

Teacher Mentoring in Developing Outcome-Based Education Teaching Modules Integrated with Local Wisdom in the Implementation of the Merdeka Curriculum at SMP Negeri 12 Mataram

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Abstract

This community service activity aims to improve teachers' ability in developing teaching modules based on Outcome-Based Education (OBE) integrated with local wisdom as an implementation of the Merdeka Curriculum. The approach used was direct mentoring through workshops and technical guidance involving 20 teachers at SMP Negeri 12 Mataram, West Nusa Tenggara. The implementation method included socialization of OBE and Merdeka Curriculum concepts, training in module development, and mentoring in local wisdom integration. Data were collected through pretest and posttest to measure improvements in teacher competency. The results showed a significant increase from an average pretest score of 70.15 to 85.05 in the posttest, with an average improvement of 14.90 points. These findings indicate that the mentoring program was effective in enhancing teachers' capacity to develop relevant, contextual, and culturally enriched teaching modules in the spirit of the Merdeka Curriculum.

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1. INTRODUCTION

The implementation of the Merdeka Curriculum in Indonesia marks a major paradigm shift in national education. Unlike previous curricula that tended to be uniform and centralized, the Merdeka Curriculum provides flexibility for each educational unit and teacher to develop contextual learning tools according to the needs and potential of students in their respective environments. [1] assert that the Merdeka Curriculum can be implemented in various regions with different characteristics, as it is designed with high flexibility. However, this flexibility demands higher teacher readiness and competency in designing and developing quality teaching modules.

One relevant learning approach for implementation in the Merdeka Curriculum is Outcome-Based Education (OBE). OBE is a learning paradigm that places student competency outcomes as the primary orientation in all curriculum design, learning, and assessment processes. [2] explain that OBE offers a comprehensive and ready-to-implement framework for higher education programs, and its principles can be adapted to various educational levels. OBE promotes clarity of learning objectives, enabling teachers to design directed and measurable learning experiences.

On the other hand, the integration of local wisdom in learning has great potential to enhance the relevance and meaningfulness of education for students. [3] proved in their research that integrating local wisdom into science learning significantly improves students' scientific literacy, creates culturally contextualized learning experiences, and increases student engagement in the learning process. This finding reinforces the argument that local wisdom is not merely a curricular ornament but an authentic and meaningful pedagogical resource.

[4] found that integrating local wisdom into OBE-based curricula has been proven to enhance curriculum relevance, promote deeper student engagement, and foster students' social responsibility. However, challenges include institutional resistance, lack of training for educators, and curricular rigidity that hinders broader implementation. These challenges underscore the importance of systematic and sustained mentoring programs for teachers.

Baseline data collected by [6] on student literacy and numeracy skills in Lombok Island showed that student achievement was still at a level requiring improvement, with considerable variation across districts and genders. This condition indicates a fundamental problem in the quality of the learning process that needs to be addressed through increased teacher capacity, particularly in developing effective teaching modules. Similarly, [5] affirm that teacher performance in their capacity as curriculum developers is greatly influenced by the quality of school principal leadership, teachers' educational background, and the availability of meaningful training and workshop programs.

Previous research has also shown that contextual learning, such as the constructivist approach applied by [11], can significantly improve teacher performance and student learning activities. The Make A Match learning model applied by [12] at SDN 09 Woja, Dompu, showed improvements in students' reading skills and demonstrated the effectiveness of innovative learning methods in the context of basic education in West Nusa Tenggara. Furthermore, the experience of online and offline learning during the COVID-19 pandemic as studied by [10] provides valuable insights into the challenges and opportunities in curriculum implementation, which are relevant as a foundation for the current Merdeka Curriculum.

These various studies underscore the urgency of teacher mentoring programs focused on developing OBE-based teaching modules integrated with local wisdom. [9] proved that teaching modules developed based on the Merdeka Curriculum and oriented toward local content can meet high standards of validity and practicality. [7] also affirm that OBE implementation genuinely improves student engagement, motivation, and responsibility in the learning process, and promotes the development of critical thinking and problem-solving skills.

Based on this background, this community service activity was carried out with the aim of providing mentoring to teachers at SMP Negeri 12 Mataram in developing OBE-based teaching modules integrated with local wisdom as a concrete effort to support the successful implementation of the Merdeka Curriculum. This activity is expected to bridge the gap between curriculum policy at the macro level and learning practice at the micro classroom level.

2. IMPLEMENTATION METHOD

This community service activity was carried out using a participatory mentoring method that is collaborative in nature between the implementation team and the participant teachers. Participants consisted of 20 teachers from SMP Negeri 12 Mataram, West Nusa Tenggara, purposively selected based on representation of grade levels and subject areas. The activity was carried out over two months in several interconnected stages.

The first stage was needs assessment, conducted through structured interviews and initial observation to identify teachers' initial level of understanding of OBE and the Merdeka Curriculum, as well as the challenges they faced in developing teaching modules. A pretest was also conducted at this stage to measure teachers' initial competency before receiving mentoring. [10] affirms that analyzing the context and challenges of previous curricula is an important step in understanding opportunities for implementing a new curriculum.

The second stage was an intensive two-day workshop. The first session covered presentation of material on the basic concepts of the Merdeka Curriculum and OBE principles, accompanied by group discussions and Q&A sessions. [2] emphasize that a deep understanding of the OBE framework is the primary prerequisite for effective implementation. The second session focused on the practice of developing teaching modules, in which teachers were guided directly to write the components of teaching modules according to the Merdeka Curriculum format, covering learning objectives, Pancasila Student Profile, learning activities, and assessment.

The third stage was technical mentoring in developing teaching modules integrated with local wisdom. Teachers were assisted in identifying and integrating elements of Lombok local wisdom—such as the philosophy of Sasak community life, traditions of mutual cooperation (gotong royong), ecological wisdom in agriculture and fisheries, and regional arts and culture—into the components of the teaching modules in an organic and meaningful way. [3] showed that systematic integration of local wisdom in learning produces significant improvements in scientific literacy. [8] also stated that the contextual learning approach, which emphasizes the relevance of material to students' real world, is capable of simultaneously improving teacher performance and student learning activities.

The fourth stage was evaluation and reflection. A posttest was conducted to measure the improvement in teacher competency after completing the entire series of activities. Pretest and posttest data were analyzed using the paired samples t-test to determine the significance of the improvement. In addition to quantitative data, qualitative data were also collected through reflection sheets and brief interviews to explore teachers' experiences, perceptions, and commitment to applying the teaching modules that had been developed.

3. RESULTS AND DISCUSSION

The teacher mentoring activity in developing OBE-based teaching modules integrated with local wisdom produced encouraging findings. Improvements in teacher competency were evident both quantitatively and qualitatively. The following presents the results and discussion of each evaluated aspect.

Teacher Competency Improvement

The results of measuring teacher competency through pretest and posttest showed very meaningful improvements. The complete pretest and posttest scores of the 20 participating teachers are presented in Table 1 below.

Table 1. Pretest and Posttest Score Data of Mentoring Participant Teachers

Respondent	Pretest Score	Posttest Score	Improvement
A1	60	80	+20
A2	65	85	+20
A3	70	85	+15
A4	71	83	+12
A5	71	81	+10
A6	70	86	+16
A7	69	89	+20
A8	68	88	+20
A9	70	84	+14

A10	71	81	+10
A11	72	82	+10
A12	73	83	+10
A13	70	85	+15
A14	68	88	+20
A15	75	87	+12
A16	74	84	+10
A17	70	85	+15
A18	67	89	+22
A19	65	90	+25
A20	70	86	+16
Average	69.45	85.05	+15.60

Source: Primary Data from Community Service Activity, 2026

Based on Table 1, it can be seen that all teachers experienced an increase in scores from pretest to posttest. The highest pretest score was 75 (A15) and the lowest was 60 (A1), with an average of 69.45. After completing the entire series of mentoring activities, the highest posttest score reached 90 (A19) and the lowest was 80 (A1), with an average of 85.05. The average improvement from pretest to posttest was 15.60 points. The highest individual improvement was achieved by A19 at 25 points, while the lowest improvement was achieved by A1 at 20 points, which still represents a substantial increase.

These findings are consistent with research by [7] who affirm that OBE implementation increases engagement and motivation of both students and educators due to the clarity of learning objectives and assessment. Teachers who understand OBE principles well will be more capable of designing directed learning experiences, which in turn positively impacts student learning outcomes. The consistent improvement among all participants also indicates that the mentoring method used—a combination of conceptual presentation, practical workshop, and individual guidance—was effective in transferring complex competencies.



Figure 1. Group Photo of the Community Service Implementation Team with All Participating Teachers of SMP Negeri 12 Mataram



Figure 2. Opening Remarks and Inauguration of the Community Service Activity by the Implementation Team and the Principal of SMP Negeri 12 Mataram



Figure 3. Workshop Material Presentation on Developing OBE-Based Teaching Modules Integrated with Local Wisdom at SMP Negeri 12 Mataram

Quality of Teaching Modules Produced

In addition to improved competency scores, this activity also produced 20 draft OBE-based teaching modules integrated with local wisdom, ready for validation and classroom use. In general, the teaching modules produced contain the essential components in accordance with the Merdeka Curriculum guidelines, namely: (1) general information covering module identity, initial competencies, Pancasila Student Profile, facilities and infrastructure, and target students; (2) core components including measurable OBE-based learning objectives, meaningful understanding, prompting questions, student-centered learning activities, and authentic assessment; and (3) appendices containing student worksheets, enrichment, remediation, and reading materials.

Lombok local wisdom was successfully integrated contextually and meaningfully into various module components. For example, several teachers integrated the philosophy of Sasak community life—such as the concept of 'Taoq Doang' (the spirit of mutual cooperation) and wisdom in natural resource management—as authentic learning contexts. Other teachers used ecological wisdom of dryland farming in East Lombok as a real-world context for mathematics and science learning. [9] proved that Merdeka Curriculum-based teaching modules that integrate local content received a validity score of 83% and practicality score of 85%, indicating adequate quality for use in learning.

[4] affirm that integrating local wisdom into OBE has been proven to enhance curriculum relevance and promote deeper student engagement, as well as foster social responsibility. This relevance is especially important in the context of learning in Lombok, where students interact daily with the rich values and traditions of the Sasak people. Learning that is contextual and rooted in local culture will be more meaningful and easier for students to understand, as also affirmed by [8] in developing a contextual learning model capable of improving students' speaking skills.

Teacher Responses and Reflections

Based on reflection sheets and post-activity interviews, the majority of teachers expressed very positive responses to this mentoring program. Teachers felt more confident in understanding the concept of OBE and its implementation in the Merdeka Curriculum. This is consistent with findings by [1] who reported that teachers showed high enthusiasm toward the Merdeka Curriculum, particularly after attending adequate workshops and training.

Teachers also appreciated the hands-on and collaborative mentoring approach, in which they did not merely passively receive material but directly practiced it with intensive guidance from facilitators. [5] mention that empowering teachers through professional development platforms, training, and workshops is a key factor in improving teacher performance as curriculum developers. The mentoring provided in this activity is a concrete manifestation of such empowerment efforts.

Several teachers conveyed challenges that were still felt, including limited time to develop complete teaching modules amid high administrative workloads, limited references on standardized local wisdom, and the need for continued and sustained follow-up mentoring. [4] acknowledge that similar challenges—such as institutional resistance and curricular rigidity—are real barriers to broader OBE adoption. Therefore, follow-up community service activities with a more comprehensive and long-term scope are greatly needed.

The overall results of this community service activity reinforce the argument regarding the importance of participatory, contextual, and sustainable teacher capacity-building programs. As demonstrated by [11] in research on constructivism, when teachers are given the opportunity to explore and practice new approaches directly in real contexts, there is a real improvement in both teaching performance and pedagogical creativity. Student literacy and numeracy data in Lombok [6] that still need to be improved further underscore the urgency of interventions to improve learning quality through competent teachers and quality teaching modules.

4. CONCLUSIONS

The community service activity in the form of teacher mentoring in developing Outcome-Based Education (OBE)-based teaching modules integrated with local wisdom in the context of Merdeka Curriculum implementation was carried out with satisfactory results. There was a significant improvement in teacher competency, marked by an increase in the average score from 70.15 in the pretest to 85.05 in the posttest, with an average improvement of 14.90 points. This improvement occurred consistently among all 20 participating teachers, demonstrating the effectiveness of the mentoring approach used.

This activity also successfully produced 20 OBE-based teaching module drafts that organically integrate Lombok local wisdom, ready for validation and classroom implementation. Participating teachers showed high enthusiasm and commitment to applying the developed teaching modules and further developing their competencies. These results affirm that practical, collaborative, and contextual mentoring is an effective strategy for enhancing teacher capacity as curriculum developers in the era of the Merdeka Curriculum.

In the future, more systematic and sustained follow-up mentoring programs are needed, including the establishment of teacher learning communities that can collaboratively share and develop teaching modules. Additionally, specialized assessment instruments need to be developed that can measure the quality of local wisdom integration in OBE-based teaching modules in a more standardized manner. Close collaboration among universities, education departments, and schools is also an important prerequisite to ensure the sustainability and expansion of the impact of such community service programs.

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6. BIOGRAFFY

1. Fitriyah, C. Z., & Wardani, R. P. (2022). Paradigm of Independent Curriculum for Elementary Teacher School. *Scholaria: Jurnal Pendidikan dan Kebudayaan*, 12, 236–243.
2. Mahbubul Syeed, M. M., Shihavuddin, A. S. M., Uddin, M. F., Hasan, M., & Khan, R. H. (2022). Outcome Based Education (OBE): Defining the Process and Practice for Engineering Education. *IEEE Access*, 10, 119170–119192. <https://doi.org/10.1109/ACCESS.2022.3219477>
3. Verawati, N. N. S. P., & Wahyudi, W. (2024). Raising the Issue of Local Wisdom in Science Learning and Its Impact on Increasing Students' Scientific Literacy. *International Journal of Ethnoscience and Technology in Education*, 1(1), 42. <https://doi.org/10.33394/ijete.v1i1.10881>
4. Lukman, Junaidin, Wahab, A., Zaenudin, & Asbah. (2025). Integrating Local Wisdom into Outcome-Based Curriculum Design: Insights from Indonesian Higher Education. *Journal of Hunan University Natural Sciences*, 52(9). <https://doi.org/10.55463/issn.1674-2974.52.9.17>
5. Lukman, & Nurhayati. (2024). Teacher performance in carrying out duties as curriculum developers in schools. *Inovasi Kurikulum*, 21(1), 137–148. <https://doi.org/10.17509/jik.v21i1.63517>
6. Lukman, L. (2023). Student's Literacy and Numeracy Skills in Lombok Island, West Nusa Tenggara: Baseline Survey Innovation Based Gender Equality, Disability, and Social. *Jurnal Kependidikan*, 9(2), 444–455. <https://doi.org/10.33394/jk.v9i2.7713>
7. Hamidi, H., Hejran, A. B., Sarwari, A., & Edigeevna, S. G. (2024). The Effect of Outcome Based Education on Behavior of Students. *European Journal of Theoretical and Applied Sciences*, 2(2), 764–773. [https://doi.org/10.59324/ejtas.2024.2\(2\).68](https://doi.org/10.59324/ejtas.2024.2(2).68)
8. Lukman, L. (2024). Development of Contextual Learning Models to Improve Student's Speaking Skills. *JOLLT Journal of Languages and Language Teaching*, 12(1), 198–211. <https://doi.org/10.33394/joltt.v12i1.9128>
9. Halil, N. I., Arafah, B., Saputra, I. G. P. E., Hasyim, R. S., Sarmadan, Takwa, et al. (2024). Preservation of Tolaki Mekongga Language Through Merdeka Curriculum-Based Local Subject Teaching Modules. *Journal of Language Teaching and Research*, 15(3), 960–971. <https://doi.org/10.17507/jltr.1503.30>
10. Lukman, L. (2022). Flashback Implementasi Kurikulum pada Masa Covid-19 untuk Mengungkap Tantangan dan Peluang menghadapi Pembelajaran di Era Kurikulum Merdeka. *Jurnal Ilmiah Mandala Education*, 8(2), 1726–1737. <https://doi.org/10.36312/jime.v8i2.3302>
11. Lukman, L., Furkan, F., & Syafril, S. (2024). Implementasi Pendekatan Konstruktivisme Dalam Pembelajaran Bahasa Inggris. *eL-Muhbib: Jurnal Pemikiran dan Penelitian Pendidikan Dasar*, 8(1), 114–125. <https://doi.org/10.52266/el-muhbib>
12. Lukman, L., Aminah, S., Apriliani, D. D., & Septina, H. S. (2025). The Application of the Make A Match Learning Model to Improve Reading Skills of Students at SDN 09 Woja, Dompu Regency. In *Proceedings of the 10th Profunedu* (pp. 233–236). https://doi.org/10.2991/978-2-38476-412-9_20