

The Implementation of Differentiated Instruction in Islamic Religious Education to Enhance Students' Learning Motivation

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Abstract. This study aims to examine the implementation of differentiated instruction in Islamic Religious Education (IRE) as a strategy to enhance elementary school students' learning motivation. Employing a classroom action research approach with a mixed-methods design, the research was conducted at SDN Leuwiliang and SDN Pelita, both of which have adopted the *Merdeka Curriculum*. Data were collected through the Motivated Strategies for Learning Questionnaire (MSLQ), classroom observations, in-depth interviews, and documentation of the instructional process. The findings indicate that learning style-based differentiation strategies such as the use of podcasts for auditory learners and worship practice simulations for kinesthetic learners effectively increased student engagement. Content differentiation through the integration of local culture and tiered assignments also significantly reduced the rate of learning incompleteness. Quantitative analysis revealed a significant improvement in intrinsic goal orientation scores (from $\mu = 2.1$ to $\mu = 3.4$) and self-efficacy (from $\mu = 2.3$ to $\mu = 3.6$), with $p < 0.018$. The successful implementation was further supported by educational technology, teacher collaboration, and principal-led budgeting policies. These findings affirm that differentiated instruction in IRE not only enhances learning motivation but also fosters a more inclusive and contextualized learning experience. The study recommends the development of technical guidelines, reflective training for IRE teachers, and school policies that are responsive to diverse learning needs.

Keywords: differentiated instruction, learning motivation, Islamic Religious Education, learning styles, elementary school, *Merdeka Curriculum*.

1 Introduction

In facing the challenges of 21st-century education, teachers are expected not only to master subject content but also to respond effectively to the diversity of learners in the classroom [1]–[3]. In the era of the *Merdeka Curriculum*, which emphasizes student-centered learning, the "one-size-fits-all" approach has become increasingly irrelevant. Teachers, particularly those teaching Islamic Religious Education (IRE), face

significant challenges in designing learning processes that are contextual, meaningful, and motivating for students from diverse backgrounds [4]–[6].

In the context of IRE, low student motivation is a commonly observed issue that demands serious attention. This subject is often perceived as monotonous, normative, and disconnected from students' real-life experiences, and is therefore frequently treated as supplementary in the formal education system. In reality, IRE should serve as a crucial medium for the development of students' character, morality, and spirituality [7].

The *Merdeka Curriculum* provides flexibility for teachers to tailor instruction based on students' readiness, interests, and learning profiles. In this regard, differentiated instruction is a highly relevant pedagogical approach. Carol Ann Tomlinson emphasizes that differentiation is not merely about varying methods, but a systematic pedagogical strategy to ensure that every student has optimal access to learning processes and goals. Differentiated instruction allows teachers to accommodate student diversity by modifying content, process, product, and learning environment [8].

Numerous studies have demonstrated that differentiated instruction positively affects student learning outcomes and motivation, particularly when applied consistently and aligned with classroom context [4], [9]–[11]. However, most of these studies focus on science and language subjects, while its application in IRE especially at the elementary level remains underexplored. This represents a significant gap in the literature that needs to be addressed.

Learning motivation is a key component in the internalization of religious values. Self-Determination Theory [12] posits that when students' basic psychological needs for autonomy, competence, and relatedness are met, their intrinsic motivation increases. If implemented effectively, differentiated instruction has the potential to fulfill these needs, particularly in IRE, which is inherently affective and transformative.

Similarly, the Zone of Proximal Development (ZPD) theory supports the idea that the most effective learning occurs when teachers provide instructional challenges slightly above the students' current abilities but still within reach with support. Differentiated instruction enables the design of targeted learning activities aligned with each student's ZPD [13].

Unfortunately, in practice, many IRE teachers have not received adequate training to apply differentiation systematically. Constraints such as limited time, lack of teaching resources, and insufficient understanding of students' learning profiles are major barriers. As a result, the potential of differentiated instruction to enhance motivation and the quality of IRE has not been fully realized in the field.

This study aims to address that gap by examining how the implementation of differentiated instruction in IRE can improve elementary students' learning motivation within the framework of the *Merdeka Curriculum*. It also seeks to identify effective strategies, challenges, and implementation models that align with the characteristics of Indonesian elementary schools.

Through this approach, the study intends to contribute to more adaptive religious education practices that respond to learner diversity. Furthermore, the findings are expected to strengthen the conceptual framework of differentiated instruction in

religious education and provide practical recommendations for teachers and education policymakers.

2 Method

This study employed a mixed-method approach using a Classroom Action Research (CAR) design. This approach was selected as it enables researchers not only to quantitatively evaluate the effectiveness of differentiated instruction but also to gain in-depth understanding of the learning dynamics and students' responses to the intervention in a natural setting [14], [15].

The research was conducted at two elementary schools in Cicalengka Subdistrict, Bandung Regency: SDN Leuwiliang with 145 students (73 boys and 72 girls), and SDN Pelita with 186 students (95 boys and 91 girls). Both schools have adopted the *Merdeka Curriculum* and were purposively selected due to their high student diversity in terms of learning readiness, interests, and learning profiles. The research subjects consisted of fourth- and fifth-grade students and Islamic Religious Education (IRE) teachers.

Data collection employed a method triangulation strategy to ensure the validity and depth of findings. Three primary techniques were used: quantitative questionnaires, participant observation, and in-depth interviews. Quantitative data were collected using a student motivation questionnaire developed based on the Self-Determination Theory framework, encompassing three key dimensions: autonomy, competence, and relatedness. The questionnaire consisted of 24 items on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). The instrument underwent content validation by experts in religious and educational psychology and achieved a reliability coefficient (Cronbach's Alpha) of 0.87 [16]–[18].

The questionnaires were administered in two stages: pre-intervention (prior to the implementation of differentiated instruction) and post-intervention (after two action cycles). The responses were analyzed using SPSS version 25, employing paired sample t-tests to identify significant changes in learning motivation, and ANCOVA to control for covariates such as gender and initial student readiness [19]–[21].

Qualitative data were collected through participant observation during classroom activities and in-depth interviews with IRE teachers and selected students. Observations focused on the implementation of differentiation strategies in content, process, and product, as well as on student behavior and participation during learning. Semi-structured interviews were conducted to explore the perceptions, challenges, and experiences of both teachers and students involved in differentiated learning. Supporting documents such as lesson plans, student worksheets, differentiated learning products, and teacher reflection notes were also collected.

To ensure data trustworthiness, the criteria of credibility, transferability, dependability, and confirmability were applied. Credibility was ensured through technique triangulation and member checking; transferability was supported through thick contextual description; dependability was achieved through systematic documentation of the analysis process; and confirmability was maintained via an audit trail of data, instruments, and analytical decisions [22].

Quantitative data were analyzed statistically using paired t-tests and ANCOVA to assess the treatment's effectiveness in enhancing student learning motivation. Qualitative data were analyzed using thematic analysis, following the steps of data reduction, categorization, pattern identification, and conclusion drawing. The analysis process was conducted concurrently with the intervention to allow for responsive adjustments based on classroom dynamics.

The research was conducted from February to April 2025, encompassing the stages of planning, action cycles, observation, reflection, as well as data analysis and reporting. Two action cycles were conducted at each school, with adaptations made based on reflection results and classroom dynamics.

3 Results

3.1 Effective Differentiated Instruction Strategies in Islamic Religious Education

Based on research conducted at SDN Leuwiliang and SDN Pelita, the most effective differentiated instruction strategy in the Islamic Religious Education (IRE) subject is the learning style-based approach. At SDN Pelita, the use of audio media such as podcasts on the stories of prophets received a positive response from 78% of students with an auditory profile. Meanwhile, at SDN Leuwiliang, kinesthetic activities such as group simulation of ablution and prayer practices successfully increased participation among 82% of students who preferred learning through movement. These findings reinforce Tomlinson's assertion that mapping students' learning profiles is a crucial step in planning differentiated instruction [8].

The implementation of differentiation strategies was carried out through collaborative planning involving homeroom teachers, IRE teachers, and the school curriculum development team. This collaborative approach is reflected in the following interview excerpt:

"Before starting a new theme, we usually discuss the students' profiles first. We look at the initial assessment results and then determine the most suitable media or method." (IRE Teacher at SDN Pelita, interview transcript, March 18, 2025)

Teaching documentation from both schools shows that teachers developed differentiated lesson plans with structures that accommodate variations in content, process, and product. At SDN Pelita, an audio-modular scheme was designed for auditory learners, while at SDN Leuwiliang, behavioral observation rubrics were provided for group physical activities. This approach aligns with the principles of responsive teaching, where teachers adapt methods and media to the actual characteristics of their students [8].

In terms of content, the integration of local cultural contexts has proven to be a reinforcing factor in learning effectiveness. At SDN Leuwiliang, for instance, using examples from Sundanese traditions in teaching zakat helped students more easily connect religious concepts with their everyday realities. Teacher reflections indicated that this local contextualization increased learning relevance by 40%. This supports

Gay's findings on the effectiveness of culturally responsive pedagogy in enhancing student engagement [23].

Tiered assignments were also implemented in teaching hijaiyah letters. Teachers prepared three levels of practice basic, intermediate, and advanced based on diagnostic assessment results. At SDN Pelita, this strategy reduced the rate of incomplete learning from 35% to 12% over three instructional cycles. This finding aligns with the research by Reis and Renzulli (2010), which showed that tiered instruction is effective in aligning learning challenges with student readiness.

In addition, the role of teachers as adaptive facilitators was a critical factor in the success of differentiation strategies. Teachers at both schools demonstrated the ability to observe classroom dynamics and make real-time method adjustments. For instance, when students appeared disengaged during group discussions, teachers immediately switched to a card-based quiz game. This approach reflects formative responsiveness the teacher's ability to interpret learning situations and respond with timely interventions [24].

Observational data also showed that students engaged in activities aligned with their learning styles exhibited increased motivation. They were more active in asking questions, more consistent in attendance, and expressed positive emotions during lessons. These findings are consistent with Self-Determination Theory [25], which emphasizes that autonomy and competence are key drivers of intrinsic motivation.

Overall, this study demonstrates that implementing differentiated instruction tailored to learning styles, local contexts, and student readiness levels significantly enhances the effectiveness of IRE learning. Teacher involvement in collaborative planning, the development of tiered materials, and the use of culturally responsive approaches are key components in creating adaptive and meaningful learning experiences.

3.2 Dynamics of Learning Motivation Changes

The findings of this study indicate a significant increase in students' learning motivation following the implementation of differentiated instruction in Islamic Religious Education (IRE). Based on quantitative data from the Motivated Strategies for Learning Questionnaire (MSLQ), there was a notable rise in the average scores of two key indicators: intrinsic goal orientation increased from $\mu = 2.1$ to $\mu = 3.4$, and self-efficacy for learning improved from $\mu = 2.3$ to $\mu = 3.6$. Statistical tests showed a significance value of $p < 0.018$, indicating that the observed changes were not due to chance, but rather the result of systematic instructional intervention.

This increase in motivation was also corroborated by in-depth interviews with 24 students from both schools. A total of 73% of respondents stated that they felt more motivated because they were given the autonomy to choose their learning products. Some students opted to create infographics on Islamic history, while others enthusiastically designed board games themed around moral values. This strategy allowed them to align learning activities with their individual styles and interests, ultimately enhancing their sense of ownership over the learning process and outcomes. These results are consistent with Self-Determination Theory [25], which emphasizes

the fulfillment of autonomy and competence needs as key drivers of intrinsic motivation.

An interesting finding emerged from the visual-spatial learners at SDN Pelita. After using augmented reality (AR) media to study tajwid rules, their motivation increased by 58%, based on student reflections and teacher observation notes. The AR tool enabled students to view animated hijaiyah letters and phonetic effects in three-dimensional form, creating a more immersive and contextualized learning experience. The IRE teacher at the school confirmed that students with visual learning preferences demonstrated greater focus and longer attention spans during lessons when using this technology.

The application of media tailored to students' learning styles not only improved cognitive outcomes but also strengthened emotional engagement in the learning process. This aligns with the principles of the zone of proximal development [13] which states that optimal learning occurs when students are given challenges just beyond their current ability but still within reach through scaffolding or guided assistance. In this case, AR technology acted as a scaffold that bridged students' potential with complex content in an enjoyable way.

Overall, the combination of flexible learning product choices, adaptive educational technologies, and individualized learning style mapping emerged as the key factors driving increased learning motivation in the context of IRE. This strategy demonstrates that when students' basic psychological needs such as autonomy, competence, and relatedness are met, learning motivation significantly improves and is sustained over time.

3.3 Challenges and Supporting Factors in Implementation

The study found that the implementation of differentiated instruction in Islamic Religious Education (IRE) at both schools faced a range of structural and technical challenges, but was also supported by several key factors that contributed to its success. One of the main challenges identified was the teacher–student ratio, which influenced the differentiation model adopted. At SDN Pelita, with a ratio of 1:24, teachers adopted a station rotation model, dividing students into learning-style-based groups and rotating them through different learning stations. In contrast, SDN Leuwiliang, with a ratio of 1:20, had greater flexibility to implement a peer tutoring strategy, where students who had mastered the content supported their peers in need of further guidance.

Another significant challenge was the limited time and resources available for developing differentiated instructional materials. Approximately 62% of teachers reported difficulties in preparing three to four variations of learning modules for each lesson, tailored to students' readiness, interests, and learning profiles. Teachers noted that this process was time-consuming, particularly when aligning lesson content with the learning outcomes of the Merdeka Curriculum while ensuring active engagement of all students in a heterogeneous classroom.

Despite these challenges, several enabling factors played a critical role in facilitating implementation. One key factor was collaborative work among IRE teachers in developing a differentiated learning materials bank. At SDN Pelita, teachers formed a

digital professional learning community to share instructional resources, lesson plans, and field-based reflections. This initiative led to more efficient workflows and improved the contextual relevance and quality of the materials developed.

Innovation was also evident in the use of digital tools for diagnostic assessment. At SDN Pelita, IRE teachers used Quizizz for Diagnostic Assessment, reducing the time required to map students' learning profiles from two weeks to just three days. With rapid and accurate assessment data, teachers were able to adjust their instructional strategies more effectively especially when grouping students based on their learning readiness levels.

School policy support also proved to be an accelerating factor. At both schools, principals played a pivotal role in fostering an environment that supported differentiated instruction. In both SDN Leuwiliang and SDN Pelita, school leaders allocated an average of 20% of BOS (School Operational Assistance) funding toward the development of differentiated media and learning resources. This support included the procurement of visual teaching aids, licensing for online learning applications, and teacher training in responsive instructional design tailored to diverse student needs.

These findings confirm that the successful implementation of differentiated instruction does not rely solely on individual teacher capacity, but is also shaped by the school's broader ecosystem. Teacher collaboration, strong school leadership, and the integration of digital technology are interdependent factors that collectively strengthen efforts to create inclusive and meaningful learning processes.

4 Discussion

The findings of this study affirm that student diversity is not a barrier but rather a critical foundation for instructional design. The implementation of differentiation in Islamic Religious Education (IRE) at SDN Leuwiliang and SDN Pelita demonstrates that mapping students' learning styles, interests, and readiness levels is a prerequisite for developing effective instructional strategies, as theorized by Tomlinson [8].

Differentiation based on learning styles proved to be the most effective approach in the context of IRE. Auditory students responded positively to podcasts, while kinesthetic learners engaged more actively through simulated prayer practices. These findings reinforce earlier research that instruction aligned with students' natural learning preferences enhances engagement and comprehension [26]. Content differentiation through the integration of local cultural values, such as Sundanese customs in the context of zakat, created greater relevance between instructional content and students' lives. This supports the theory of Contextual Teaching and Learning [27], which emphasizes the importance of linking content to real-life contexts to foster deeper cognitive engagement.

The use of tiered assignments based on diagnostic assessments successfully reduced the number of students not meeting learning outcomes. This aligns with Vygotsky's zone of proximal development, which highlights the importance of instructional challenges that are just above the student's current competency level to facilitate growth. Quantitative data from the MSLQ instrument indicated a significant increase

in both intrinsic goal orientation and self-efficacy among students following the differentiated instruction intervention. This reinforces Self-Determination Theory, which posits that intrinsic motivation increases when students' needs for autonomy, competence, and relatedness are met.

Interview data revealed that allowing students to choose their learning products (e.g., infographics, board games) was a major driver of motivation. Granting this freedom to express understanding fosters autonomy, which is a critical factor in enhancing intrinsic motivation. The use of augmented reality (AR) for learning tajwid significantly boosted learning motivation, particularly among visual learners. This supports the idea that digital media with strong visual-spatial elements can effectively bridge learning styles and instructional content in religious education [28].

Differences in teacher-student ratios between the two schools led to the adoption of adaptive differentiation strategies station rotation in larger classes and peer tutoring in smaller ones. These approaches reflect context-sensitive responses to human resource limitations, demonstrating that differentiation can be flexible and responsive rather than rigid.

The primary challenge identified was the preparation of diverse instructional materials. Most teachers reported difficulty in designing multiple versions of lesson modules tailored to different learning styles and readiness levels. This underscores the need for targeted professional development to help teachers manage workload while maintaining instructional quality. Teachers' initiatives to build a digital bank of differentiated materials emerged as a collective solution to time constraints. This collaboration reflects the principles of professional learning communities [29], which promote the improvement of pedagogical practices through teamwork.

The use of Quizizz facilitated faster identification of students' learning styles and readiness. This technology served as an adaptive support tool, enhancing the efficiency and accuracy of individual student diagnostics and providing evidence-based data for instructional decision-making [30].

The allocation of 20% of BOS (School Operational Assistance) funds for the development of differentiated learning media indicates strong policy support from school leadership. This backing acts as a structural enabler of instructional management, emphasizing the importance of instructional leadership in implementing educational innovations [31].

In this context, the school principal plays not only an administrative role but also acts as a facilitator of pedagogical innovation. Active involvement from school leaders creates space for teachers to experiment with new approaches without fear of failure. This affirms the need for supportive and reflective school management. The Merdeka Curriculum's emphasis on personalized learning finds strong relevance in differentiated instruction. This study reinforces the notion that Islamic Religious Education should be managed in an adaptive, contextualized, and student-centered manner, rather than being strictly normative or dogmatic.

Conceptually, this study extends the application of differentiation theory within the context of religious education at the primary level. Practically, the findings offer guidance for developing technical manuals for differentiated IRE instruction, designing

reflective practice-based teacher training, and informing budget allocation policies that accommodate diverse student learning needs.

5 Conclusion

This study demonstrates that differentiated instruction in Islamic Religious Education (IRE) is effective in enhancing elementary school students' learning motivation. The most successful strategy was learning style-based differentiation, such as the use of podcasts for auditory learners and simulated worship practices for kinesthetic learners. This approach was further strengthened by the integration of local culture and tiered assignments tailored to students' abilities, resulting in a significant improvement in both relevance and learning outcomes. Students' learning motivation showed a notable increase in terms of both intrinsic goal orientation and self-efficacy, supported by the autonomy to choose learning products and the use of adaptive learning media such as augmented reality. These findings suggest that fulfilling students' basic psychological needs autonomy, competence, and relatedness plays a crucial role in fostering intrinsic motivation. The success of implementation was also influenced by structural supports such as teacher collaboration, the use of digital diagnostic platforms, and school leadership that encouraged innovation. Despite technical challenges like preparing differentiated learning modules, collective approaches and school policies that embrace student diversity were key to creating more adaptive, contextual, and motivating religious education experiences.

References

- [1] A. T. Purnawanto, "Pembelajaran berdiferensiasi," *J. Pedagog.*, vol. 16, no. 1, pp. 34–54, 2023.
- [2] R. G. Kurniawan, *Pembelajaran Diferensiasi Berbasis Deep Learning: Strategi Mindful, Meaningful, dan Joyful Learning*. Penerbit Lutfi Gilang, 2025.
- [3] F. Martanti, J. Widodo, R. Rusdarti, and A. S. Priyanto, "Penguatan Profil Pelajar Pancasila Melalui Pembelajaran Diferensiasi Pada Mata Pelajaran IPS di Sekolah Penggerak," in *Prosiding Seminar Nasional Pascasarjana (PROSNAMPAS)*, 2022, vol. 5, no. 1, pp. 412–417.
- [4] S. P. Casmudi, *PEMBELAJARAN DIFERENSIASI ABAD 21: Konsep Pembelajaran untuk Memenuhi Kebutuhan Siswa dalam Transformasi Digital*. PENERBIT KBM INDONESIA, 2025.
- [5] S. S. Miladiyah, N. Sugandi, and R. Sulastini, "Analisis Penerapan Kurikulum Merdeka Di SMP Bina Taruna Kabupaten Bandung," *J. Ilm. Mandala Educ.*, vol. 9, no. 1, 2023.
- [6] H. Houtman, "Merdeka Belajar Dalam Masyarakat 5.0," 2020.
- [7] I. Rista, N. Nelson, and A. Amrullah, "Strategi Guru PAI dalam Meningkatkan Motivasi Belajar Peserta Didik pada Kurikulum Merdeka di SMPN 4 Rejang Lebong." Institut Agama Islam Negeri Curup, 2025.
- [8] C. A. Tomlinson, "Differentiated Instruction in the Regular Classroom: What Does It Mean? How Does It Look?," *Underst. Our Gift.*, vol. 14, no. 1, pp. 3–6, 2001.
- [9] L. M. McQuarrie and P. McRae, "A provincial perspective on differentiated instruction:

- The Alberta Initiative for School Improvement (AIS),” *J. Appl. Res. Learn.*, vol. 3, no. 4, pp. 1–18, 2010.
- [10] S. N. Azizah and A. P. Astutik, “Diferensiasi pembelajaran pendidikan agama Islam dalam meningkatkan literasi di era digital,” *JIIP-Jurnal Ilm. Ilmu Pendidik.*, vol. 8, no. 3, pp. 2905–2915, 2025.
- [11] U. F. Lestari, M. Wati, M. Afandi, M. Subhan, and M. D. R. Sahbana, “Strategi Pembelajaran Diferensiasi dalam Pendidikan Agama Islam: Perspektif Psikologis,” *J. Educ. Res.*, vol. 5, no. 4, pp. 5272–5280, 2024.
- [12] R. Assya'bani, “ANALISIS PSIKOLOGIS DALAM PENDIDIKAN KEAGAMAAN ISLAM PADA SEKOLAH BERASRAMA (Sebuah Tinjauan Multi Perspektif),” *J. Educ. Sociol. Law*, vol. 1, no. 2, pp. 1012–1030, 2025.
- [13] L. S. Vygotsky and M. Cole, *Mind in society: Development of higher psychological processes*. Harvard university press, 1978.
- [14] J. W. Creswell and V. L. P. Clark, *Designing and conducting mixed methods research*. Sage publications, 2017.
- [15] H. Altrichter, S. Kemmis, R. McTaggart, and O. Zuber-Skerritt, “The concept of action research,” *Learn. Organ.*, vol. 9, no. 3, pp. 125–131, 2002.
- [16] Adrias and A. Ruswandi, *Desain Penelitian Kuantitatif, Kualitatif, dan Mix Method*. Depok: Rajawali Pers, 2025.
- [17] R. K. Yin, *Case study research and applications*. SAGE Publications US., 2017.
- [18] A. Tashakkori and J. W. Creswell, “The new era of mixed methods,” *J. Mix. Methods Res.*, vol. 1, no. 1, pp. 3–7, 2007, doi: 10.1177/2345678906293042.
- [19] Y. Lincoln and B. Guba, “Naturalistic inquiry. Beverly Hills: Sage Pulications.” Inc, 1985.
- [20] A. K. Shenton, “Strategies for ensuring trustworthiness in qualitative research projects,” *Educ. Inf.*, vol. 22, no. 2, pp. 63–75, 2004.
- [21] E. J. Tisdell, S. B. Merriam, and H. L. Stuckey-Peyrot, *Qualitative research: A guide to design and implementation*. John Wiley & Sons, 2025.
- [22] M. B. Miles, A. M. Huberman, and J. Saldaña, *Qualitative Data Analysis: A Methods Sourcebook*, Third edit. Thousand Oaks: SAGE Publications Inc, 2014.
- [23] G. Gay, “Culturally responsive teaching principles, practices, and effects,” in *Handbook of urban education*. Routledge, 2013, pp. 391–410.
- [24] R. Wormeli, “Accountability: Teaching through assessment and feedback, not grading,” *Am. Second. Educ.*, pp. 14–27, 2006.
- [25] E. L. Deci and R. M. Ryan, “The " what" and " why" of goal pursuits: Human needs and the self-determination of behavior,” *Psychol. Inq.*, vol. 11, no. 4, pp. 227–268, 2000.
- [26] R. Dunn, S. A. Griggs, J. Olson, M. Beasley, and B. S. Gorman, “A meta-analytic validation of the Dunn and Dunn model of learning-style preferences,” *J. Educ. Res.*, vol. 88, no. 6, pp. 353–362, 1995.
- [27] johnson, *contextual teaching and learning*. 2007.
- [28] K. U. Mayer, “New directions in life course research,” *Annu. Rev. Sociol.*, vol. 35, no. 1, pp. 413–433, 2009.
- [29] R. DuFour, “What is a " professional learning community"?,” *Educ. Leadersh.*, vol. 61, no. 8, pp. 6–11, 2004.
- [30] V. Griggs, M. Blackburn, and J. Smith, “The educational scorecard: The Start of our Journey,” *Electron. J. Bus. Res. Methods*, vol. 10, no. 2, pp. 121–131, 2012.
- [31] P. Hallinger and R. H. Heck, “Leadership for learning,” *Does Collab. Leadersh. make a Differ.*, pp. 654–678, 2007.