Ar-Rasyid: Jurnal Publikasi Penelitian Ilmiah - ISSN:3109-6220
https://e-journal.sahariset.com/index.php/ar-rasyid
Volume 2 Nomor 9, September 2026 - Halaman 44-58

TEACHER SELF-LEADERSHIP IN THE INTEGRATION OF DIFFERENTIATED LEARNING AND DEEP LEARNING AT SMA XAVERIUS BANDAR LAMPUNG

Resti Hosiana Situmorang*[1] , Susanto Susanto[2]
Universitas Bandar Lampung[1,2]
Email: restihosiana@gmail.com[1], susanto@ubl.ac.id[2]

ABSTRACT

This study aims to analyze teacher self-leadership in integrating differentiated instruction and deep learning at SMA Xaverius Bandar Lampung. This study employed a descriptive qualitative approach. The participants consisted of ten teachers, one vice principal for curriculum, and one principal. Data were collected through classroom observations, interviews, and documentation. Data validity was established using source triangulation and technique triangulation. Data were analyzed through the stages of understanding (verstehen), interpretation, coherence, hermeneutics, and inductive analysis. The findings indicate that teachers have demonstrated self-leadership through self-management, self-reflection, professional development, instructional initiative, and adaptability. Differentiated instruction and deep learning have been implemented, although several aspects still require improvement. Supporting factors include teachers' commitment, school leadership, collaborative culture, and learning facilities, while the main challenges are limited instructional time, diverse student characteristics, teachers' workload, and varying digital competencies. The study concludes that teacher self-leadership plays an important role in supporting the integration of differentiated instruction and deep learning to create student-centered learning.

Keywords : *Teacher Self-Leadership, Differentiated Learning, Deep Learning, Student-Centered Learning, Merdeka Curriculum.*

ABSTRAK

Penelitian ini bertujuan untuk menganalisis self-leadership guru dalam mengintegrasikan pembelajaran berdiferensiasi dan deep learning di SMA Xaverius Bandar Lampung. Penelitian ini menggunakan pendekatan kualitatif deskriptif. Partisipan penelitian terdiri atas sepuluh orang guru, satu orang wakil kepala sekolah bidang kurikulum, dan satu orang kepala sekolah. Data dikumpulkan melalui observasi pembelajaran di kelas, wawancara, dan dokumentasi. Keabsahan data diuji melalui triangulasi sumber dan triangulasi teknik. Analisis data dilakukan melalui tahapan pemahaman (verstehen), interpretasi, koherensi, hermeneutika, dan analisis induktif. Hasil penelitian menunjukkan bahwa guru telah menerapkan self-leadership melalui kemampuan mengelola diri, melakukan refleksi diri, mengembangkan kompetensi profesional, mengambil inisiatif dalam pembelajaran, serta beradaptasi terhadap

perubahan. Pembelajaran berdiferensiasi dan deep learning telah diterapkan, meskipun beberapa aspek masih memerlukan peningkatan. Faktor-faktor yang mendukung penerapan tersebut meliputi komitmen guru, kepemimpinan sekolah, budaya kolaboratif, dan ketersediaan fasilitas pembelajaran. Sementara itu, kendala utama yang dihadapi mencakup keterbatasan waktu pembelajaran, keberagaman karakteristik peserta didik, beban kerja guru, serta perbedaan tingkat kompetensi digital. Penelitian ini menyimpulkan bahwa self-leadership guru memiliki peran penting dalam mendukung integrasi pembelajaran berdiferensiasi dan deep learning guna menciptakan proses pembelajaran yang berpusat pada peserta didik.

Kata Kunci : *Self-Leadership Guru, Pembelajaran Berdiferensiasi, Deep Learning, Pembelajaran Berpusat pada Peserta Didik, Kurikulum Merdeka.*

INTRODUCTION

Education in the 21st century has undergone a significant paradigm shift. Learning is no longer focused solely on students' ability to comprehend and memorize academic content but increasingly emphasizes essential competencies such as critical thinking, creativity, communication, collaboration, digital literacy, and problem-solving. A systematic review by van Laar et al. (2017) identified communication, collaboration, creativity, critical thinking, problem-solving, flexibility, self-direction, and lifelong learning as important competencies associated with the demands of the 21st century. This transformation requires learning processes that are more active, flexible, and responsive to students' diverse needs. Consequently, education is expected to facilitate the holistic development of students' potential and equip them with competencies necessary to respond effectively to future challenges.

In line with this transformation, the implementation of the Merdeka Curriculum emphasizes differentiated learning, which provides teachers with greater flexibility to adapt instructional processes to students' characteristics, abilities, interests, and learning needs. Empirical evidence supports the importance of differentiated instruction, as a systematic review and meta-analysis found that differentiated instruction has a significant positive effect on students' learning outcomes. (AM et al., 2023). At the same time, the policy direction of the Ministry of Primary and Secondary Education through the deep learning approach promotes learning experiences that are mindful, meaningful, and joyful. Recent educational research describes this approach as emphasizing deeper understanding, active engagement, contextual experiences, and meaningful learning rather than simple knowledge transmission. (Andayanie et al., 2025). The successful implementation of these approaches depends substantially on teachers' capacity to exercise self-leadership. In this context, self-leadership refers to

teachers' ability to manage themselves, continuously develop their competencies, respond constructively to educational changes, and design learning experiences that place students at the center of the educational process.

Self-leadership refers to an individual's capacity to regulate personal behavior, direct actions toward desired goals, cultivate intrinsic motivation, and engage in conscious self-development. Research has demonstrated that self-leadership is associated with individuals' ability to manage their behavior and improve work-role performance, indicating its relevance to professional effectiveness in changing work environments (Maden-Eyiusta & Alparslan, 2022). Within the educational context, self-leadership can be demonstrated through effective self-management, continuous self-reflection, professional development, instructional initiative, and adaptability to changes in curriculum and educational technology. Teachers with well-developed self-leadership are better positioned to manage the demands associated with educational transformation. The importance of self-directed and reflective capacities is also supported by research showing that metacognitive ability and mindful agency are positively associated with self-leadership (Chen & Zhang, 2022). Such capacity can encourage teachers to adopt innovative instructional approaches, integrate technology into classroom activities, evaluate their teaching practices, and formulate learning strategies that correspond to students' characteristics and learning needs. Therefore, self-leadership represents an important factor in supporting the effective implementation of differentiated learning and deep learning within the school environment.

Nevertheless, the implementation of differentiated learning and deep learning at SMA Xaverius Bandar Lampung continues to encounter several challenges that require further attention. According to the results of the Monitoring and Evaluation (Monev) for the Odd Semester of the 2025/2026 Academic Year, the overall quality of learning had demonstrated satisfactory performance. However, differentiated learning had not yet been implemented consistently according to the varying needs, abilities, and characteristics of students. Furthermore, classroom instruction remained relatively teacher-centered, while the utilization of instructional media and educational technology had not been optimized. The application of deep learning, Higher Order Thinking Skills (HOTS), and 21st-century competencies also had not been implemented consistently across the learning process. These challenges are consistent with research indicating that teachers' technology integration varies according to motivational and contextual factors, including the perceived utility of technology (Backfisch et al., 2021).

These conditions indicate a gap between the expectations of contemporary educational policies and their practical implementation in the classroom. The challenges may not be attributed solely to teachers' understanding of differentiated learning and deep learning but may also be associated with their capacity to lead and regulate themselves. Teachers are expected to demonstrate a strong commitment to continuous learning, reflect systematically on their instructional practices, strengthen their professional competencies, and adapt to changes in curriculum and students' evolving needs. Research on teacher professional identity further indicates that teachers' professional orientations influence how they appropriate and integrate technology into instructional practices (Lai & Jin, 2021). When teachers' self-leadership is not sufficiently developed, the implementation of differentiated learning and deep learning may become inconsistent. As a result, classroom learning may be less effective in fostering active student engagement, meaningful learning experiences, and the optimal achievement of instructional objectives.

Previous studies have indicated that self-leadership and related self-regulatory capacities are relevant to educational development. Qiao et al. (2022), for example, found that self-leadership was examined as an important factor in the career adaptability of pre-service kindergarten teachers, while Chen and Zhang (2022) demonstrated the relationship between mindful agency, metacognitive ability, and self-leadership in educational settings. In relation to differentiated learning, AM et al. (2023) reported significant positive effects of differentiated instruction on student learning outcomes, highlighting its potential to support more inclusive and student-centered learning. Meanwhile, recent research on deep learning in education emphasizes the integration of mindful, meaningful, and joyful learning to create more holistic and transformative learning experiences (Andayanie et al., 2025). Accordingly, learning is not limited to the transmission of subject matter but also facilitates students' critical, reflective, creative, and contextual thinking abilities.

Despite these findings, empirical studies specifically examining the relationship between teacher self-leadership and the implementation of differentiated learning and deep learning within school settings remain relatively limited. This limitation is particularly evident in the context of Merdeka Curriculum implementation at the secondary school level, where research investigating how teachers' self-leadership contributes to the integration of these two learning approaches is still scarce. Therefore, this study seeks to examine the role of teacher self-leadership in implementing differentiated learning and the deep learning approach at SMA Xaverius Bandar Lampung. In addition, the study aims to describe how both approaches are implemented in practice and identify

the factors that facilitate or hinder their effective implementation.

The findings of this study are expected to contribute to the development of educational management, particularly by strengthening teacher professionalism through the development of self-leadership as a foundation for creating learning environments that are flexible, innovative, and responsive to students' needs. The findings may also provide practical value for school management in formulating teacher competency development programs, strengthening academic supervision, and improving the quality of learning through continuous and systematic efforts.

The novelty of this study lies in integrating three major concepts—teacher self-leadership, differentiated learning, and deep learning—within a single research framework situated in the context of Merdeka Curriculum implementation at SMA Xaverius Bandar Lampung. Unlike previous studies that have generally examined these concepts independently, this study focuses on teachers as the primary actors in implementing learning transformation while also examining the supporting and inhibiting factors associated with self-leadership in integrating differentiated learning and deep learning. The findings are expected to enrich the field of educational management and provide a reference for future research concerning teacher professional development and the implementation of 21st-century learning.

Literatur Review

Theachers Self Leadership

Teachers' self-leadership refers to an individual's ability to lead, direct, control, and manage oneself in carrying out professional responsibilities to achieve predetermined goals. Self-leadership involves not only behavioral regulation but also self-awareness, self-motivation, self-control, and the ability to reflect on one's actions and professional practices. In the teaching profession, self-leadership is particularly important because teachers are required to respond to curriculum changes, developments in educational technology, and diverse student learning needs. Research by Qiao et al. (2022) demonstrates that self-leadership is associated with teachers' career adaptability, indicating that the ability to manage and direct oneself can support teachers in responding effectively to changing professional demands. Therefore, teachers' self-leadership can be understood as their capacity to manage themselves consciously, independently, reflectively, and responsibly so that they can perform their professional duties effectively and respond appropriately to the demands of twenty-first-century education.

In this study, teachers' self-leadership is reflected in five main indicators: self-management, self-reflection, competency development, learning initiative, and adaptability. Self-management refers to teachers' ability to manage their time,

behavior, emotions, and professional responsibilities effectively. Self-reflection refers to teachers' ability to evaluate their teaching practices, identify weaknesses, and make continuous improvements. Research by Cole et al. (2022) highlights that reflection plays an important role in teachers' professional development by helping them critically examine their teaching experiences and make meaningful improvements in their practice. Competency development is demonstrated through teachers' willingness to continuously learn through professional training, learning communities, technology utilization, and the development of teaching methods. Learning initiative refers to teachers' willingness and ability to seek and implement new learning strategies, methods, and ideas. Meanwhile, adaptability reflects teachers' openness to changes in curriculum, technology, student characteristics, and the demands of modern education. This aspect is consistent with Wang et al. (2023), who found that deeper reflection among preservice teachers contributes to the development of teacher leadership, suggesting that reflective capacity can support teachers in taking greater initiative and responsibility in their professional roles. These five indicators therefore provide a basis for analyzing teachers' ability to lead themselves in integrating differentiated learning and deep learning at SMA Xaverius Bandar Lampung.

Differentiated Learning

Differentiated learning is a learning approach that places students at the center of the learning process by adapting learning activities to their needs, readiness, interests, and learning profiles. Teachers are expected to respond to student diversity by modifying instructional content, processes, products, and learning conditions according to students' learning needs (Smale-Jacobse et al., 2019). Differentiation does not mean providing completely different instruction to every student; rather, it involves providing various options and adjustments so that each student has an opportunity to develop optimally. Such adjustments can be made to content, process, product, and learning environment. These components represent important dimensions of differentiated instruction because teachers can vary what students learn, how they learn, how they demonstrate their understanding, and the conditions in which learning takes place (Setambah et al., 2025).

Meanwhile, the Ministry of Education, Culture, Research, and Technology (2024) positions differentiated learning as an important component of student-centered education because teachers are expected to adapt instructional strategies, methods, media, and assessments to students' conditions and learning needs. Therefore, differentiated learning can be understood as an approach that enables teachers to design flexible, inclusive, relevant, and meaningful learning experiences that respond to the diverse characteristics of students. Empirical

evidence also indicates that differentiated instruction can positively influence student learning outcomes. A systematic review and meta-analysis of 49 primary studies found a significant positive effect of differentiated instruction on student learning outcomes, although its effectiveness may vary depending on the educational context (AM et al., 2023).

In this study, differentiated learning is examined through several indicators, namely content differentiation, process differentiation, product differentiation, learning environment, diagnostic assessment, and learning strategies. Content differentiation refers to adapting learning materials or resources to students' needs. Process differentiation concerns variations in learning activities, methods, or ways in which students understand the material. Product differentiation refers to variations in the forms of learning outcomes through which students can demonstrate their understanding. The learning environment includes the arrangement of the learning atmosphere, space, and conditions that support students' needs. Diagnostic assessment is used to identify students' readiness, needs, and characteristics as a basis for designing learning activities, while learning strategies are adapted to students' conditions and abilities. These indicators demonstrate that differentiated learning is an adaptive process that enables teachers to provide learning experiences that are more responsive to student diversity while promoting student-centered learning.

Deep Learning

Deep learning refers to a learning approach oriented toward developing deep understanding, active student engagement, higher-order thinking skills, and the ability to connect knowledge with real-life contexts. Unlike surface learning, deep learning emphasizes students' active construction of meaning through relating new knowledge to prior understanding, critical thinking, reflection, and meaningful application. Mystakidis (2021) explains that deep meaningful learning involves higher-order thinking and active intellectual engagement through the construction of meaning, pattern recognition, and connections between concepts. Similarly, Mystakidis, Berki, and Valtanen (2017) emphasize that deep and meaningful learning goes beyond the assimilation of disconnected facts by promoting disciplinary understanding, critical thinking, creativity, metacognitive skills, and the application of knowledge in authentic contexts. Therefore, deep learning can be understood as a learning approach that enables students to construct understanding actively through reflective, contextual, relevant, and student-centered learning experiences.

In this study, deep learning is identified through several indicators, namely mindful learning, meaningful learning, joyful learning, Higher Order Thinking Skills (HOTS), contextual learning, active student engagement, student-centered

learning, the use of educational technology, and collaboration. Mindful learning reflects students' conscious, focused, and reflective engagement in the learning process. Meaningful learning is demonstrated by students' ability to connect learning materials with their experiences and real-life situations, while joyful learning refers to the creation of an enjoyable learning environment that encourages students' motivation to learn. HOTS includes the abilities to think critically, analyze, evaluate, solve problems, and generate solutions. Contextual learning connects learning materials with real-life situations, while student-centered learning positions students as active participants in the learning process. The use of technology can enrich learning experiences, while collaboration encourages students to interact, discuss, and work together in completing learning tasks. These characteristics are consistent with Agyeman (2024), who found that learner-centered pedagogical strategies, including group discussions, presentations, and project-based activities, can promote active participation and deeper learning experiences. In addition, Zhu and Niyozov (2024) demonstrated that dialogic teaching and Universal Design for Learning can facilitate deep learning by encouraging active participation, interaction, and meaningful engagement in learning. These indicators therefore provide a basis for examining the extent to which deep learning has been implemented in the learning process at SMA Xaverius Bandar Lampung.

RESEARCH METHODOLOGY

This study employed a qualitative descriptive approach to gain an in-depth understanding of the role of teachers' self-leadership in implementing differentiated learning and the deep learning approach at SMA Xaverius Bandar Lampung. This approach was considered appropriate because it enabled the researcher to comprehensively explore teachers' experiences, strategies, and self-leadership practices in managing and developing learning activities that are responsive to students' diverse needs. The qualitative descriptive approach is appropriate for studies that aim to provide a comprehensive description of a phenomenon based closely on participants' experiences and perspectives (Kim et al., 2017).

The research participants consisted of ten teachers, one vice principal responsible for curriculum affairs, and one principal who served as the primary informant. The informants were selected purposively based on their involvement in and understanding of the implementation and management of learning activities at the school. Data were collected through several techniques, including direct observation of classroom learning activities, in-depth interviews with the informants, and document analysis involving lesson plans, instructional materials, and other supporting documents relevant to the research focus.

To ensure data validity, the study employed source triangulation and technique triangulation. Source triangulation was conducted by comparing and verifying information obtained from different informants, while technique triangulation involved examining the consistency of data collected through different data collection methods. The application of these two forms of triangulation was intended to enhance the consistency, credibility, and trustworthiness of the data, thereby ensuring that the research findings could be academically justified.

The data analysis process was conducted systematically through several stages, beginning with verstehen, which refers to an effort to understand the meaning underlying the phenomenon under investigation. This was followed by the interpretation of the collected data, an analysis of coherence to identify relationships among the information obtained, and a hermeneutic analysis to explore deeper meanings. The analysis was subsequently concluded through an inductive process of drawing conclusions based on empirical findings from the field. These analytical stages were undertaken to develop a comprehensive understanding of teachers' self-leadership, the implementation of differentiated learning and deep learning, as well as the various factors that support or hinder their implementation at SMA Xaverius Bandar Lampung.

RESULTS AND DISCUSSION

Teachers' Self-Leadership in Integrating Differentiated Learning and Deep Learning

The findings indicate that teachers' level of self-leadership at SMA Xaverius Bandar Lampung falls within the good category. This conclusion was established through triangulation involving classroom observations, interviews, an examination of learning materials, and Monitoring and Evaluation (M&E) documents. In carrying out their professional responsibilities, teachers demonstrated an adequate ability to manage themselves, as reflected in the systematic preparation of teaching modules, discipline in conducting learning activities, and effective time management. Furthermore, teachers actively engaged in evaluating and reflecting on the learning process, enhanced their competencies through training programs and professional learning communities, demonstrated initiative in developing and implementing innovative learning models, and adapted to changes in the curriculum, technological developments, and students' diverse learning needs.

These findings suggest that teachers possess a sufficiently strong capacity for self-leadership, which serves as an important foundation for supporting learning practices that prioritize students' needs and development. This capacity is reflected in teachers' ability to consciously regulate their behavior, take

independent initiative, and develop and optimize their personal potential to create learning experiences that are effective, relevant, and meaningful. This finding is consistent with the perspective of Goldsby et al. (2021), who conceptualize self-leadership as an individual's ability to direct and regulate oneself through behavioral management, the enhancement of internal motivation, self-reflection, and continuous capability development. Accordingly, teachers' self-leadership can serve as a supporting factor in fostering adaptive, innovative, and student-centered learning practices. Teachers with strong self-leadership are generally better prepared to respond to changes and develop learning practices that align with the demands of the Merdeka Curriculum. Nevertheless, the study also reveals that the implementation of self-leadership has not yet been fully consistent among all teachers. The observation and M&E findings indicate that learning reflection, the use of diagnostic assessment, and the utilization of technology to support deep learning have not been implemented optimally. This condition suggests that the primary challenge is no longer teachers' understanding of the self-leadership concept, but rather their consistency in translating the competencies they possess into their daily teaching practices.

Implementation of Differentiated Learning and Deep Learning

The findings indicate that the implementation of differentiated learning and deep learning at SMA Xaverius Bandar Lampung has generally been carried out well. In practice, teachers have adjusted the learning process according to students' needs and characteristics through various aspects, including learning materials (content), the stages of learning activities (process), forms of learning outcomes (product), the learning environment, the implementation of diagnostic assessments, and the selection of appropriate learning strategies. At the same time, classroom instruction has begun to adopt the principles of deep learning by promoting learning that is conducted consciously (mindful learning), is relevant and meaningful to students (meaningful learning), and takes place in an enjoyable atmosphere (joyful learning). These practices are also accompanied by the development of higher-order thinking skills (Higher Order Thinking Skills/HOTS), the integration of real-life contexts into learning activities, and increased active student engagement throughout the learning process.

The observation results demonstrate that all indicators used to assess the implementation of these two approaches showed positive outcomes. No teachers were classified in the low category, indicating that all educators had demonstrated the ability to apply the principles of differentiated learning and deep learning in classroom activities. Several aspects, including learning environment management, the implementation of meaningful learning and joyful learning, contextual learning, and the student-centered learning approach, even achieved a

very good category. This condition reflects teachers' commitment to creating learning processes that take students' needs, experiences, and development into consideration. Therefore, learning is not merely focused on delivering subject matter but also on creating relevant learning experiences that place students at the center of the learning process.

Although the implementation has generally been good, the application of differentiated learning and deep learning has not yet been equally consistent among all teachers. The results of observations, interviews, and Monev documents indicate that several aspects still require further strengthening, particularly the use of diagnostic assessment results as a basis for lesson planning, the development of activities that foster HOTS, the optimization of technology to support deep learning, and the implementation of reflection after the learning process. These findings suggest that teachers generally possess a good understanding of both approaches; however, their implementation continues to be influenced by the characteristics of the subject matter, classroom conditions, and time constraints. Consequently, differentiated learning and deep learning have not yet been implemented consistently throughout every learning activity. This finding is consistent with Tomlinson (2017), who emphasizes that the effectiveness of differentiated learning largely depends on teachers' ability to develop adaptive instructional strategies that respond to student diversity. Adjustments to learning materials, instructional processes, learning outcomes, and the learning environment need to take into account each student's readiness, interests, and learning characteristics. Such an approach enables the learning process to become more effective because it can respond appropriately to the diverse needs of students.

The findings also support the concept of deep learning proposed by Mystakidis (2021), which places active student engagement as an important element of the learning process. Deep learning is not merely concerned with students' ability to understand and master subject matter but also with creating learning experiences that are mindful, meaningful, and enjoyable. The implementation of contextual and relevant learning provides students with opportunities to connect the subject matter with their own experiences and real-life situations. Furthermore, opportunities for students to actively construct their understanding can foster deeper learning experiences, allowing the knowledge acquired to become more than temporary information and instead develop into meaningful and sustainable understanding.

Supporting and Inhibiting Factors of Teacher Self-Leadership

The findings indicate that strengthening teacher self-leadership in implementing differentiated learning and the deep learning approach is

influenced by a combination of internal and external factors. Internally, the main supporting factors include teachers' awareness, willingness, and commitment to continuously develop their professional capacity. These efforts are reflected in their attempts to broaden their knowledge and perspectives, reflect on and evaluate their teaching practices, and develop innovative approaches that are aligned with students' characteristics and learning needs. This condition demonstrates that teachers' ability to direct and manage themselves serves as an important foundation for responding to changing demands in the learning process.

Meanwhile, external factors originating from the school environment also contribute significantly to strengthening teacher self-leadership. Support from the principal and the vice principal for curriculum affairs through academic supervision, Monitoring and Evaluation (M&E) activities, training programs, learning communities, the provision of learning facilities, and the development of a collaborative work culture serves as an important source of support. The synergy between teachers' internal readiness and the support provided by the school environment creates favorable conditions for the implementation of differentiated learning and deep learning to become more structured, consistent, and sustainable.

Nevertheless, the study also identified several factors that hinder the optimization of teacher self-leadership. These obstacles include the inconsistent implementation of differentiated learning and deep learning, the suboptimal use of diagnostic assessment as a basis for designing instruction, and the use of technology that remains largely limited to serving as a medium for delivering learning materials. Although teachers possess adequate conceptual understanding and receive support through school policies and available learning resources, their implementation in classroom practice has not always been consistent. Therefore, strengthening teacher self-leadership should focus on teachers' ability to translate professional development outcomes into consistent teaching practices through continuous reflection, academic supervision, learning communities, and more effective Monitoring and Evaluation. These findings demonstrate that the successful implementation of differentiated learning and deep learning depends not only on teachers' knowledge and conceptual understanding but also on their capacity to lead themselves to continuously learn, adapt, evaluate their practices, and make ongoing improvements.

CONCLUSION

Teachers' *self-leadership* in integrating differentiated instruction and *deep learning* at Xaverius Senior High School Bandar Lampung is categorized as good. Teachers demonstrate the ability to manage themselves through systematic lesson planning, reflection, continuous professional development, innovation, and adaptation to curriculum changes, technology, and students' diverse characteristics. This is reflected in the use of diagnostic assessments, student-centered learning, and participation in professional training and learning communities. However, instructional reflection and innovation are not yet consistently practiced by all teachers and therefore require further strengthening.

The implementation of differentiated instruction and *deep learning* at Xaverius Senior High School Bandar Lampung has been generally good but is not yet fully consistent. Differentiated instruction is implemented through adjustments to content, processes, products, learning environments, assessments, and instructional strategies, while *deep learning* is reflected in *mindful, meaningful,* and *joyful learning*, HOTS, contextual learning, active student engagement, student-centered learning, technology integration, and collaboration. Although teachers' understanding and instructional plans are supportive, classroom implementation remains varied, particularly in the use of diagnostic assessments, HOTS, technology, and active student participation. Therefore, the main challenge lies in ensuring consistent implementation rather than in teachers' conceptual understanding.

Supporting and inhibiting factors affecting teachers' *self-leadership* arise from both internal and external aspects. Internal supporting factors include commitment, motivation for professional development, self-reflection, and innovation, while external factors include school leadership support, supervision, mentoring, professional development opportunities, instructional resources, adequate facilities, and a continuous monitoring and evaluation culture. Inhibiting factors include inconsistent implementation of differentiated instruction and *deep learning*, suboptimal use of diagnostic assessments and technology, limited authentic assessment and reflection, variations in teachers' innovative abilities, and uneven student engagement. Therefore, strengthening teachers' *self-leadership* requires greater consistency in instructional practices, optimal use of assessment and technology, enhanced innovation and reflection, and broader student engagement.

BIBLIOGRAPHY

Agyeman, N. Y. B. (2024). Deep learning in high schools: Exploring pedagogical approaches for transformative education. Humanika: Kajian Ilmiah Mata Kuliah Umum, 24(2), 111–126. https://doi.org/10.21831/hum.v24i2.71350

AM, M. A., Hadi, S., Istiyono, E., & Retnawati, H. (2023). Does differentiated instruction affect learning outcome? Systematic review and meta-analysis. Journal of Pedagogical Research, 7(5), 18–33. https://doi.org/10.33902/JPR.202322021

Andayanie, L. M., Adhantoro, M. S., Purnomo, E., & Kurniaji, G. T. (2025). Implementation of deep learning in education: Towards mindful, meaningful, and joyful learning experiences. Journal of Deep Learning, 1(1), 47–56. https://doi.org/10.23917/jdl.v1i1.11157

Backfisch, I., Lachner, A., Stürmer, K., & Scheiter, K. (2021). Variability of teachers' technology integration in the classroom: A matter of utility! Computers & Education, 166, 104159. https://doi.org/10.1016/j.compedu.2021.104159

Chen, Z., & Zhang, X. (2022). The relationship between mindful agency and self-leadership of Chinese private college undergraduates: Mediating effect of metacognitive ability. Frontiers in Psychology, 13, 847229. https://doi.org/10.3389/fpsyg.2022.847229

Cole, C., Hinchcliff, E., & Carling, R. (2022). Reflection as teachers: Our critical developments. Frontiers in Education, 7, 1037280. https://doi.org/10.3389/feduc.2022.1037280

Haryani, E., Coben, W. W., Pleasants, B. A.-S., & Fetters, M. K. (2021). Analysis of teachers' resources for integrating the skills of creativity and innovation, critical thinking and problem solving, collaboration, and communication in science classrooms. Jurnal Pendidikan IPA Indonesia.

Kim, H., Sefcik, J. S., & Bradway, C. (2017). Characteristics of qualitative descriptive studies: A systematic review. Research in Nursing & Health, 40(1), 23–42. https://doi.org/10.1002/nur.21768

Lai, C., & Jin, T. (2021). Teacher professional identity and the nature of technology integration. Computers & Education, 175, 104314. https://doi.org/10.1016/j.compedu.2021.104314

Maden-Eyiusta, C., & Alparslan, S. E. (2022). Captain or deckhand? The impact of self-leadership on employees' work role performance under remote work. Frontiers in Psychology, 13, 988105. https://doi.org/10.3389/fpsyg.2022.988105

Mystakidis, S. (2021). Deep meaningful learning. Encyclopedia, 1(3), 988–997. https://doi.org/10.3390/encyclopedia1030075

Mystakidis, S., Berki, E., & Valtanen, J. (2017). The Patras blended strategy model for deep and meaningful learning in quality life-long distance education. Electronic Journal of e-Learning, 15(5), 440–452. https://doi.org/10.34190/JEL.17.2.01

Qiao, T., Song, Z., & Huang, J. (2022). The relationship between pre-service kindergarten teachers' professional identification and career adaptability: A chain mediation model. Frontiers in Psychology, 13, 1045947. https://doi.org/10.3389/fpsyg.2022.1045947

Sasota, R. S., Cristobal, R. R., Sario, I. S., Biyo, J. T., & Magadia, J. C. (2021). Will–skill–tool (WST) model of technology integration in teaching science and

mathematics in the Philippines. Journal of Computers in Education, 8, 443–464.

Setambah, M. A. B., Mat Saad, M. I., Che Md Ghazali, N. H., & Adnan, M. (2025). A comprehensive synthesis of differentiated instruction approaches in mathematics. LUMAT: International Journal on Math, Science and Technology Education, 12(4). https://doi.org/10.31129/LUMAT.12.4.2371

Smale-Jacobse, A. E., Meijer, A., 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

van Laar, E., van Deursen, A. J. A. M., van Dijk, J. A. G. M., & de Haan, J. (2017). The relation between 21st-century skills and digital skills: A systematic literature review. Computers in Human Behavior, 72, 577–588. https://doi.org/10.1016/j.chb.2017.03.010

Wang, Y., Ko, J., & Qian, H. (2023). How would preservice teachers with deeper reflection emerge as teacher leaders? ECNU Review of Education, 6(2). https://doi.org/10.1177/20965311221142892

Zhu, Q., & Niyozov, S. (2024). Towards deep learning in online courses: A case study in cross-pollinating Universal Design for Learning and dialogic teaching. Journal of the Scholarship of Teaching and Learning, 24(3). https://doi.org/10.14434/josotl.v24i3.35331