



From Knowledge to Practice: Enhancing Teacher Competence through a Life Skills-Based Module in the Merdeka Belajar Curriculum

Nita Sampe Padang^{1*}, Nurdin K² <https://orcid.org/0000-0002-1016-0134>, Salmilah³ <https://orcid.org/0009-0008-1978-7209>

^{1,2,3}State Islamic University of Palopo (UIN Palopo), Indonesia

*e-mail: nitasampepadang5@gmail.com

Article Information

Received: June 27, 2025
Revised: July 20, 2025
Accepted: July 29, 2025
Online: September 19, 2025

Keywords

Merdeka Belajar Curriculum
Teacher Competence
Life Skills
Instructional Module
ADDIE Model

ABSTRACT

The implementation of the Merdeka Belajar Curriculum in Indonesia requires teachers not only to understand policy principles but also to apply them effectively in classroom practice. However, many teachers face challenges in enacting differentiated instruction, indicating a gap between conceptual understanding and practical readiness. This study aimed to develop, validate, and evaluate a life skills-based module to enhance teacher competence in implementing the Merdeka Belajar Curriculum. The study followed the ADDIE model, Analysis, Design, Development, Implementation, and Evaluation, employing a research and development design with a mixed-method approach. Data were collected at SMPIT Ibnu Sina Palopo from 12 participating teachers through questionnaires, expert validation sheets, teacher response instruments, pre-test and post-tests, interviews, and documentation. Quantitative data were analyzed descriptively and through gain scores, while qualitative data were examined thematically. The results indicated that teachers possessed adequate conceptual understanding of the curriculum but limited readiness to apply differentiated learning strategies. The developed module was rated highly valid by content, language, and design experts and assessed as practical by teachers during pilot implementation. Effectiveness testing showed significant improvement in teacher competence after using the module, supported by qualitative evidence of increased confidence and adaptability. In conclusion, the life skills-based module successfully bridged the gap between theoretical knowledge and classroom practice, confirming the importance of embedding personal, social, academic, and vocational competencies into teacher professional development. The study contributes to curriculum innovation and teacher training by offering a structured, practice-oriented resource that supports the successful enactment of the Merdeka Belajar Curriculum in Indonesian secondary schools.

INTRODUCTION

Education plays a central role in shaping individuals to become intellectually, emotionally, and socially competent members of society. Implementing the *Merdeka Belajar* (Independent Learning) Curriculum in Indonesia aims to provide greater flexibility for schools, teachers, and students to innovate and adapt learning to local contexts ([Muthi et al., 2025](#); [Okta & Putra, 2025](#)). Compared to the 2013 Curriculum, which was more structured and standardized, the *Merdeka Belajar* Curriculum emphasizes differentiated learning, autonomy, and creativity in teaching and learning processes ([Priawasana & Subiyantoro, 2024](#); [D. Wulandari & Mustofa, 2023](#)). However, the successful implementation of this curriculum relies heavily on teachers' competence, which encompasses pedagogical, professional, social, and personal dimensions.

Teachers' competence has been recognized as a decisive factor in improving the quality of education and students' learning outcomes. Nevertheless, studies reveal that many educators still face challenges in translating the principles of the *Merdeka Belajar* Curriculum into daily teaching practices, particularly in applying differentiated instruction. At SMPIT Ibnu Sina Palopo, for instance, preliminary observations showed that while most teachers were familiar with the basic concepts of *Merdeka Belajar*, only a limited number demonstrated readiness to apply adaptive teaching strategies based on students' needs. It indicates a significant gap between curriculum policy and classroom practice.

One promising approach to addressing this gap is integrating life skills into teacher training and instructional modules. Life skills, comprising personal, social, academic, and vocational competencies, equip educators with knowledge and adaptive abilities to solve problems, make decisions, and create meaningful learning experiences. Previous research has highlighted the importance of life skills in supporting students' independence and teachers' professional development. However, few studies have focused on developing structured modules that embed life skills within the framework of the *Merdeka Belajar* Curriculum, particularly for teacher competence enhancement in Indonesian Islamic schools.

Recent studies emphasize that teacher competence in the *Merdeka Belajar* context requires mastery of subject matter and the ability to design and implement differentiated instruction. Relevant research shows that teachers' readiness is still uneven, with many requiring professional support to integrate new curriculum demands into classroom practice ([Saparuddin et al., 2025](#); [Y. Wulandari et al., 2024](#)). These findings underline the urgency of providing innovative professional development tools that address teachers' challenges in adopting the *Merdeka Belajar* framework.

In parallel, integrating life skills into education has gained increasing attention in national and international discourse. Life skills, including critical thinking, problem-solving, communication, and collaboration, are essential for preparing individuals to navigate the complexities of the 21st century ([Organization, 2020](#); [Thornhill-Miller et al., 2023](#)). Within the Indonesian context, life skill-based education has enhanced students' adaptability and teachers' capacity to deliver meaningful instruction ([Nurbatra & Nurbatra, 2022](#); [Tamsilu, 2025](#)). Thus, embedding life skills into teacher professional development modules is crucial for aligning curriculum reforms with the broader goals of holistic education.

Furthermore, developing educational modules as professional learning resources has proven effective in improving teaching practices. The ADDIE model, consisting of Analysis, Design, Development, Implementation, and Evaluation, has been widely used as a systematic framework for instructional design ([Abuhassna et al., 2024](#); [Branch & Clark-Stallkamp, 2025](#)). Several studies demonstrate that modules developed using ADDIE are valid, practical, and effective in supporting teachers' professional growth across various disciplines ([Crompton et al., 2023](#); [Moses Adeleke Adeoye et al., 2024](#)). However, there remains a limited body of research that specifically applies this model to create modules that integrate life skills into the *Merdeka Belajar* Curriculum, particularly in the context of Islamic secondary education.

Therefore, this study aims to develop, validate, and evaluate a life skills-based module to support teachers in implementing the *Merdeka Belajar* Curriculum at SMPIT Ibnu Sina Palopo. By adopting the ADDIE development model, the study provides a systematic framework for module design and examines its validity, practicality, and effectiveness. The findings are expected to contribute to the literature on curriculum innovation and teacher professional development, while offering practical implications for improving teacher competence in similar educational settings.

METHODS

Research Design

This study employed a Research and Development (R&D) design with a mixed-method approach, integrating quantitative and qualitative data. The R&D approach was chosen because it produces empirical findings and develops a tangible educational product, such as a life skills-based teaching module aligned with the *Merdeka Belajar* Curriculum. The mixed-method design ensured both breadth (quantitative validation and effectiveness testing) and depth (qualitative insights from teachers and experts).

Participants

The research was conducted at SMPIT Ibnu Sina Palopo, an Islamic private secondary school in South Sulawesi, Indonesia. The participants comprised 12 teachers directly involved in implementing the *Merdeka Belajar* Curriculum. Teachers were selected purposively based on their teaching experience, subject area representation, and willingness to participate in the study. The diversity of participants ensured a balanced perspective on the module's feasibility across different subjects.

Development Model

The study adopted the ADDIE model ([Branch & Clark-Stallkamp, 2025](#)), which includes five stages:

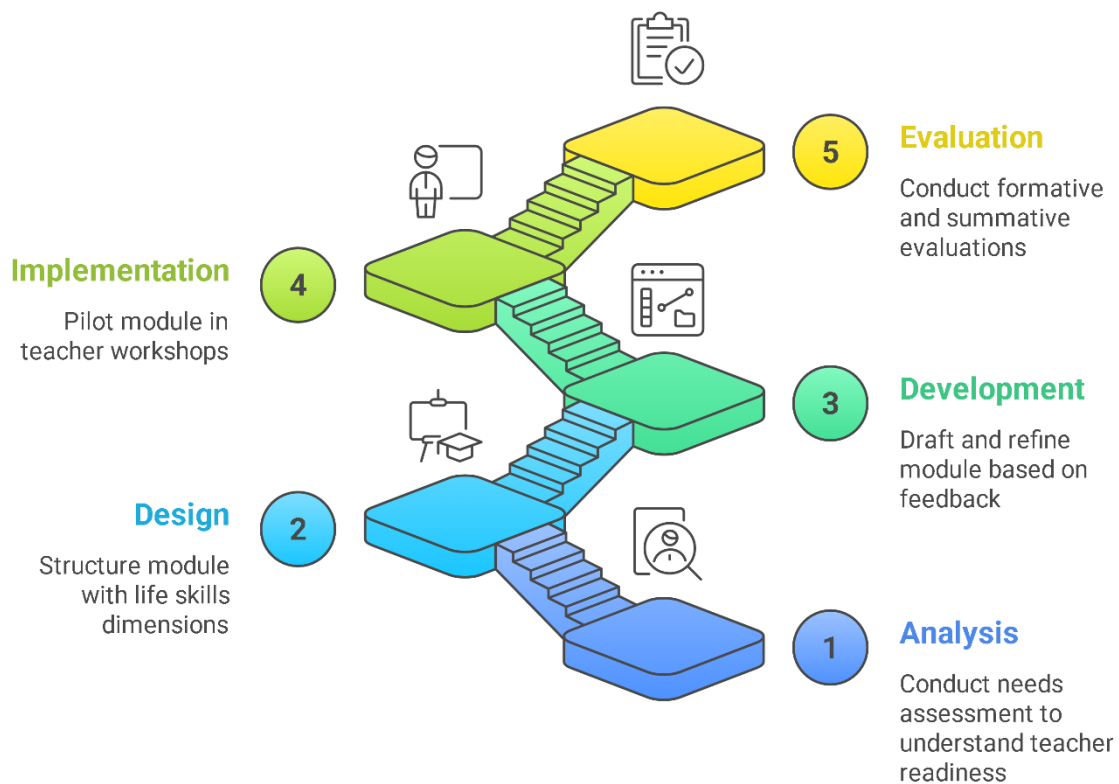


Figure 1. Stages of Development Model

In the analysis stage, a needs assessment was conducted through questionnaires and interviews with teachers to explore their understanding and readiness in implementing the *Merdeka Belajar* Curriculum. The findings indicated that although most teachers were familiar with the basic concepts, many lacked the confidence and skills required for differentiated instruction. In the design stage, the module structure was developed by integrating four dimensions of life skills, personal, social, academic, and vocational into the teaching framework. The design process included setting learning objectives, organizing content flow, and embedding assessment activities that aligned with the requirements of the *Merdeka Belajar* Curriculum. The development stage involved drafting the initial version of the module,

which was then reviewed and refined based on feedback from three experts: a content expert, a language expert, and a product design expert. Their input was used to improve the accuracy of the content, the clarity of the language, and the overall usability of the module. In the implementation stage, the revised module was piloted during teacher workshops at SMPIT Ibnu Sina Palopo. Teachers engaged with the module by applying its content to simulated classroom scenarios and providing feedback on its practicality. Finally, the evaluation stage comprised both formative and summative evaluations. Formative evaluation included expert validation and teacher responses, while summative evaluation measured the module's effectiveness through pre-test and post-tests that assessed teachers' knowledge and ability to apply differentiated instruction supported by life skills.

Instruments and Data Collection

Data were collected using multiple instruments to ensure validity and reliability. The following chart illustrates the distribution of instruments used in this study.

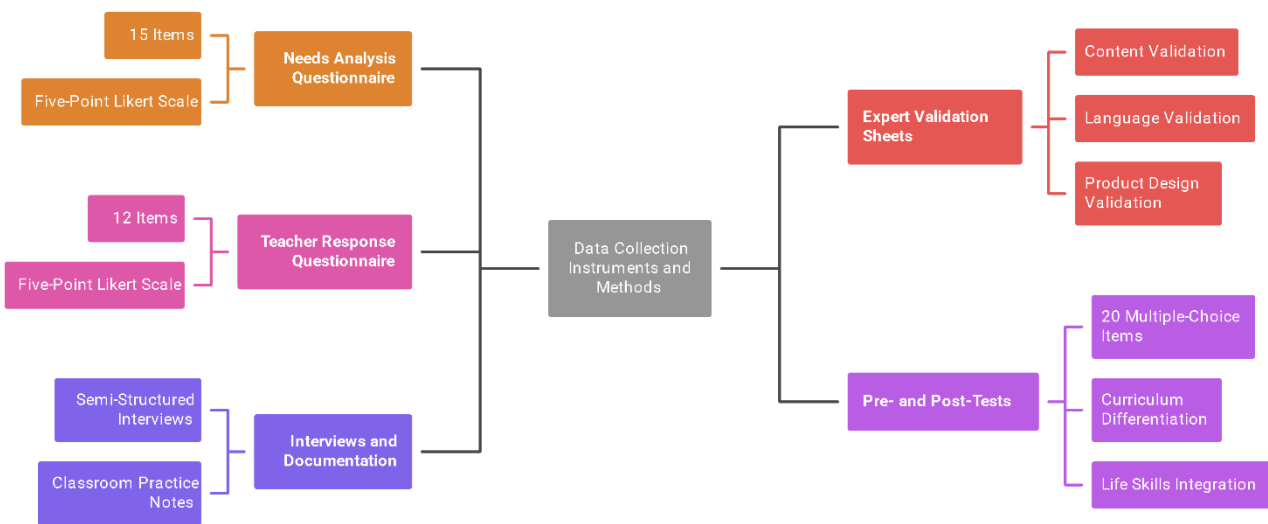


Figure 2. Data Collection Instruments and Methods

The first instrument was a needs analysis questionnaire, consisting of 15 items on a five-point Likert scale, administered to 12 teachers. This questionnaire aimed to capture teachers' perceptions of their readiness and challenges in implementing the *Merdeka Belajar* Curriculum. To establish the quality of the developed module, three types of expert validation sheets were employed, covering content, language, and product design. Each expert used a four-point rating scale to evaluate the appropriateness of the module's structure, the clarity of language, and the effectiveness of its overall design. The experts' feedback served as the basis for revising and improving the module before pilot implementation. In addition, a teacher response questionnaire was distributed after the module was piloted in a workshop setting. This instrument contained 12 items measured on a five-point Likert scale, designed to assess the practicality of the module in terms of usability, relevance, and applicability in classroom practice. Pre-test and post-tests were conducted with the participating teachers to evaluate the module's effectiveness. Each test comprised 20 multiple-choice questions that measured teachers' knowledge of differentiated instruction and their ability to integrate life skills into teaching practice. Finally, interviews and documentation were used to complement the quantitative findings. Semi-structured interviews provided deeper insights into teachers' experiences with the module, while documentation of classroom practices offered additional evidence regarding implementing life skills within the *Merdeka Belajar* framework.

Data Analysis

Quantitative data were analyzed using descriptive statistics. Validity, practicality, and effectiveness scores were converted into percentage categories: very valid (>85%), valid (70–84%),

practical (>85%), and effective (gain score >0.70). Paired-sample t-tests were employed to compare pre-test and post-test results. Qualitative data from expert feedback and interviews were analyzed thematically to identify recurring themes and suggestions for module improvement.

Ethical Considerations

Ethical approval was obtained from the Graduate Program of UIN Palopo. All participants provided informed consent, and confidentiality of data was strictly maintained. Teachers' participation was voluntary, and they were informed of their right to withdraw at any stage.

RESULTS

Analysis Stage

The needs analysis was conducted to identify teachers' understanding and readiness to implement the *Merdeka Belajar* Curriculum. Results from the questionnaire revealed that while most teachers demonstrated an adequate conceptual understanding (71.3%), their readiness to implement differentiated learning remained relatively low (40.0%). These findings indicate a substantial gap between theoretical knowledge and classroom practice, necessitating professional development support. The summary of quantitative results is presented in Table 1.

Table 1. Needs Analysis Results (Quantitative)

Domain	Percentage (%)	Category
Conceptual Understanding	71.3	Adequate
Readiness for Implementation	40.0	Low

In addition to the questionnaire, semi-structured interviews were conducted to provide deeper insights. The analysis revealed three dominant themes: (1) a gap between teachers' knowledge and actual classroom practices, (2) the need for practical resources such as sample lesson plans and rubrics, and (3) constraints related to time and resources that hinder differentiated instruction. Illustrative examples of these themes are presented in Table 2.

Table 2. Needs Analysis Results (Qualitative)

Theme	Description	Interview Quote*
The gap between knowledge and practice	Teachers understood the concept but lacked strategies for application	"I know about <i>Merdeka Belajar</i> , but I don't know how to apply it with my students."
Need for practical resources.	Teachers requested concrete examples and assessment rubrics	"It would help if we had sample activities and ready-to-use rubrics."
Resource and time constraints	Limited materials and class time hinder differentiation	"We want to try, but it feels difficult with limited time and resources."

* Quotes are anonymized to protect participant confidentiality.

These findings demonstrate that although teachers have grasped the basic concepts of *Merdeka Belajar*, their limited readiness and the barriers they face indicate the necessity of a life skills-based module designed to provide practical, applicable strategies for classroom practice.

Design Stage

Based on the needs analysis findings, the module was designed to integrate four core dimensions of personal, social, academic, and vocational life skills into teaching practices. The design process emphasized clear learning objectives, contextualized content, and assessment tasks aligned with the *Merdeka Belajar* Curriculum. Special attention was given to ensuring that the module would not only

convey theoretical concepts but also provide teachers with practical tools such as lesson templates, activity guides, and rubrics. The structure of the designed module is summarized in Table 3.

Table 3. Structure of the Life Skills-Based Module

Life Skills Dimension	Focus of Integration	Examples of Activities	Expected Teacher Competence
Personal	Self-awareness, decision-making, discipline	Reflection journals, goal-setting exercises	Teachers model and guide students' self-regulation
Social	Communication, teamwork, empathy	Group discussions, peer feedback, collaborative projects	Teachers facilitate collaboration and respect
Academic	Critical thinking, problem-solving, and adaptability	Case studies, inquiry-based tasks, and differentiated worksheets	Teachers design tasks that foster higher-order thinking
Vocational	Practical skills for future careers	Project-based learning, entrepreneurship mini-projects	Teachers link classroom learning to real-life applications

The design also incorporated interactive elements, including sample scenarios for differentiated instruction and step-by-step guidance for integrating life skills into lesson planning. It ensured the module would be user-friendly, adaptable across subjects, and directly relevant to teachers' daily practice.

Development Stage

Following the design process, the prototype module was developed and subjected to expert validation to ensure its content, language, and product design quality. Three experts participated in the validation: a content expert (curriculum and pedagogy), a language expert (academic writing and clarity), and a product design expert (layout and usability). Each aspect was assessed using a four-point scale ranging from *invalid* to *very valid*.

The validation results in Table 4 demonstrate that the module achieved very high ratings across all dimensions. Content validity reached 88.75%, indicating that the material was relevant, accurate, and aligned with the goals of the *Merdeka Belajar* Curriculum. Language validity obtained a score of 91.67%, suggesting that the module was written clearly and was easy to understand. Product design validity was the highest, with a score of 95.83%, reflecting the module's usability and aesthetic quality.

Table 4. Expert Validation Results

Validation Aspect	Expert Role	Score (%)	Category	Feedback Highlights
Content Validity	Curriculum Expert	88.75	Very Valid	Strengthen contextual examples; add varied case studies
Language Validity	Language Expert	91.67	Very Valid	Simplify technical terms; ensure consistency in wording
Product Design	Design Expert	95.83	Very Valid	Improve visual balance; maintain clarity of layout

The validation process confirmed that the module was very valid and suitable for implementation. Minor revisions suggested by the experts, such as refining language clarity and adding more contextualized examples, were incorporated into the final version before pilot testing.

Implementation Stage

After expert validation and revision, the module was piloted with 12 teachers at SMPIT Ibnu Sina Palopo through a workshop-based implementation. During the workshop, teachers were guided to apply the module in simulated classroom scenarios and later provided feedback through a practicality questionnaire. The questionnaire consisted of 12 items on a five-point Likert scale, covering aspects such as clarity of instructions, relevance of content, ease of use, and applicability in teaching practice.

The results, summarized in Table 5, indicate that the module achieved an average practicality score of 88.68%, which falls into the “very practical” category. Teachers especially appreciated the clarity of instructions (92%) and the relevance of the integrated life skills (90%). The lowest score was related to the flexibility of adapting activities across different subjects (83%), although it still fell within the “practical” range.

Table 5. Teacher Practicality Test Results

Indicator	Score (%)	Category	Feedback Highlights
Clarity of Instructions	92.00	Very Practical	Easy to follow step-by-step guidance
Relevance of Life Skills Content	90.00	Very Practical	Content highly applicable to real classroom needs
Ease of Use	87.50	Very Practical	Module is simple and user-friendly
Flexibility Across Subjects	83.00	Practical	Some activities need adaptation for specific subjects
Average Score	88.68	Very Practical	Overall, highly practical for teachers

These findings show that the module is theoretically valid and practically feasible for teachers to adopt in their daily instructional practices. Teachers expressed confidence that the module could help them implement the *Merdeka Belajar* Curriculum more effectively, particularly in integrating life skills into classroom activities.

Evaluation Stage

The effectiveness of the life skills-based module was assessed through pre- and post-tests administered to the 12 participating teachers. Each test consisted of 20 multiple-choice items measuring teachers’ knowledge of differentiated instruction and their ability to integrate life skills into teaching practice. The comparison of scores provided evidence of the module’s impact on teacher competence.

As shown in Table 6, the average pre-test score was 52.08%, indicating that teachers had only a moderate understanding of differentiated instruction before the intervention. After completing the workshop and engaging with the module, the post-test score rose to 86.67%, representing a substantial improvement. The calculated gain score of 0.72 falls into the “high” category, confirming the module’s effectiveness.

Table 6. Pre-Test and Post-Test Results

Test Type	Average Score (%)	Category	Interpretation
Pre-Test	52.08	Moderate	Teachers had limited initial competence
Post-Test	86.67	High	Teachers improved significantly after using the module

Test Type	Average Score (%)	Category	Interpretation
Gain Score	0.72	High Effectiveness	The module is highly effective in enhancing competence

In addition to quantitative findings, qualitative feedback from interviews revealed that teachers felt more confident planning lessons, applying differentiated strategies, and integrating life skills into their daily practice. One participant stated: *“This module makes it easier to understand how to implement Merdeka Belajar, especially with practical examples that I can directly adapt in my class.”* Overall, the evaluation stage confirmed that the life skills-based module was valid, practical, and effective in improving teacher competence for implementing the *Merdeka Belajar* Curriculum.

DISCUSSION

The findings of this study revealed a persistent gap between teachers’ conceptual understanding of the *Merdeka Belajar* Curriculum and their readiness to implement it in practice. This result is consistent with curriculum implementation theory, distinguishing between the intended, implemented, and attained curricula (Onyura et al., 2022; Pinar, 2019). While teachers may cognitively grasp the policy framework, classroom enactment is constrained by contextual factors such as time, resources, and institutional support. Previous studies in Indonesia similarly reported that many teachers could articulate the principles of *Merdeka Belajar* but encountered significant challenges when applying differentiated instruction in real classrooms (Ap et al., 2025; Sianturi, 2025; Zulaiha, 2025).

Integrating life skills into teacher professional development provided a meaningful response to this gap. Life skills such as critical thinking, problem-solving, communication, and collaboration served as a bridge that translated abstract curriculum objectives into concrete strategies. This finding resonates with the broader 21st-century learning framework, which positions life skills as essential not only for students but also for teachers who must adapt instruction to dynamic learning contexts (Dishon & Gilead, 2021; González-Pérez & Ramírez-Montoya, 2022; Soghomonyan & Karapetyan, 2023). Research has shown that embedding life skills within instruction enhances teacher adaptability and student engagement (Isaeva et al., 2025; Yeh, 2025), and the present study affirms this by demonstrating that teachers felt more confident and capable when provided with structured exemplars and ready-to-use tools.

Adopting the ADDIE model further ensured the module was systematically designed, validated, and refined before implementation. Instructional design literature emphasizes that aligning learning objectives, teaching strategies, and assessments is critical to achieving meaningful educational outcomes (Abuhassna & Alnawajha, 2023; MacPhail et al., 2023). In this study, expert validation confirmed the relevance, clarity, and usability of the module, which aligns with previous findings that ADDIE-based products are both practical and effective in supporting teacher professional growth (Indarti et al., 2025; Zulkepli et al., 2024). The iterative nature of the model also facilitated continuous improvement, resulting in a product that was both academically sound and contextually relevant.

The results also align with principles of adult learning theory, which emphasize that adults learn best when instruction is problem-centred, immediately applicable, and directly relevant to their professional needs (Allen et al., 2021; Chuang, 2021). Teachers in this study valued the inclusion of concrete examples, lesson templates, and rubrics that could be adapted to their classrooms. These preferences confirm prior claims that professional development must go beyond theoretical orientation and instead emphasize authentic, job-embedded practice (Oprea et al., 2020; Yoon et al., 2021). Even within a short workshop format, the experiential activities in the module provided sufficient opportunities for teachers to engage actively, reflect on their practice, and develop greater confidence in applying curriculum principles.

At the same time, the findings highlight important contextual constraints that limit scalability. Teachers indicated that while the module was highly practical, some activities required further adaptation for certain subjects, and limited time and resources posed barriers to full implementation. It echoes international research suggesting that curriculum reforms often falter when local conditions are not adequately considered (Eilam, 2022; Newton, 2020). Future module adaptations should explore

digital delivery formats, streamlined versions for resource-constrained schools, and mechanisms for ongoing support such as peer coaching or lesson study communities, to ensure sustainability and broader applicability.

Theoretically, this study makes three contributions. It demonstrates that teacher competence in the context of *Merdeka Belajar* cannot be enhanced solely through policy dissemination but requires structured, practice-oriented professional development resources. It extends the application of the ADDIE model beyond product development, showing its utility as a research framework that generates empirical evidence from both formative and summative evaluation. Finally, it reinforces the role of life skills as a mediating factor that enables teachers to enact curriculum reform effectively, highlighting that these competencies are as crucial for teachers as they are for students.

In practical terms, the findings call on educational stakeholders to provide teachers with accessible, practice-oriented training modules that emphasize life skills integration. Such modules should be embedded into sustained professional development programs, supported by school leadership, and complemented by follow-up strategies that encourage collaboration and reflection. Policymakers may also consider leveraging digital platforms to extend the reach and scalability of these resources.

Nonetheless, several limitations must be acknowledged. The small sample size and short implementation period limit the generalizability of the results, and the evaluation relied primarily on teacher self-reports and knowledge tests rather than direct classroom observations. Future research should expand the participant pool, adopt longitudinal designs to assess sustainability, and triangulate findings with classroom observations and student learning outcomes. It will also be valuable to explore how school leadership and institutional culture influence the effectiveness of life skills-based modules.

This study demonstrates that a life skills-based module developed through the ADDIE model can enhance teacher competence in implementing the *Merdeka Belajar* Curriculum by bridging the gap between conceptual understanding and practical readiness. By grounding curriculum innovation in theoretical frameworks and practical strategies, the research contributes to the literature on teacher professional development while offering actionable implications for improving educational practice in Indonesian Islamic schools.

CONCLUSION

This study developed, validated, and evaluated a life skills-based module to support teachers in implementing the *Merdeka Belajar* Curriculum at SMPIT Ibnu Sina Palopo. Using the ADDIE instructional design model, the research demonstrated that the module was valid in content, language, and design, highly practical for classroom application, and effective in enhancing teacher competence. Integrating personal, social, academic, and vocational life skills proved valuable in bridging the gap between teachers' conceptual understanding of curriculum reform and their readiness to enact it in practice.

The findings highlight both theoretical and practical contributions. Theoretically, the study confirms that curriculum reform requires professional development resources that are policy-aligned and practice-oriented, reinforcing the importance of life skills as mediating competencies for teachers. Practically, the study offers an instructional module that can serve as a model for similar schools seeking to strengthen teacher competence in differentiated instruction within the *Merdeka Belajar* framework.

Despite its contributions, the study was limited by its small sample size, short implementation period, and reliance on knowledge tests rather than direct observation of classroom practices. Future research should expand the scope of participants, adopt longitudinal designs to examine the sustainability of teacher competence gains, and include student learning outcomes as an additional measure of effectiveness. Further exploration of digital and scalable versions of the module is also recommended to broaden its impact.

Funding and Conflicts of Interest

The authors declare no funding and conflicts of interest for this research.

REFERENCES

Abuhassna, H., & Alnawajha, S. (2023). Instructional Design Made Easy! Instructional Design Models, Categories, Frameworks, Educational Context, and Recommendations for Future Work. *European*

Journal of Investigation in Health, Psychology and Education, 13(4), 715–735.

<https://doi.org/10.3390/ejihpe13040054>

- Abuhassna, H., Alnawajha, S., Awaie, F., Mohamed Adnan, M. A. Bin, & Edwards, B. I. (2024). Synthesizing Technology Integration within the Addie Model for Instructional Design: A Comprehensive Systematic Literature Review. *Journal of Autonomous Intelligence*, 7(5), 1546. <https://doi.org/10.32629/jai.v7i5.1546>
- Allen, S. J., Rosch, D. M., & Riggio, R. E. (2021). Advancing Leadership Education and Development: Integrating Adult Learning Theory. *Journal of Management Education*, 46(2), 252–283. <https://doi.org/10.1177/10525629211008645>
- Ap, D., Tumonglo, Y. T., Husnatul, F., & Hari, R. (2025). Differentiated Learning in the Merdeka Curriculum: A Literature Review on School Practices. *Journal of English Language and Education*, 10(4), 1535–1544. <https://doi.org/10.31004/jele.v10i4.1297>
- Branch, R. M., & Clark-Stallkamp, R. (2025). The Evolution of Instructional Design Models BT. In H. Lee, J. Stefaniak, & R. M. Branch (Eds.), *Educational Media and Technology Yearbook: Volume 45* (pp. 17–31). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-95028-5_2
- Chuang, S. (2021). The Applications of Constructivist Learning Theory and Social Learning Theory on Adult Continuous Development. *Performance Improvement*, 60(3), 6–14. <https://doi.org/10.1002/pfi.21963>
- Crompton, H., Jones, M. V, Sendi, Y., Aizaz, M., Nako, K., Randall, R., & Weisel, E. (2023). Examining technology use within the ADDIE framework to develop professional training. *European Journal of Training and Development*, 48(3–4), 422–454. <https://doi.org/10.1108/EJTD-12-2022-0137>
- Dishon, G., & Gilead, T. (2021). Adaptability and Its Discontents: 21st-Century Skills and the Preparation for an Unpredictable Future. *British Journal of Educational Studies*, 69(4), 393–413. <https://doi.org/10.1080/00071005.2020.1829545>
- Eilam, E. (2022). Climate Change Education: The Problem with Walking Away from Disciplines. *Studies in Science Education*, 58(2), 231–264. <https://doi.org/10.1080/03057267.2021.2011589>
- González-Pérez, L. I., & Ramírez-Montoya, M. S. (2022). Components of Education 4.0 in 21st Century Skills Frameworks: Systematic Review. *Sustainability (Switzerland)*, 14(3), 1–31. <https://doi.org/10.3390/su14031493>
- Indarti, L., Saud, U. S., Yuniarsih, T., & Suryana, A. (2025). TPACK – Based Professional Development : A Model for Strengthening English Teachers' Competence. *IRJE: Indonesian Research Journal in Education*, 9(2), 855–874. <https://doi.org/10.22437/irje.v9i02.44603>
- Isaeva, R., Karasartova, N., Dznunusnalieva, K., Mirzoeva, K., & Mokliuk, M. (2025). Enhancing Learning Effectiveness Through Adaptive Learning Platforms and Emerging Computer Technologies in Education. *Jurnal Ilmiah Ilmu Terapan Universitas Jambi*, 9(1), 144–160. <https://doi.org/10.22437/jiituj.v9i1.37967>
- MacPhail, A., Tannehill, D., Leirhaug, P. E., & Borghouts, L. (2023). Promoting Instructional Alignment in Physical Education Teacher Education. *Physical Education and Sport Pedagogy*, 28(2), 153–164. <https://doi.org/10.1080/17408989.2021.1958177>
- Moses Adeleke Adeoye, Kadek Adrian Surya Indra Wirawan, Made Shania Satya Pradnyani, & Nyoman Intan Septiarini. (2024). Revolutionizing Education: Unleashing the Power of the ADDIE Model for Effective Teaching and Learning. *JPI (Jurnal Pendidikan Indonesia)*, 13(1), 202–209. <https://doi.org/10.23887/jpiundiksha.v13i1.68624>
- Muthi, S., Suriansyah, A., & Purwanti, R. (2025). Independent Curriculum Adaptation Strategy for Students' Cultural Diversity at Pendreh Village Junior High School. *PARADIGMA: Scientific Studies on Science, Religion and Culture*, 22(02), 463–476. <https://doi.org/10.33558/paradigma.v22i2.11180>

- Newton, N. (2020). The Rationale for Subsidiarity as a Principle Applied Within Curriculum Reform and Its Unintended Consequences. *The Curriculum Journal*, 31(2), 215–230. <https://doi.org/10.1002/curj.37>
- Nurbatra, L. H., & Nurbatra, L. H. (2022). Learning Life Skills through English Materials : Integrating Life Skills in English Pedagogy. *ASEAN Journal of Community Engagement*, 6(2), 262–277. <https://doi.org/10.7454/ajce.v6i2.1045>
- Okta, S. L., & Putra, D. (2025). Adaptation of Independent Learning Curriculum by Elementary School Teachers: Case Study in the Indonesia–Malaysia Border Region. *International Journal of Ethno-Sciences and Education Research*, 5(2), 65–70. <https://doi.org/10.46336/ijeer.v5i2.936>
- Onyura, B., Lass, E., Lazor, J., Zuccaro, L., & Hamza, D. M. (2022). Vitalizing the Evaluation of Curricular Implementation: A Framework for Attending to the “How and Whys” of Curriculum Evolution. *Advances in Health Sciences Education*, 27(2), 553–572. <https://doi.org/10.1007/s10459-021-10083-6>
- Oprea, B., Păduraru, L., & Iliescu, D. (2020). Job Crafting and Intent to Leave: The Mediating Role of Meaningful Work and Engagement. *Journal of Career Development*, 49(1), 188–201. <https://doi.org/10.1177/0894845320918666>
- Organization, W. H. (2020). *Life Skills Education School Handbook: Prevention of Noncommunicable Diseases - Approaches for Schools*. World Health Organization. <https://www.who.int/publications/i/item/9789240005020>
- Pinar, W. F. (2019). *What Is Curriculum Theory?* (3rd Editio). Routledge. <https://doi.org/10.4324/9781315625683>
- Priawasana, E., & Subiyantoro, S. (2024). Evaluating the K-13 Versus Merdeka Curriculum: Impacts on Primary, Junior, and Senior High School Education in Indone. *Jurnal Kependidikan: Jurnal Hasil Penelitian Dan Kajian Kepustakaan Di Bidang Pendidikan, Pengajaran Dan Pembelajaran*, 10(3), 859–867. <https://doi.org/10.33394/jk.v10i3.12060>
- Saparuddin, M., Wartini, S., & Bahzar, M. (2025). Balancing Innovation and Burden: Evaluating the Impact of Curriculum Reform. *Journal of Educational Management Research*, 04(06), 2332–2344. <https://doi.org/10.61987/jemr.v4i6.1006>
- Sianturi, B. (2025). Teachers’ Perceptions and Challenges in Implementing Differentiated Learning in Kurikulum Merdeka. *J-SHMIC : Journal of English for Academic*, 12(1), 1–15. [https://doi.org/10.25299/jshmic.2025.vol12\(1\).21490](https://doi.org/10.25299/jshmic.2025.vol12(1).21490)
- Soghomonian, Z., & Karapetyan, A. (2023). Teaching Strategies of the 21st Century Skills Adapted to the Local Needs. *European Journal of Teaching and Education*, 5(3), 48–69. <https://doi.org/10.33422/ejte.v5i3.1097>
- Tamsilu, T. (2025). Life Skills-Based Leadership Strategy in Improving Madrasah Quality: A Case Study. *ETDC: Indonesian Journal of Research and Educational Review*, 4(4), 1503–1521. <https://doi.org/10.7454/ajce.v6i2.1045>
- Thornhill-Miller, B., Camarda, A., Mercier, M., Burkhardt, J. M., Morisseau, T., Bourgeois-Bougrine, S., Vinchon, F., El Hayek, S., Augereau-Landais, M., Mourey, F., Feybesse, C., Sundquist, D., & Lubart, T. (2023). Creativity, Critical Thinking, Communication, and Collaboration: Assessment, Certification, and Promotion of 21st Century Skills for the Future of Work and Education. *Journal of Intelligence*, 11(3), 1–32. <https://doi.org/10.3390/jintelligence11030054>
- Wulandari, D., & Mustofa, T. A. (2023). Comparative Implementation of the 2013 Curriculum and the Merdeka Curriculum in State Junior High Schools. *TADRIB: Jurnal Pendidikan Agama Islam*, 9(2), 152–159. <https://doi.org/10.19109/tadrib.v9i2>
- Wulandari, Y., S, R., & Ilham, D. (2024). Unleashing Student Creativity: A Dynamic Look at Merdeka Belajar Curriculum’s Impact. *International Journal of Asian Education*, 5(1), 21–33.

<https://doi.org/10.46966/ijae.v5i1.371>

Yeh, H.-C. (2025). The Synergy of Generative AI and Inquiry-Based Learning: Transforming the Landscape of English Teaching and Learning. *Interactive Learning Environments*, 33(1), 88–102.

<https://doi.org/10.1080/10494820.2024.2335491>

Yoon, H. J., Chang, Y.-L., Sadique, F., & Al Balushi, I. (2021). Mechanisms for Hopeful Employee Career Development in COVID-19: A Hope-Action Theory Perspective. *Advances in Developing Human Resources*, 23(3), 203–221. <https://doi.org/10.1177/15234223211017848>

Zulaiha, S. (2025). Implementing Differentiated Instruction in Bahasa Indonesia Within the Framework of the Merdeka Curriculum. *TERAMPIL: Jurnal Pendidikan Dan Pembelajaran Dasar*, 12(1), 116–133. <https://doi.org/10.24042/terampil.v12i1.27118>

Zulkepli, N., Safina Mohd Ariff Albakri, I., Zarina, Megat Khalid, P., & Faisal Farish Ishak, M. (2024). Using the ADDIE Model to Develop an Online Professional Development Program for Non-Specialist ESL Teachers. *Arab World English Journal*, July(10), 302–313.

<https://doi.org/10.24093/awej/call10.19>