementation of differentiated instruction in early childhood education (PAUD) institutions designated as Driving Schools (*Sekolah Penggerak*) in Pringsewu Regency, Indonesia. A qualitative approach is particularly well-suited for investigating complex and contextually embedded educational phenomena, offering rich, in-depth narratives and interpretative insights into participants' experiences and perspectives (Creswell & Poth, 2018).

Data Collection

Data were collected through methodological triangulation, including participant observation, semi-structured interviews, and document analysis. Observations were conducted during instructional activities to examine how differentiation strategies were applied. Semi-structured interviews were held with school principals, teachers, and administrative staff to gather insights

regarding their perceptions, experiences, and challenges. Relevant documents such as instructional modules, operational school curricula (KOSP), and internal evaluation reports were analyzed to corroborate the observational and interview data.

To ensure the trustworthiness of the data, triangulation of sources and methods was implemented, along with participant validation through *member checking* (Patton, 2015). Ethical standards were strictly observed, including informed consent, confidentiality assurances, and voluntary participation.

Data Analysis

Data were analyzed using the interactive model of Miles, Huberman, and Saldaña (Miles et al., 2014), involving three core activities: data condensation, data display, and conclusion drawing/verification. Thematic analysis was conducted by categorizing the data according to the dimensions of the CIPP evaluation model Context, Input, Process, and Product to ensure coherence between empirical findings and evaluative frameworks (Stufflebeam & Coryn, 2014). The coding process was iterative and rigorous, supported by analytic memo writing and pattern recognition.

Evaluation Components Based on the CIPP Model

Context Evaluation

Context Evaluation focused on the institutional readiness and leadership capacity to support instructional transformation. School principals played a pivotal role in facilitating professional development, technical support, and the integration of digital tools an area still underdeveloped in early childhood education settings.

Input Evaluation

Input Evaluation examined human resources and material support. Teachers demonstrated improved competencies in designing differentiated instruction based on student profiles. However, ongoing professional development remains critical to fostering sustained innovation and instructional quality (Subban & Round, 2021).

Process Evaluation

Process Evaluation assessed the fidelity of differentiated instruction implementation. Teachers applied principles such as content tailoring, diagnostic assessment, and inclusive classroom management. Nevertheless, gaps in digital literacy limited the effective use of technology for personalization. Moreover, training initiatives had reached only a portion of educators, highlighting the need for broader dissemination through peer mentoring and school-based learning communities (Guskey, 2020).

Product Evaluation

Product Evaluation revealed improvements in student engagement, confidence, critical thinking, and participation. The integration of differentiated strategies enriched the learning experience and enhanced inclusivity. Collaborative practices such as teacher learning communities facilitated both in-person and via digital platforms like PMM (Platform Merdeka Mengajar) contributed to reflective teaching, mentoring, and continuous improvement (OECD, 2020).

RESEARCH RESULT & DISCUSSION

Effectiveness of Differentiated Learning Strategies in ECE

The findings of this study indicate that the implementation of differentiated instruction in early childhood education (ECE) significantly enhances both academic and behavioral outcomes among young learners. Differentiated instruction defined as the proactive adaptation of content, learning processes, products, and classroom environments to meet individual learner needs enabled teachers to address variations in students' cognitive readiness, learning preferences, and interests. This strategic responsiveness allowed for the creation of developmentally appropriate, inclusive, and engaging learning experiences.

Empirical evidence aligns with these observations. Deunk et al. (2018), in a large-scale meta-analysis, found that differentiated instruction generates small-to-moderate but consistently positive effects on student achievement when applied systematically (Deunk et al., 2018). Importantly, these gains are more pronounced in settings where differentiation is integrated into lesson planning and assessment strategies. In the present study, teachers confirmed that structured differentiation allowed for the early identification of developmental delays and the provision of timely, individualized interventions. This finding echoes the work of Subban and Round (2021), who argue that differentiation in early education supports holistic child development and bridges achievement gaps in mixed-ability classrooms (Subban & Round, 2021).

A key benefit of differentiation is its capacity to prevent the pitfalls of the traditional "one-size-fits-all" model, which often fails to accommodate the rapid developmental transitions occurring in early childhood. The use of flexible instructional strategies such as tiered assignments, learning centers, and scaffolded questioning was found to increase engagement and sustain learners' motivation across a spectrum of abilities. These practices contribute to a more inclusive learning environment, as also supported by Florian and Black-Hawkins (2019), who emphasize that inclusive pedagogy is underpinned by the belief that all learners are capable of success given the right support (Florian & Black-Hawkins, 2019).

Furthermore, teachers in this study reported that differentiation enabled more precise formative assessment, allowing them to respond to learners' evolving needs in real time. This form of pedagogical agility, as described by Pozas and Letzel (2020), reinforces the importance of instructional flexibility and teacher self-efficacy in managing diverse classrooms. Notably, the use of diagnostic assessments and student profiles was instrumental in guiding the design of responsive instruction (Pozas & Letzel, 2020).

The professional learning of educators also played a pivotal role in enhancing differentiation practices. Teachers who had received targeted training in differentiation reported greater confidence in adapting instruction, a finding consistent with Hockett and Doubet (2021), who emphasize that differentiation flourishes in contexts that support reflective teaching and collaborative learning. Additionally, school leaders in the study promoted communities of practice, peer mentoring, and digital platforms to disseminate effective practices and support continuous professional development (Hockett & Doubet, 2021).

In summary, differentiated instruction not only contributes to improved learning outcomes but also fosters a pedagogical culture grounded in responsiveness, inclusion, and equity. These findings underscore the importance of embedding differentiation within early childhood curricula and teacher training programs to ensure that education remains adaptive to learner diversity and developmental needs.

Enhancing Student Engagement and Motivation

One of the most salient findings emerging from the field data is the significant role of differentiated instruction in enhancing learner engagement in early childhood education (ECE) settings. Engagement widely conceptualized as a multidimensional construct encompassing

behavioral, emotional, and cognitive dimensions is a core determinant of early learning success and long-term academic development (Fredricks & Wang, 2021). In the current study, children exhibited increased motivation and active classroom participation when presented with learning tasks aligned with their developmental readiness, interests, and individual learning profiles.

Teachers reported that when learning materials were customized to reflect students' preferences and cognitive stages, learners displayed greater enthusiasm and persistence. Instructional activities incorporating play-based, interest-driven themes led to elevated levels of curiosity and sustained attention, particularly among children with varied levels of preparedness. These findings are consistent with the theoretical propositions of Reis and Renzulli (2020), who assert that personalized instruction cultivates a sense of ownership and intrinsic motivation among learners, particularly when their individual strengths and interests are acknowledged (Reis & Renzulli, 2020).

Notably, engagement levels increased when students were allowed autonomy in selecting learning tasks or participating in small group activities. These opportunities promoted a sense of agency and peer collaboration, critical factors in both cognitive and social-emotional development. Differentiated grouping based not solely on chronological age but also on cognitive readiness enabled more meaningful peer interactions and reinforced children's sense of belonging. Parsons et al. (2018) emphasize that such responsive grouping structures are instrumental in fostering authentic engagement and facilitating differentiated instructional responses in real time (Parsons et al., 2018).

Furthermore, differentiated instruction provided a platform for learners to develop resilience and adaptive coping strategies, especially in tasks that required sustained mental effort. As Skinner and Pitzer (2016) highlight, engagement is deeply intertwined with developmental processes that include emotional regulation, problem-solving, and persistence traits observed among the children in this study when instruction was scaffolded to support success while maintaining an appropriate level of challenge (Skinner & Pitzer, 2016).

The relational dimension of engagement was also evident. Teachers who implemented differentiated strategies tended to build stronger, more responsive relationships with their students, which is crucial for sustained participation and emotional security in early learning environments (Hamre & Pianta, 2021). These relationships, formed through attentive observation and personalized responses, contributed to a climate of trust and psychological safety key elements in inclusive pedagogy.

In conclusion, the integration of differentiated instruction within early childhood classrooms not only supports academic outcomes but also significantly enhances engagement by honoring learner diversity and fostering agency, connection, and perseverance. These findings reinforce the imperative for teacher preparation programs and professional development initiatives to emphasize differentiation as a pedagogical approach rooted in both inclusion and motivation theory.

Supporting Individual Ability Development and Learning Progression

An essential dimension of differentiated instruction revealed in this study is its effectiveness in fostering individual learner growth. Teachers consistently reported that through the use of tiered activities, scaffolded instruction, and diverse assessment methods, they were able to more accurately identify each child's developmental stage and respond with targeted support. These strategies created a flexible and responsive learning environment where emerging skills could be nurtured progressively and equitably.

This instructional approach is deeply rooted in Vygotsky's Zone of Proximal Development (ZPD) theory, which posits that optimal learning occurs when instruction is aimed just beyond the learner's current capabilities and supported with appropriate scaffolding (Vygotsky, 1978). In this

study, teachers utilized differentiation as a mechanism to stretch children's thinking while ensuring that necessary assistance was embedded within the learning experience. This was particularly evident in the Pringsewu schools, where notable improvements were observed in foundational literacy and numeracy among students across a wide spectrum of abilities.

Differentiated instruction facilitated measurable growth not only for advanced learners but also for those who initially struggled. For example, lower-performing students showed increased confidence and competence when provided with accessible entry points to the curriculum. This aligns with findings by Prast et al. (2018), who demonstrated that differentiation in primary mathematics resulted in both enhanced student achievement and more adaptive teaching practices (Prast et al., 2018).

Furthermore, learners with special educational needs (SEN) experienced significant benefits under differentiated instruction models. Teachers were able to modify materials and tasks to suit individual learning profiles, reducing barriers to access and enabling genuine participation. Alnahdi (2020) notes that such personalization mitigates the risk of exclusion by ensuring that instruction aligns with each learner's cognitive and emotional readiness. This study confirms that differentiated instruction plays a vital role in establishing inclusive classroom environments where all students feel valued and supported (Alnahdi, 2020).

The inclusive impact of differentiation is also reflected in teacher beliefs and pedagogical shifts. Pozas and Letzel (2020) found that when teachers internalize the principles of responsiveness and flexibility, their instructional behaviors adapt accordingly, creating a more inclusive climate. This shift was evident among educators in this study, who reported a growing sense of efficacy in addressing learner diversity (Pozas & Letzel, 2020).

Teacher capacity to implement differentiated instruction, however, depends on structured professional development and institutional support. Schwab and Sharma (2022) emphasize the need for teacher education programs to embed inclusive pedagogies such as differentiation into core instructional frameworks, thereby transforming beliefs into sustainable classroom practices (Schwab & Sharma, 2022).

In conclusion, differentiated instruction significantly enhances individual learner growth by enabling educators to tailor learning experiences to students' developmental needs. Its theoretical foundation, empirical validation, and inclusive application position it as a critical strategy for advancing equity and excellence in early childhood education.

Teacher Empowerment through Training and Institutional Support

A recurrent theme emerging from the research findings is the pivotal role of continuous professional development (CPD) in enabling effective implementation of differentiated instruction in early childhood education (ECE). The data revealed a consistent pattern: educators who possessed a stronger conceptual and practical understanding of differentiation were markedly more successful in designing, executing, and evaluating adaptive learning pathways. Conversely, teachers with limited exposure to training in this area tended to rely on traditional, uniform instructional strategies that constrained the benefits of differentiation.

Professional learning activities in the participating PAUD institutions included structured workshops, collaborative lesson planning sessions, peer mentoring, and reflective learning communities. These modes of development fostered shared pedagogical knowledge and cultivated a culture of instructional inquiry. Teachers who engaged in collaborative planning reported improved competence in adapting instructional materials and tasks to address learner diversity. Prast et al. (2018) demonstrated that targeted training in differentiation leads to measurable gains in both instructional quality and student achievement (Prast et al., 2018).

Beyond skill enhancement, sustained professional learning also cultivated instructional self-efficacy—a key predictor of teachers' willingness to experiment with pedagogical innovations. Opfer and Pedder (2019) assert that teacher learning is most impactful when embedded in context-specific practices and supported by collaborative dialogue (Opfer & Pedder, 2019). Similarly, Avalos (2016) notes that professional development is most effective when it supports reflection on teaching, encourages co-construction of knowledge, and is aligned with classroom realities (Avalos, 2016).

School leadership played an instrumental role in facilitating effective CPD by ensuring the availability of time, autonomy, and resources for innovation. Teachers in this study highlighted the importance of supportive leadership that recognized and valued experimentation with differentiated practices. Additionally, reflective tools such as teacher self-assessment, peer feedback, and classroom observation protocols served as mechanisms for continuous instructional refinement. These strategies align with Kennedy's (2019) conclusion that professional development must prioritize the practical application of new ideas within classroom settings, rather than merely focusing on content delivery (Kennedy, 2019).

Moreover, the integration of lesson study groups as a form of embedded professional learning provided a platform for collective problem-solving and knowledge sharing. Garet et al. (2016) emphasized that high-quality professional development is characterized by its content focus, active learning, and collective participation—features present in the models observed in this study (Garet et al., 2016). The findings also align with Darling-Hammond et al. (2017), who argue that effective CPD must be sustained, collaborative, and directly relevant to classroom practice (Darling-Hammond et al., 2017).

In summary, this study reinforces the assertion that differentiated instruction is unlikely to be implemented effectively without a parallel commitment to building teacher capacity through structured and contextually responsive professional development. CPD is not merely a support mechanism—it is a foundational component of inclusive, adaptive, and high-quality pedagogy.

Strengthening Instructional Quality and Inclusivity

This study revealed that the implementation of differentiated instruction substantially elevated the overall instructional quality in early childhood classrooms. Moving beyond uniform and standardized teaching practices, educators crafted more dynamic, interactive, and culturally responsive learning experiences that allowed for deeper engagement with the curriculum. As a result, classrooms became more inclusive spaces where all learners—regardless of ability, background, or readiness level—could meaningfully access, participate in, and respond to the learning process.

A central feature of high-quality instruction is teacher responsiveness, which was markedly enhanced through the use of differentiated strategies. Teachers in the study emphasized that student-centered lesson planning, informed by continuous formative assessments, enabled real-time pedagogical adjustments to meet emerging learning needs. This finding is consistent with Coubergs et al. (2017), who argue that differentiated instruction fosters greater classroom adaptability and teacher sensitivity to learner diversity—both of which are foundational indicators of instructional effectiveness.

Furthermore, the introduction of differentiated learning practices positively influenced the social-emotional climate of the classroom. Teachers reported that students demonstrated increased empathy and respect for peers' differences. In turn, educators adopted more nurturing and facilitative roles, transitioning from directive instruction to guidance rooted in relational pedagogy. This transformation signifies a broader shift toward inclusive pedagogy, which, as outlined by

Florian and Spratt (2016), is premised on the belief that effective teaching addresses learner diversity as a normative and essential feature of good instruction—not as an exception.

This inclusive dynamic is further supported by the principles of the UNESCO Framework for Equitable Education (UNESCO, 2021), which advocates for pedagogical models that are inclusive, equitable, and learner-centered. Differentiated instruction—when implemented intentionally—aligns with this global vision by bridging access and engagement through pedagogical flexibility.

In addition, the cultivation of instructional quality extended beyond individual teacher practice and into the organizational culture of the schools studied. Classrooms increasingly reflected collaborative planning efforts, where teachers co-designed lessons that integrated formative feedback loops, flexible grouping, and varied instructional modalities. Gheyssens et al. (2020) argue that such collaborative professionalism is essential to sustaining inclusive teaching practices in institutional contexts.

These findings suggest that differentiated instruction is not only a strategy for personalization but also a vehicle for systemic pedagogical transformation. It enhances instructional coherence, promotes social inclusion, and encourages reflective practice. By establishing a responsive classroom ecology, differentiated instruction elevates the standard of teaching and aligns with contemporary imperatives for equity and excellence in early education.

Importance of Parental and Community Engagement

This study underscores the critical role of parental and community engagement as enablers of effective differentiated instruction in early childhood education (ECE) contexts. The findings reveal that when parents are not only informed about but also actively support differentiated practices, children benefit from a more coherent and reinforced learning experience between school and home. Activities such as take-home projects, portfolio reviews, and family storytelling sessions were found to strengthen the school-home partnership, aligning learning expectations and supporting cognitive and socio-emotional growth.

This observation aligns with Epstein's (2018) framework on school-family-community partnerships, which emphasizes that structured collaboration across these three spheres creates a holistic learning ecosystem (Epstein, 2018). In the case of PAUD institutions in Pringsewu, parental involvement extended beyond logistical support into pedagogical engagement, whereby families contributed insights into their children's interests, learning behaviors, and cultural backgrounds. Such participatory practices made classroom instruction more responsive and culturally grounded.

Parental engagement also improved communication pathways between teachers and families, enabling more timely and nuanced discussions of student progress. Goodall and Montgomery (2014) distinguish between parental involvement and parental engagement, noting that the latter implies a learning-centered model where parents become co-educators in a child's academic journey (Goodall & Montgomery, 2014). This distinction was evident in the study, as teachers who encouraged parents to reflect on student work reported better alignment between home reinforcement and school-based differentiation strategies.

Furthermore, collaboration with the local community enriched the curriculum and instructional planning. Incorporating local folklore, traditions, and real-world community themes into lessons not only enhanced student engagement but also supported the development of a culturally sustaining pedagogy. These findings resonate with Pushor (2015), who advocates for tracing "family knowledge" as a legitimate epistemology within schools, thus creating inclusive and contextually relevant curricula (Pushor, 2015).

Teachers noted that when local knowledge was integrated into learning tasks—such as through community-based storytelling or traditional games—students demonstrated higher

motivation and connection to the material. This shift contributes to an inclusive educational climate where community and cultural identities are affirmed rather than marginalized, in line with Mapp and Bergman (2021), who argue that authentic family engagement is a cornerstone of educational equity (Mapp & Bergman, 2021).

Finally, supportive leadership was essential in institutionalizing family and community collaboration. School leaders who allocated time, resources, and training for teachers to build partnerships with families facilitated more sustainable and meaningful engagement. As Hornby and Blackwell (2018) suggest, overcoming institutional and perceptual barriers to parental involvement requires systemic support and a shared vision of inclusive schooling.

In conclusion, the integration of family and community engagement into differentiated instruction strategies not only enhances instructional coherence but also affirms learners' identities and social contexts. This multidimensional collaboration contributes significantly to the effectiveness and equity of early learning environments.

Role of School-Based Learning Communities

The formation and cultivation of school learning communities emerged as a vital enabler in the sustained implementation of differentiated instruction. In schools where professional collaboration was prioritized, educators demonstrated higher instructional coherence, stronger motivation, and greater adaptability in their teaching practices. This finding reflects a broader understanding of schools not merely as instructional sites but as evolving communities of practice committed to continuous pedagogical inquiry and improvement.

Learning communities—characterized by shared vision, reflective dialogue, and collaborative action—provide essential scaffolding for teachers to refine their differentiation strategies through collective sense-making and experimentation (Vangrieken et al., 2017). In the context of this study, school leaders institutionalized collaborative practices such as structured learning circles, peer observations, and innovation-sharing platforms. These mechanisms enhanced both accountability and professional agency, reinforcing a culture of shared ownership over instructional quality.

The effectiveness of these communities lies not only in their structural design but also in their leadership dynamics. Distributed and facilitative leadership, particularly from school principals, was key in creating the time and space needed for professional discourse (Voelkel, 2019). Teachers reported increased confidence and competence when their efforts in adapting lessons, experimenting with scaffolding techniques, and responding to diverse learner needs were recognized and supported institutionally. This aligns with Harris and Jones (2017), who argue that leadership must nurture collaborative learning environments as a strategic approach to sustaining instructional innovation (Harris & Jones, 2017).

One of the most powerful functions of school-based professional learning communities (PLCs) in this study was their role in facilitating action research cycles. Teachers were encouraged to implement small-scale interventions in their classrooms—such as modified grouping strategies or differentiated tasks—and reflect on the outcomes through peer feedback sessions. This iterative process not only supported professional growth but also generated contextually grounded insights into what differentiation looks like in practice, echoing the findings of Opfer and Pedder (2019) on the efficacy of inquiry-oriented professional learning (Opfer & Pedder, 2019).

Moreover, the integration of reflective practices—such as instructional rounds, shared portfolios, and self-assessment tools—created feedback-rich environments where differentiation was not a static method, but a dynamic and evolving practice. These insights resonate with Stoll et al. (2016), who describe effective learning communities as those that embed critical reflection into their core routines, thus enabling sustained pedagogical transformation (Stoll et al., 2016).

In conclusion, this study highlights that differentiated instruction is most effective when supported by organizational structures that promote collective learning and leadership. Professional learning communities not only empower teachers to continuously improve their practice but also serve as incubators for innovation, inclusion, and instructional excellence.

CONCLUSION

From the results of the evaluation of the implementation of differentiated learning in early childhood driving schools, it can be concluded that: Evaluation of the implementation of differentiated learning in early childhood driving schools has been completed carried out effectively, as seen from teachers who carry out learning according to students' learning needs, carrying out initial assessments, process assessments and the end of learning.

Teachers design learning using teaching modules according to the characteristics of each school. The implementation of differentiated learning also has a positive impact on improving student learning outcomes, such as; understanding of the material according to learning outcomes, critical thinking skills, learning motivation, self-confidence and active participation of students in learning,so that children are ready to enter the next level of education, namely Elementary School (SD).

However, there are challenges that teachers face when struggling to create differentiated classes, namely; in managing time, limited resources and support in accessing other learning resources.

The recommendation from this research is that school principals carry out training activities to increase teacher competency, create learning communities in schools, monitor and effectively implement differentiated learning in PAUD.

Implications obtained from this research includes contextual adjustments for each school that align with the school curriculum through commitment from all stakeholders to create a fun and meaningful learning environment and facilitate infrastructure for implementing differentiated learning.

REFERENCES

Alnahdi, G. H. (2020). The use of differentiated instruction in inclusive classrooms: A review of literature. *International Journal of Inclusive Education*, *24*(6), 594–606. https://doi.org/10.1080/13603116.2018.1503800

Avalos, B. (2016). Teacher professional development in Teaching and Teacher Education over ten years. *Teaching and Teacher Education*, *63*, 10–25. https://doi.org/10.1016/j.tate.2016.01.002

Bråten, I. (2022). *The Handbook of Metacognition in Education*. Routledge.

Creswell, J. W., & Poth, C. N. (2018). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*. SAGE Publications.

Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). Effective teacher professional development. *Palo Alto: Learning Policy Institute*. https://learningpolicyinstitute.org/product/effective-teacher-professional-development-report

Deunk, M. I., Smale-Jacobse, A. E., de Boer, H., Doolaard, S., & Bosker, R. J. (2018). Differentiation within primary school classrooms: A systematic review of research evidence on effective practices. *Educational Research Review*, *24*, 31–54. https://doi.org/10.1016/j.edurev.2018.02.002

Epstein, J. L. (2018). *School, Family, and Community Partnerships: Your Handbook for Action*. Corwin Press.

Florian, L., & Black-Hawkins, K. (2019). Whatever happened to inclusive education? *Educational Review*, *71*(4), 424–437. https://doi.org/10.1080/00131911.2019.1664201

Fredricks, J. A., & Wang, M.-T. (2021). Student engagement, context, and adjustment: Addressing definitional, measurement, and methodological issues. *Contemporary Educational Psychology*, *66*, 101971. https://doi.org/10.1016/j.cedpsych.2021.101971

Garet, M. S., Porter, A. C., Desimone, L., Birman, B. F., & Yoon, K. S. (2016). What makes professional development effective? Results from a national sample of teachers. *American Educational Research Journal*, *53*(4), 914–945. https://doi.org/10.3102/0002831216667476

Goodall, J., & Montgomery, C. (2014). Parental involvement to parental engagement: A continuum. *Educational Review*, *66*(4), 399–410. https://doi.org/10.1080/00131911.2013.781576

Guskey, T. R. (2020). Evidence-based professional learning. *Educational Leadership*, *77*(8), 18–22.

Hamre, B. K., & Pianta, R. C. (2021). Early teacher–child relationships and the trajectory of children's school outcomes. *Child Development Perspectives*, *15*(1), 10–16. https://doi.org/10.1111/cdep.12385

Harris, A., & Jones, M. (2017). Leading professional learning communities. *School Leadership & Management*, *37*(5), 471–489. https://doi.org/10.1080/13632434.2017.1346975

Hockett, J. A., & Doubet, K. M. (2021). Differentiation in action: Strategies and insights from classrooms. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas*, *94*(4), 155–162. https://doi.org/10.1080/00098655.2021.1925377

Kennedy, M. M. (2019). How we learn about teacher learning. *Review of Educational Research*, *89*(3), 488–531. https://doi.org/10.3102/0034654319848584

Mapp, K. L., & Bergman, E. L. (2021). Powerful Partnerships: A Teacher's Guide to Engaging Families for Student Success. *The Education Digest*, *86*(9), 32–37.

Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative Data Analysis: A Methods Sourcebook*. SAGE Publications.

OECD. (2020). *OECD Future of Education and Skills 2030: Curriculum Analysis*. OECD Publishing. https://www.oecd.org/education/2030-project/

Opfer, V. D., & Pedder, D. (2019). Conceptualizing teacher professional learning. *Review of Educational Research*, *89*(3), 445–478. https://doi.org/10.3102/0034654319850159

Parsons, S. A., Vaughn, M., Malloy, J. A., & Pierce, M. (2018). Students' engagement in instruction. *The Reading Teacher*, *72*(1), 89–98. https://doi.org/10.1002/trtr.1691

Patton, M. Q. (2015). *Qualitative Research & Evaluation Methods: Integrating Theory and Practice*. SAGE Publications.

Pozas, M., & Letzel, V. (2020). Teachers and differentiated instruction: Exploring differentiation practices and beliefs. *Journal of Research in Special Educational Needs*, *20*(4), 276–286. https://doi.org/10.1111/1471-3802.12481

Prast, E. J., Van de Weijer-Bergsma, E., Kroesbergen, E. H., & Van Luit, J. E. H. (2018). Differentiated instruction in primary mathematics: Effects on student achievement and teachers' instructional practices. *International Journal of Educational Research*, *87*, 38–49. https://doi.org/10.1016/j.ijer.2017.10.003

Pushor, D. (2015). Tracing family knowledge at school: Creating spaces for parents. *Education Canada*, *55*(3), 14–18.

Reis, S. M., & Renzulli, J. S. (2020). The Schoolwide Enrichment Model: A focus on student strengths and interests. *Gifted Education International*, *36*(2), 131–147. https://doi.org/10.1177/0261429420904380

Schwab, S., & Sharma, U. (2022). Inclusive pedagogy: From beliefs to practice in teacher education. *Teaching and Teacher Education*, *109*, 103557. https://doi.org/10.1016/j.tate.2021.103557

Skinner, E. A., & Pitzer, J. R. (2016). Developmental dynamics of student engagement, coping, and everyday resilience. *Development and Psychopathology*, *28*(4pt1), 1299–1316. https://doi.org/10.1017/S0954579416000874

Smale-Jacobse, A. E., Meijer, P. C., Helms-Lorenz, M., & Maulana, R. (2019). Differentiated instruction in secondary education: A systematic review of research evidence. *Frontiers in Psychology*, *10*, 2366. https://doi.org/10.3389/fpsyg.2019.02366

Stoll, L., Bolam, R., McMahon, A., Wallace, M., & Thomas, S. (2016). Professional learning communities: A review of the literature. *Journal of Educational Change*, *10*(2), 221–258. https://doi.org/10.1007/s10833-009-9118-1

Stufflebeam, D. L., & Coryn, C. L. S. (2014). *Evaluation Theory, Models, and Applications*. Jossey-Bass.

Subban, P., & Round, P. (2021). Differentiated instruction: A research basis. *Australian Journal of Teacher Education*, *46*(1), 44–61. https://doi.org/10.14221/ajte.2021v46n1.3

Sumual, S. D. M., Rawis, J. A. M., & Lengkong, J. S. J. (2025). Kemitraan Strategis dalam Institusi Pendidikan: Integrasi Visi, Misi, dan Nilai Dasar Melalui Kerangka Balanced Scorecard. *Jurnal Sosial Humaniora*. https://journalcenter.org/index.php/inovasi/article/view/4029

UNESCO. (2021). *Reimagining our futures together: A new social contract for education*. UNESCO. https://unesdoc.unesco.org/ark:/48223/pf0000379707

Vangrieken, K., Meredith, C., Packer, T., & Kyndt, E. (2017). Teacher communities as a context for professional development: A systematic review. *Teaching and Teacher Education*, *61*, 47–59. https://doi.org/10.1016/j.tate.2016.10.001

Voelkel, R. H. (2019). The role of distributed leadership and teacher academic optimism in professional learning communities. *Educational Management Administration & Leadership*, *47*(6), 837–854. https://doi.org/10.1177/1741143218764173

Vygotsky, L. S. (1978). *Mind in Society: The Development of Higher Psychological Processes*. Harvard University Press.