

## Teachers' Competence in Developing Teaching Modules through In-House Training (IHT) at Madrasah Ibtidaiyah

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### ABSTRACT

Elementary school teachers, particularly in Madrasah Ibtidaiyah, face challenges in developing character-based teaching modules due to limited relevant training. This study aimed to enhance teacher competence through in-house training (IHT) integrated with intensive mentoring and digital technology. A qualitative case study was conducted at a Madrasah Ibtidaiyah in Kebakkramat, Karanganyar, involving 10 teachers, supported by the principal and school supervisor. Data were collected through observation, interviews, and documentation, and analyzed using the Miles and Huberman interactive model. The IHT program significantly improved teachers' competence in designing character-based teaching modules aligned with the *Merdeka Curriculum*. Findings showed that 80% of participants understood the structure of teaching modules, 70% could align learning outcomes and objectives with activities and assessments, and 80% successfully compiled contextual and systematic modules. All participants benefited from peer feedback and facilitator guidance, while 90% reported increased confidence in implementation. The integration of digital tools such as Google Docs, Canva, and collaborative platforms further supported the training's effectiveness. The study demonstrates that a structured IHT model, combining practical mentoring and technology use, effectively builds both technical and pedagogical competencies. These findings contribute to national efforts in developing adaptive, tech-literate teachers capable of delivering student-centered learning. However, the study's limitations include its small sample size and single-school context. Future research should explore broader implementation with continuous mentoring and strengthened digital reflection practices to ensure sustainable professional development.

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## 1. INTRODUCTION

Teacher competence in Madrasah Ibtidaiyah has an important role in shaping students' character, improving learning outcomes, and implementing the Merdeka Curriculum. Teachers not only act as teachers but also instill character and moral values that are in line with the Pancasila Student Profile and Islamic teachings (Ibrahim et al., 2023; Kartiwan & Alkarimah, 2023; Aziz & Hasanah, 2022; Falaq, 2022; Nurhidaya et al., 2021; Wulandari & Ichsan, 2023). In addition, teachers play a role in increasing motivation and learning outcomes by implementing innovative learning strategies that are in accordance with students' needs (Afandi, 2020; Amalia & Maknun, 2022; Midayanti et al., 2023). The implementation of the Merdeka Curriculum requires teachers to be more adaptive and creative in designing student-centered learning and developing methods that encourage their independence and character building (Jannati et al., 2023; Munawir et al., 2024; Bakri, 2024). Therefore, the success of education in Madrasah Ibtidaiyah is highly dependent on the competence of teachers in designing learning that improves academic understanding and shapes students' character in accordance with the moral values of Pancasila and Islam.

One of the essential elements in supporting teacher competence in the Merdeka Curriculum is the teaching module. The teaching module is designed to provide flexibility in learning and ensure a student-centered approach so that it can develop cognitive, affective, and psychomotor aspects in a balanced manner (Kemdikbud, 2022; Yuhaga, 2023). More than just a teaching guide, the teaching module also plays a role in encouraging independent learning, improving literacy and numeracy, and strengthening the Pancasila Student Profile through strengthening character and 21st-century skills (Nuruningsih & Palupi, 2021). In practice, the teaching module is an important tool for teachers to create more creative and meaningful learning, which not only forms independent and innovative students but also prepares them to compete in the global era (Mahanani, 2023; Rismawanda & Mustika, 2024). Therefore, a well-designed teaching module supports contextual and innovative learning and ensures that each child learns according to their needs in an era of ever-changing education.

Although the teaching modules in the Merdeka Curriculum are designed to support contextual learning that is relevant to students' needs, many teachers still face various challenges in compiling them. Limited understanding of the components of teaching modules results in difficulties in designing effective learning (Buchari, 2018; Rismawanda & Mustika, 2024). In addition, the lack of training that focuses on compiling teaching modules makes many teachers less confident in developing materials independently, so they tend to rely on modules from outside parties that are not necessarily in accordance with student characteristics (Kamiludin, 2021; Yuhaga, 2023). Suboptimal mastery of technology is also an obstacle in utilizing digital media to create more interactive and interesting modules, which is further exacerbated by limited access to supporting facilities and infrastructure (Mahmudin, 2021; Handayani, 2019). Given the complexity of the obstacles faced by these teachers, systematic and sustainable efforts are needed to improve their competence in compiling teaching modules that are in accordance with the demands of the Merdeka Curriculum.

Solving the problem of teacher competency in compiling teaching modules according to the Merdeka Curriculum is critical, considering that teaching modules are the main tool for creating systematic, relevant, and character-based learning (Yuhaga, 2023). The negative impact if not resolved immediately, is the low quality of learning, weak student motivation, and lack of competitiveness of graduates in the global era (Hartatik, 2022). In addition, limited teacher competency can weaken the implementation of the principles of independent learning, which are the core of the Merdeka Curriculum (Nuruningsih & Palupi, 2021; Saifullah, 2023). Therefore, real solutions need to be implemented immediately so that teachers can be better prepared in compiling and using teaching modules effectively. One solution that can be done is in-house training.

In-house training activities are one of the training strategies to improve teacher competence in various aspects of learning, including in preparing learning implementation plans or teaching modules. Implemented internally in schools, focusing on the specific needs of teachers so that training can be more relevant and contextual to the situation in the field (Jayadipura, 2018; Maolana, 2018; Rizal et al., 2022). In-house training provides a space for teachers to learn collaboratively, discuss, and share best practices, which are important in producing teaching materials that are in line with the curriculum. This activity can

also be combined with intensive mentoring to help teachers understand the important components of the teaching modules that are the basis of the Merdeka Curriculum (Yuhaga, 2023; Mahanani, 2023; Mulyani & Insani, 2023). In addition, in-house training also integrates educational technology, which is important for creating interactive and interesting teaching modules and is relevant to the needs of 21st-century learning (Nuruningsih & Palupi, 2021; Virgiyanti et al., 2023). In-house training not only improves technical understanding in compiling teaching modules but also ensures that their implementation is effective so that the quality of teaching in the classroom can improve significantly (Khaerani, 2016; Pangestuti, 2022; Tasmini, 2022). Thus, in-house training not only helps teachers understand the technical aspects of compiling lesson plans or teaching modules but also ensures that their implementation is effective and supports the success of 21st-century learning.

Several studies have shown that in-house training is effective in improving teacher competence in compiling lesson plans or teaching modules. (Yuhaga, 2023) found that training at SDN 1 Pandran Raya helped teachers understand the main components of the Merdeka Curriculum teaching module, such as learning objectives and evaluation, so that the module was more systematic. (Mahanani, 2023) noted that intensive mentoring at SDN 3 Kalanglundo improved the ability of teachers at the driving school to compile teaching modules. (Nuruningsih & Palupi, 2021) showed that the Focus Group Discussion (FGD) method in-house training at SDN Pondok 03 was effective in improving teachers' ability to compile contextual lesson plans. Research by (Pangestuti (2022) and Hartatik (2022) emphasized that in-house training can integrate the values of the Pancasila Student Profile and support the preparation of teaching materials based on the Merdeka Curriculum. In addition, Khaerani (2016) and Virgiyanti et al. (2023) emphasized that in-house training helps teachers understand the components of teaching modules and teaching tools in more depth, making them relevant to students' needs.

Although previous studies have shown the effectiveness of in-house training in improving teacher competence in compiling teaching modules, most of these studies were conducted in public elementary schools and have not discussed the implementation of this approach in the Madrasah Ibtidaiyah environment. This study presents novelty by placing Madrasah Ibtidaiyah as the main context, where teachers are not only required to compile teaching modules according to the *Merdeka* Curriculum but also to integrate more complex character values, namely the Pancasila Student Profile character, in an Islamic context. In addition, the approach used in this study combines tiered training with intensive mentoring, reflective sessions, and the gradual use of educational technology as part of the teacher competency strengthening process. This technology integration includes the introduction of educational applications to support character-based learning and collaborative activities between students, as well as an emphasis on contextual, process-based, and project-based assessments. Therefore, the main focus of this study is not only to analyze the effectiveness of in-house training in improving teacher competence but also to examine how mentoring and utilization of technology are practically applied in the preparation and implementation of character-based teaching modules in Madrasah Ibtidaiyah.

## 2. METHODS

The type of research used in this study is qualitative research, which aims to explore an in-depth understanding of the phenomena that occur in the implementation of in-house training and how it develops teacher competence in compiling character-based teaching modules in accordance with the Merdeka Curriculum. In accordance with Sugiyono (2019), qualitative research aims to understand phenomena in their natural context, with an in-depth approach to teacher experiences, their interactions, and the processes involved in training and its implementation. This study uses a case study method to obtain a more holistic picture of the process and results of implementing in-house training at Madrasah Ibtidaiyah.

This research was conducted in one of the Madrasah Ibtidaiyah in Kebakkramat, Karanganyar, which was chosen because it had held in-house training as part of an effort to improve teacher competence in implementing the Merdeka Curriculum. This madrasah is considered relevant because it has an in-house training program that focuses on compiling teaching modules that are not only in accordance with the Merdeka Curriculum standards but also integrate character values. The subjects of the study included 10

teachers who participated in the in-house training, the principal, and supervisors involved in its implementation. Meanwhile, the objects of the study included the process of implementing in-house training and its impact on teacher competence in compiling teaching materials.

The implementation of in-house training in this study consisted of six sessions conducted periodically every week, with a duration of 2-3 hours per session. The training methods used were not limited to lectures and discussions but also included technical assistance, peer review, microteaching, and monitoring and evaluation. Each session was designed sequentially, starting from the presentation of the material, analysis of learning outcomes and learning objective flow, practice of compiling teaching modules, observation and revision, and teaching simulation to final evaluation. This training focused on the context of Madrasah Ibtidaiyah, where teachers not only learned to compile teaching modules according to the Merdeka Curriculum but were also directed to integrate the character values of the Pancasila Student Profile contextually in learning. In addition, this in-house training also combines the use of simple technology such as presentation applications, interactive platforms, and other digital media that are adjusted to the teacher's abilities and the facilities available at the madrasah. The mentoring process was carried out intensively in each session so that teachers received material and had space for direct practice, discussion, and constructive feedback. This research was also carried out by paying attention to the principles of research ethics, such as obtaining the principal's approval, maintaining the privacy and confidentiality of teacher data, and ensuring that the entire process is carried out in a participatory and transparent manner.

Data were collected through interviews, observations, and documentation to obtain a comprehensive picture of the implementation of the training. Interviews were conducted to explore their experiences and challenges in compiling character-based teaching modules. Direct observations were conducted during training sessions to see teacher involvement, material delivery methods, and the application of concepts taught in the practice of compiling modules. Meanwhile, documentation includes training materials, teaching modules that have been compiled by teachers, and notes or reports during the training. Data from these three methods were then compared to ensure consistency and validity of the findings through triangulation. Data analysis was carried out following the Miles and Huberman model, as stated by (Miles et al. (2014), which includes reduction, presentation, and drawing conclusions. Data was reduced by filtering and grouping from the results of observations, interviews, and documentation to identify patterns related to the effectiveness of in-house training. Furthermore, the data is presented in narrative or table form so that the research findings are easier to understand. Conclusions are drawn to gain a deeper understanding of the implementation of in-house training in improving teacher competence and its success in implementing the Merdeka Curriculum in Madrasah Ibtidaiyah.

### 3. FINDINGS AND DISCUSSION

The implementation of In-House Training (IHT) in this study was carried out across six sequentially structured sessions: presentation of material, identification of learning outcomes and instructional objectives, guided practice in developing teaching modules, peer review, microteaching, and monitoring and evaluation. The training employed a combination of interactive lectures, question-and-answer sessions, group discussions, direct technical assistance, and continuous practice integrated with formative evaluation.

A distinctive feature of this study lies in its contextual focus on Madrasah Ibtidaiyah, an educational setting that has received limited attention in prior research. Teachers in madrasahs face unique challenges in developing teaching modules that not only align with the Merdeka Curriculum but also meaningfully integrate the character values embodied in the Pancasila Student Profile, while remaining consistent with the religious and cultural nuances of the madrasah environment.

Furthermore, the training adopted an active mentoring-based approach, supported by the use of accessible digital tools such as Canva, PowerPoint, Google Docs, Google Drive, and other digital media. These tools were strategically utilized to enhance the effectiveness of character-based module development.

To capture a comprehensive understanding of the IHT implementation, the researcher employed three primary data collection methods: observation, in-depth interviews, and document analysis. This triangulated approach ensured the generation of rich, detailed data and strengthened the validity of findings concerning the impact of IHT on enhancing teacher competencies in designing relevant, contextual, and character-integrated teaching modules within the Madrasah Ibtidaiyah context.

### 3.1 Session 1: Presentation of Material for Compiling Teaching Modules

The first session activity was the presentation of material for compiling character-based teaching modules, which was carried out on December 31, 2024. Teachers were given a basic understanding of compiling character-based teaching modules in accordance with the Merdeka Curriculum, which includes three main components: general information (author identity, initial competencies, Pancasila Student Profile, and facilities and infrastructure that support learning), core components (learning outcomes and objectives, learning objective flow, assessment, and learning steps that include trigger questions, reflections, and remedial and enrichment programs), and attachments (teaching materials, learning media, student worksheets, and assessment instruments). The presentation of the material was complemented by an interactive discussion, where teachers shared experiences and asked questions related to the challenges in compiling teaching modules that were in accordance with the curriculum. To support concept visualization and make the training more interesting, the facilitator used digital presentation media such as PowerPoint and Canva. The use of interactive media makes it easier for teachers to understand the structure of the teaching module in a more visual and applicable way. The session ended with a question-and-answer forum to strengthen teachers' understanding before proceeding to the stage of analyzing learning outcomes and the flow of learning objectives in compiling more structured teaching modules.

The findings are in line with the results of interviews with the principal and several teachers on December 31, 2024. The principal stated that most teachers have understood the structure and components of the teaching module, especially in linking the Pancasila Student Profile with learning. However, there are still some who need assistance in developing more varied assessments. The principal said,

*"Most teachers are starting to understand the structure and components of the teaching module, especially in linking the Pancasila Student Profile with learning, but there are still some who need assistance in linking the concept of compiling the teaching module with more concrete examples, especially in compiling more applicable learning steps."*

The fifth-grade teacher also said that the training helped her better understand the importance of integrating the Pancasila Student Profile character into every stage of learning. He said, *"Now I understand better how this character can be applied in every part of the teaching module, not only in the assessment but also in the learning steps."* She also said that the use of media such as PowerPoint and Canva made it easier to understand the structure of the teaching module. The sixth-grade teacher said that the use of visual media during the presentation of the material really helped her understand the flow of compiling the teaching module as a whole. She felt more confident in compiling a teaching module that was not only attractive in appearance but also relevant to the needs of the students. In her interview, she said,

*"I understand better after seeing the visual examples of the teaching module. It feels easier to follow and gives me an idea to create a module that is more interesting and in accordance with the needs of students in the class."*

On the other hand, the third-grade teacher admitted that character is important but still does not clearly understand how to connect the character of the Pancasila Student Profile to the teaching module in the learning activities and assessment section.

The facilitator evaluation document and school supervision results indicate that the first training session succeeded in building teachers' initial understanding of the structure and components of character-based teaching modules according to the Merdeka Curriculum. Most teachers were able to identify the main sections, such as general information, core components, and appendices, and began to understand how to integrate the values of the Pancasila Student Profile into learning and assessment activities. Teachers also seemed enthusiastic about discussing and actively asking questions, especially regarding

alternative assessments. However, some teachers still needed further assistance to understand the relationship between learning outcomes, goal flows, activity steps, and assessments that support character strengthening. Thus, this training has provided a strong foundation, but further sessions are still needed for further study and practice in compiling more concrete and applicable teaching modules.

### 3.2 Session 2: Identification of Learning Outcomes and Learning Objective Flow

In the second session of the training held on January 7, 2025, the activity focused on the process of identifying learning outcomes and learning objective flow to ensure that the preparation of teaching modules is in accordance with the principles of the Merdeka Curriculum. In this activity, teachers work in groups accompanied by facilitators and principals. Facilitators share reference documents for learning outcomes and learning objective flow via Google Drive, which are then analyzed collaboratively by teachers using Google Docs. The discussion process between teachers encourages a collective understanding of the relationship between learning outcomes and learning objective flow with learning objectives, activities, and assessments designed in the teaching module. The results of this analysis become the basis for formulating clear, measurable, and contextual learning objectives, which are then translated into meaningful learning activities and relevant assessments to measure student competency achievement.

Based on the results of observations and facilitator evaluation documents and reflection notes, it can be seen that 70% (7 out of 10 teachers) have demonstrated the ability to identify the relationship between learning outcomes and learning objective flow with learning objectives. This can be seen from active discussions and the resulting working documents. For example, the fifth-grade science teacher was able to connect the learning outcomes about *"Students understand the concept of ecosystems and interactions between living things"* with learning activities in the form of direct observation of the school environment and discussions of the food chain. The teacher stated,

*"I just realized that learning objectives can be arranged sequentially from the learning objective flow, and each student activity should lead to achieving the competencies set out in the learning outcomes."*

However, 30% of teachers still experience obstacles at this stage, especially in interpreting the competencies contained in the learning outcomes and learning objective flow. For example, a second-grade teacher is still confused about distinguishing which is included in the learning outcomes and learning objective flow and learning objectives. The fourth-grade teacher also said,

*"I don't really understand how the order of objectives in the learning objective flow can reflect the stages of student thinking. I still often write objectives that are too general or even not appropriate for the children's age."*

This finding shows that there are still differences in the level of understanding between teachers regarding the structure and function of learning outcomes and learning objective flow in the Merdeka Curriculum learning design.

Document studies analyzed during the training strengthened the findings from observations and interviews. Documents resulting from the identification of learning outcomes and learning objective flows created by teachers showed that most had been able to formulate learning objectives more systematically and in accordance with the students' developmental phase. For example, documents compiled by a group of sixth-grade teachers showed how learning outcomes regarding critical thinking skills in analyzing information were developed into several gradual learning objectives, starting from reading information and asking questions to compiling responses in oral or written form. This document is not only real evidence of increased teacher understanding in compiling learning components but also supports consistency between interviews and observation results in the data triangulation process.

In his interview, the principal emphasized that the training had brought about positive changes in teachers' perspectives on learning outcomes and learning objective flow. He stated, *"Previously, they just copied from the internet without understanding the flow and interrelationships between the components. Now I see that they are starting to be able to connect competencies with learning activities and assessments in the teaching module. Although not all of them have done it yet, progress is visible."* Teacher reflections also showed significant changes in understanding. A sixth-grade teacher wrote that, *"I actually understand that learning outcomes and*

*learning objective flow are not just formalities but are an important foundation in developing focused learning.” The fifth-grade teacher also added, “Now I am more careful when developing objectives. I first look at the sequence in the Learning Objective Flow and make sure that the learning activities I create in the teaching module are connected to it.”*

Evaluation documents from the school showed an increase in teachers' understanding of connecting learning outcomes and learning objective flow compared to before the training. The process of identifying learning outcomes and learning objective flow in this training session had a positive impact on improving the competence of most teachers in developing teaching modules. The identification result documents are concrete evidence of increased understanding, while findings from observations and interviews strengthen the picture that teachers' understanding of the curriculum structure is starting to form, although not evenly. Therefore, further assistance is needed to strengthen teachers' ability to interpret and elaborate learning outcomes and learning objective flows into meaningful and applicable learning objectives. The focus of the next training will be directed at direct practice in compiling complete teaching modules, starting from the formulation of learning objectives that have been analyzed in this session to planning learning activities and formative assessments.

### **3.3 Session 3: Practice of Compiling Character-Based Teaching Modules According to the Merdeka Curriculum**

In the third session, teachers began compiling character-based teaching modules according to the Merdeka Curriculum with in the third session held on January 14, 2025, teachers began compiling character-based teaching modules according to the Merdeka Curriculum. The process of compiling teaching modules is carried out digitally, using Google Docs or Microsoft Word, and then saved via Google Drive to facilitate access, collaboration, and documentation. The facilitator directly accompanies this process, ensuring that each teacher understands the structure and principles of compiling teaching modules that integrate the values of the Pancasila Student Profile.

Documentation in the form of teaching modules compiled by teachers shows concrete evidence of increased competence in designing structured, character-based learning that is oriented towards achieving learning objectives. Based on the results of observations and facilitator evaluation documents and reflection notes, it can be seen that as many as 80% (8 out of 10 teachers) have been able to compile teaching modules with a systematic structure, covering three main components, namely general information, core components, and appendices. For example, in the teaching module on "Simple Fractions," teachers compile general information that includes module identity, initial competencies, and relevance to the values of the Pancasila Student Profile. In the core component, teachers set learning objectives, formative assessments, and learning activities using colorful pieces of paper to visualize the concept of fractions. In the appendix, teachers include student worksheets, fraction cards as learning media, and project assessment instruments to assess understanding of the concept of fractions. In addition, teachers also prepare attitude observation sheets to assess student independence, creativity, and cooperation during group activities, as well as skill assessment rubrics that focus on students' accuracy, neatness, and creativity when compiling fractions using media.

However, there are still 20% of teachers who experience obstacles in compiling learning steps that are in accordance with learning methods or models and aligning assessments with learning objectives. For example, in the Indonesian language teaching module, a teacher has designed learning objectives about writing descriptive texts, but is still confused about determining the appropriate method. In fact, they can use project-based assessments, such as writing descriptions of the surrounding environment to develop student independence and creativity, or presenting written results in groups to practice cooperation and global diversity.

The findings of this documentation strengthen the results of interviews with the principal, facilitators, and teachers. The principal said, *“Most teachers have been able to compile teaching modules well, but some still have difficulty in determining assessments that truly measure learning outcomes,”* he said. This is in line with the facilitator's observation that stated, *“Many teachers are still fixated on conventional assessments such as written questions, whereas effective teaching modules must provide various assessment methods that are appropriate to students' characters, such as projects or portfolios.”* The teachers also acknowledged that there had been

improvements in compiling teaching modules after the training. The third-grade teacher said, *“Previously, I only focused on the material, but now I realize that teaching modules must also build students’ character. In the ecosystem material, I started adding group discussion activities to train cooperation and critical thinking.”* The fourth-grade teacher added, *“I used to only give written questions, but after the training, I tried a simulation assessment of buying and selling so that students could understand fractions contextually.”* The second-grade teacher said, *“Previously, I only listed the materials; now I have started to create exploration activities such as observing objects around me that can help students understand better.”*

Teacher reflection notes also support these findings, showing an increase in understanding in compiling modules that are more meaningful and in accordance with student characteristics. Teachers began to see teaching modules not only as administrative documents but as the primary tool to direct the learning process as a whole. Evaluations from the school confirmed these findings. The principal noted an increase in the quality of the preparation of teaching modules compared to before, especially in terms of more systematic learning planning. However, he also emphasized that some teachers still needed guidance in aligning learning strategies and assessments with student characteristics. Overall, the results of documentation, interviews, and observations complement each other, indicating that the mentoring program has succeeded in improving teachers’ understanding and skills in compiling teaching modules that are contextual, character-based, and oriented towards strengthening the Pancasila Student Profile.

### **3.4 Session 4: Peer Review of Character-Based Teaching Modules**

In the fourth session, held on January 21, 2025, teachers conducted peer reviews using technology to facilitate the process of reviewing teaching modules. This process is carried out digitally, utilizing platforms such as Google Docs to provide direct feedback and collaboration. By using the comments and suggestions feature, each teacher can provide structured input as well as make revisions or changes in real-time. This not only speeds up access to documents but also allows facilitators and colleagues to provide input in real-time. Feedback documentation can also be directly recorded and stored in digital format, ensuring that all changes and improvements are clearly recorded. For example, a second-grade teacher revised the starter questions at the beginning of the lesson to be more relevant to students’ daily experiences after discussing them with other teachers through the platform. This digital collaboration allows feedback to be delivered more regularly and easily understood, allowing for more targeted improvements to the teaching module. In addition, Google Drive is used to store and manage all review documents so that access to teaching modules and feedback is faster and more efficient.

Based on the results of observations, facilitator evaluation documents, and reflection notes from participants, it can be seen that 100% (10 teacher training participants) felt helped by the feedback from facilitators and peers through the technology. Teachers improved their modules after receiving input provided through comments on Google Docs. For example, a sixth-grade teacher received input to simplify the experimental steps to suit the characteristics of students better, while still developing critical and independent reasoning skills.

The results of interviews with several teachers after the peer review session also supported the findings from observations and documentation. The sixth-grade teacher revealed that the feedback provided through the digital platform was very helpful in improving the experimental steps to better suit the abilities of students. She stated, *“Previously, I designed experiments with stages that were too complex, so they were less in line with students’ understanding. After receiving suggestions from colleagues through comments on Google Docs, I simplified the procedure and provided more guidance so that students could still think critically and independently in conducting experiments.”* The second-grade teacher also expressed significant benefits from the technology-based peer review process. *“I found it easier to change the trigger questions that were too general to be more relevant to students’ everyday experiences. Through comments and discussions with colleagues on Google Docs, I got more innovative ideas to make learning more contextual and interesting for students,”* she said. The facilitator added that the peer review process went well because teachers actively discussed and gave each other constructive feedback. In addition, the use of technology in the peer review process had a positive impact. She said, *“I saw teachers starting to be more critical in reviewing their teaching modules and those*

of their peers. They received feedback and asked in-depth questions to ensure that the modules they had prepared were truly effective and in accordance with the characteristics of their students.”

The documentation study also noted that all teachers (100%) had developed better teaching modules after going through this technology-based peer review process. The revised teaching modules showed significant improvements in terms of structure and alignment with learning objectives and included components such as learning objectives, learning activities, assessments, and character reinforcement. Teachers who still need further assistance can be further facilitated using the same digital platform. In conclusion, the use of technology in this peer review process not only increases efficiency but also strengthens collaboration and the provision of constructive feedback, not only accelerating the process but also improving the quality and involvement of teachers in developing more meaningful and effective teaching modules.

### 3.5 Session 5: Teaching Simulation

In the fifth session, teachers implemented modules in a teaching simulation (microteaching) that was held on January 28, 2025. The observation results showed that 80% (8 out of 10 teachers) were able to implement the learning scenario quite well according to the module they had prepared. They were able to follow the learning flow systematically and integrate the character values of the Pancasila Student Profile in the learning process. However, there were still 20% of teachers who experienced difficulties, especially in terms of time management and the relationship between assessments and learning objectives. For example, fourth-grade teachers needed adjustments in delivering fraction material to make it more interactive, and third-grade teachers had difficulty directing class discussions to stay focused on the targeted competencies, even though strategies such as question-and-answer sessions based on students' experiences could help foster a character of cooperation and global diversity.

In a post-simulation interview, the fourth-grade teacher revealed that she needed to adjust the way she delivered the fractions material to make it more interesting and interactive. *“I felt that my explanation was still too theoretical. After the simulation, I realized the importance of using visual aids and concrete activities so that students could more easily understand the concept of fractions,”* she explained. Meanwhile, the third-grade teacher said that she experienced challenges in keeping the direction of class discussions focused on the core competencies to be achieved. *“Sometimes the discussion gets divergent because students are too enthusiastic. I learned that I have to be more careful in choosing trigger questions that remain contextual but focused,”* she said. The facilitator assessed that, in general, the teachers showed significant improvements in terms of self-confidence, mastery of the material, and the ability to deliver learning systematically. She also appreciated the teachers' courage in trying various active and character-based learning strategies. *“I noticed that the teachers' enthusiasm for learning was very high. Although some still needed assistance, most of them were able to compile and implement contextual and meaningful teaching modules for students. They also began to be able to reflect on their weaknesses and find solutions independently or through group discussions,”* she said. This simulation is also considered to be a very valuable learning space for teachers to reflect and improve their learning practices in the future.

Documentation in the form of teaching modules, simulation implementation notes, and facilitator evaluation sheets shows a significant increase in teacher competence, especially in implementing systematic and character-based learning. Most of the teaching modules used in microteaching have been arranged sequentially and reflect the integration of the Pancasila Student Profile values, such as mutual cooperation, independence, and critical thinking, in the learning and assessment steps. The facilitator's notes also show that there is an increase in teacher understanding in compiling and implementing character-based learning; teachers have begun to apply contextual question-and-answer strategies and concrete visualizations in the teaching process. These findings support the results of observations that show the implementation of more systematic learning scenarios and strengthen interviews that highlight teachers' ability to reflect on and improve their teaching practices continuously. This simulation is an important forum for testing and refining teaching modules as part of the process of improving teacher professional competence.

### 3.6 Session 6: Monitoring and Evaluation

The sixth session, which took place on February 4, 2025, focused on monitoring and evaluation activities, especially to assess the extent to which teachers have implemented the training results in the form of teaching modules and learning practices. The main objective of this session is to ensure that each teacher is not only able to compile teaching modules systematically but also understands how to apply them in real learning that is oriented towards student character. In this activity, school supervisors and facilitators jointly assess the results of compiling teaching modules and teaching practice simulations based on the modules that have been created by each teacher.

The evaluation process was carried out through direct observation of the module documents, feedback from colleagues, and individual reflection. In addition, the assessment also included a teaching simulation that showed how teachers implement their teaching modules in real classes. Based on the observation results, as many as 90% of teachers showed increased confidence in compiling and implementing teaching modules and assessments that focus on the learning process rather than just the final results. This finding is supported by the statement of one of the second-grade teachers, *I just understand the importance of designing modules that are not only focused on the material but also encourage students to think critically and actively in learning.* This shows that the training improves teachers' technical skills and changes their mindset in compiling more innovative and character-based modules. However, 10% of teachers still find it difficult to compile differentiated teaching modules. One teacher said that he was still confused about adjusting strategies and assessments to the different needs of students.

In the discussion forum, the facilitator provided important input regarding the use of technology in teaching modules. He emphasized that the use of technology should not only be limited to administrative needs such as typing modules or storing files but also be integrated directly into the learning process. The facilitator suggested that teachers explicitly write down the digital media used in the learning tools and media component, for example, Canva to create infographics, Google Slides for group presentations, Google Forms as a reflection instrument or formative evaluation, Wordwall and Quizizz for evaluation, and others. The use of this media can enrich students' learning experiences while strengthening the application of character values emphasized in the Merdeka Curriculum. Teachers welcomed the input and stated the need for further training that focuses more on the practice of using technology in an applied manner in learning. An Islamic religious education teacher suggested that the next training also introduce various educational platforms that are in accordance with students' characters. Several teachers also proposed a guide or module template that includes systematic digital media integration.

The results of the documentation during this session also strengthened the findings of observations and interviews. The teaching modules that had been prepared showed an increase in quality, with the majority of teachers being able to formulate clear learning objectives, insert varied and contextual assessments, and design character-oriented learning activities. Several modules had also begun to include differentiated learning strategies and incorporate the use of technology, although they still needed strengthening in the technical planning of its use in the classroom. Teacher reflection notes showed a new awareness of the importance of formative assessment and the role of teachers as active learning facilitators. *"I started to be open to trying strategies that I had never used before. It turned out that with a few changes, students became more enthusiastic about learning,"* wrote one teacher in his reflection.

The school supervisor expressed his appreciation for the active involvement of teachers during the training and noted that this monitoring activity had shown a positive impact on improving the quality of teaching materials. *"I saw the enthusiasm and progress of the teachers was extraordinary. They are ready to continue to develop, especially if facilitated with the right advanced training,"* he said. The principal also appreciated the results of the training, especially in encouraging teachers to be more reflective and open to developments in the era. He stated, *"This training has succeeded in building a learning culture among teachers. They learned to compile modules and began to understand the importance of linking learning to student character and the madrasah context, as well as utilizing technology in compiling teaching modules and learning practices."* The feedback provided in this session became the basis for improvement and strengthening in the aspects of differentiated learning strategies, technology integration in teaching modules, and improving the quality of assessments that favor students.

Based on the results of the analysis, before participating in the in-house training, many teachers still relied on teaching modules downloaded from the internet or purchased printed modules from external parties without adjusting them to the characteristics of students or the context of the Madrasah Ibtidaiyah. After in-house training, there was an increase in teacher competence in compiling teaching modules that were in accordance with the needs and characteristics of students in the Madrasah Ibtidaiyah based on character according to the Merdeka Curriculum. As many as 80% of participants understood the basic structure of the teaching module, 70% were able to link learning outcomes and learning objective flows with other components, 80% succeeded in compiling a complete and systematic teaching module, 100% of participants felt helped by feedback from facilitators and peer reviews, and 90% of them felt more prepared and confident in implementing the teaching modules they had compiled. The results of this study are also in line with (Hartatik's (2022) research conducted at SDN Tlekung 02 Batu City, showing that training that is designed systematically and oriented towards field practice can improve teachers' understanding of differentiated learning, flexible planning, and formative assessment. The results show an increase in teacher competency scores from 64 in the first cycle to 81.60 in the second cycle. Thus, this series of research results underlines that in-house training is an effective and relevant training strategy to improve teacher readiness in compiling and implementing teaching modules according to the demands of the Merdeka Curriculum.

This finding is also in line with (Mahanani's (2023) study at SDN 3 Kalanglundo, which showed that teacher competence in compiling teaching modules increased significantly from 0% before training to 42.86% in the first cycle and reached 100% in the second cycle after receiving intensive training and mentoring interventions. This shows that structured, continuous, and practice-based training can be an effective strategy in improving teachers' abilities in compiling teaching materials in accordance with the Merdeka Curriculum. In addition, it is also reinforced by (Yuhaga's (2023) study at SDN 1 Pandran Raya, which showed that training was able to significantly improve teacher skills. In the study, the observation score for teacher skills in compiling teaching modules increased from 4.75 in the pre-cycle to 9.15 in cycle I (good category) and increased again to 11.2 in cycle II (excellent category). The training also provides space for teachers to discuss and evaluate problems together and follow up for improvement in the next cycle. Thus, it can be concluded that ongoing training and mentoring are very necessary to strengthen teachers' abilities in compiling contextual teaching modules that are in accordance with the demands of the Merdeka Curriculum.

Although the three previous studies all showed that training can improve teacher competence in compiling teaching modules according to the Merdeka Curriculum, there are important differences in context and approach with the current study. The three previous studies were conducted in public elementary schools using a cycle-based School Action Research approach. Meanwhile, the current study was conducted in Madrasah Ibtidaiyah and used a qualitative approach that not only focused on compiling teaching modules according to the Merdeka Curriculum structure but also on integrating character values in the Pancasila Student Profile. The training was conducted in stages through six sessions, starting from material presentation, analysis of learning outcomes, compiling teaching modules, peer review, and microteaching to evaluation. In addition, this training emphasized the importance of ongoing mentoring and the practical use of digital technology, making this training model more adaptive and in accordance with the challenges faced by teachers in Madrasah Ibtidaiyah in implementing the Merdeka Curriculum.

The findings in this study emphasize the importance of developing contextual, collaborative, and sustainable teacher training programs, especially in the Madrasah Ibtidaiyah environment. The implementation of in-house training designed with a unique approach, namely the integration of intensive mentoring and the use of digital technology, is a strategic innovation in increasing teacher capacity in compiling and implementing the Merdeka Curriculum teaching module. The resulting module is not only structured and easy to understand but also relevant to student needs and contains character values in the Pancasila Student Profile. This study has important implications for the implementation of the Merdeka Curriculum and the development of broader education policies. Policies are needed that support contextual training based on educational units such as Madrasah Ibtidaiyah so that training is not general and disconnected but rather sustainable and applicable. Strengthening teacher capacity through post-in-

house training mentoring, applicable technology training, and reflective culture are the keys to sustainable improvement in the quality of learning.

#### 4. CONCLUSION

The implementation of In-House Training (IHT) in *Madrasah Ibtidaiyah* has demonstrated a positive impact on enhancing teacher competence, particularly in the development of character-based teaching modules aligned with the Merdeka Curriculum. Improvements were evident not only in participants' understanding of module structure and components, but also in their ability to integrate the values of the Pancasila Student Profile into instructional and assessment practices. This progress fostered more student-centered, reflective, and contextually responsive learning designs, underscoring the teacher's role as a key architect of meaningful education. The study's novelty lies in its focus on *Madrasah Ibtidaiyah*, a context often overlooked in curriculum implementation research, and in its integration of intensive mentoring with practical digital tools. While the findings support broader national education goals—such as preparing adaptive, technologically literate, and pedagogically skilled teachers—they are limited by the small sample size and single-site scope, restricting generalizability. Moreover, the long-term impact of the training on classroom practice remains unassessed. Future research should expand to multiple sites with longitudinal designs to evaluate sustained implementation outcomes. It is also recommended that digital platforms such as Google Classroom, Padlet, and multimedia applications be incorporated into ongoing professional development, with an emphasis on continued mentoring, practical technology integration, and reflective digital practices to ensure the consistent and relevant growth of teacher competencies across madrasahs and other educational settings.

#### REFERENCES

- Afandi, M. A. (2020). Peranan Guru dalam Meningkatkan Prestasi Belajar Siswa di Madrasah Ibtidaiyah Hidayatul Mubtadiin Wates Sumbergempol. *Al Ibtida': Jurnal Program Studi Pendidikan Guru Madrasah Ibtidaiyah*, 8(2), 17–37.  
<https://ejournal.kopertais4.or.id/mataraman/index.php/alibtida/article/view/4319>
- Amalia, G., & Maknun, L. L. (2022). Peran Guru dalam Meningkatkan Motivasi Belajar Siswa Madrasah Ibtidaiyah/Sekolah Dasar. *Madrosatuna: Jurnal Pendidikan Guru Madrasah Ibtidaiyah*, 5(1), 21–36.  
<https://jurnal.iailm.ac.id/index.php/madrosatuna/article/view/465>
- Aziz, A., & Hasanah, U. (2022). Penguatan Profil Pelajar Pancasila Melalui Pendidikan Karakter Berbasis Nilai-Nilai Islam di Madrasah Ibtidaiyah. *Journal of Education and Learning Sciences*, 2(2), 1–14.  
<https://doi.org/10.56404/jels.v2i2.19>
- Bakri, A. (2024). Guru PAI dalam Menerapkan Kurikulum Merdeka pada Kelas Rendah di Madrasah Ibtidaiyah Al Ula. *Darajat: Jurnal Pendidikan Agama Islam*, 7(1), 43–53.  
<https://doi.org/10.58518/darajat.v7i1.2372>
- Buchari, A. (2018). Peran Guru dalam Pengelolaan Pembelajaran. *Jurnal Ilmiah Iqra'*, 12(2), 106–124.  
<http://dx.doi.org/10.30984/jii.v12i2.897>
- Falaq, Y. (2022, August). Penguatan Pendidikan Karakter dalam Skema Pelajar Pancasila di Madrasah Ibtidaiyah. In *ICIE: International Conference on Islamic Education*, 2(1), 367–380.  
<https://proceeding.iainkudus.ac.id/index.php/ICIE/article/view/248>
- Handayani, H. R. (2019). Peningkatan Kompetensi Guru dalam Menyusun RPP dan Pelaksanaan Pembelajaran Melalui Teknik IHT (In House Training). *Ideguru: Jurnal Karya Ilmiah Guru*, 4(1), 32–36. <https://doi.org/10.51169/ideguru.v4i1.66>
- Hartatik, S. (2022). Peningkatan Kompetensi Guru dalam Implementasi Kurikulum Merdeka (IKM) Melalui in House Training (IHT) di SDN Tlekung 02 Kota Batu. *Jurnal Pendidikan Taman Widya Humaniora (JPTWH)*, 1(4), 318–339.  
<https://jurnal.widyahumaniora.org/index.php/jptwh/article/view/86>
- Ibrahim, R., Asmarika, A., Salim, A., Wisanto, W., & Abunawas, A. (2023). Peran Guru dalam Membentuk Karakter Disiplin Peserta Didik Madrasah Ibtidaiyah Al Barokah Pekanbaru. *Journal of*

- Education Research*, 4(3), 1082–1088. <https://doi.org/10.37985/jer.v4i3.371>
- Jannati, P., Ramadhan, F. A., & Rohimawan, M. A. (2023). Peran Guru Penggerak dalam Implementasi Kurikulum Merdeka di Sekolah Dasar. *Al-Madrasah: Jurnal Ilmiah Pendidikan Madrasah Ibtidaiyah*, 7(1), 330–345. <http://dx.doi.org/10.35931/am.v7i1.1714>
- Jayadipura, Y. (2018). In House Training untuk Meningkatkan Kemampuan Guru dalam Menyusun RPP. *Idaarah: Jurnal Manajemen Pendidikan*, 2(2), 260–268. <https://doi.org/10.24252/idaarah.v2i2.6808>
- Kamiludin, J. (2021). Pelaksanaan In-House Training (IHT) untuk Meningkatkan Kemampuan Guru dalam Menyusun RPP. *Jurnal Pedagogiana*, 8(49), 1-12. <https://doi.org/10.24252/idaarah.v2i2.6808>
- Kartawan, C. W., & Alkarimah, F. (2023). Peran Guru Pendidikan Agama Islam dalam Mewujudkan Profil Pelajar Pancasila. *Jurnal Ilmiah Pendidikan dan Pembelajaran*, 7(2), 239–246. <https://doi.org/10.23887/jipp.v7i2.59576>
- Kementerian Pendidikan dan Kebudayaan. (2022). *Kurikulum Merdeka: Panduan Implementasi Pendidikan yang Fleksibel dan Berbasis Karakter*. Jakarta: Kementerian Pendidikan dan Kebudayaan.
- Khaerani, N. C. (2016). Peningkatan Kompetensi Guru dalam Menyusun RPP Melalui Kegiatan IHT (In House Training). *Didaktikum*, 17(1), 64–70. <https://www.i-rpp.com/index.php/didaktikum/article/view/398>
- Mahmudin, A. S. (2021). Pengembangan Bahan Ajar Mata Pelajaran Pendidikan Agama Islam oleh Guru Tingkat Sekolah Dasar. *SITTAH: Journal of Primary Education*, 2(2), 95-106. <https://doi.org/10.30762/sittah.v2i2.3396>
- Mahanani, S. (2023). Peningkatan Kompetensi Guru dalam Menyusun Modul Ajar pada Sekolah Penggerak Melalui Pembimbingan di SD Negeri 3 Kalanglundo. *Sentra Cendekia*, 4(1), 15–23. <https://doi.org/10.31331/sencenivet.v4i1.2505>
- Maolana, A. D. (2018). Peningkatan Kompetensi Guru dalam Menyusun Rencana Pelaksanaan Pembelajaran Melalui In House Training. *Jurnal Pendidikan Tambusai*, 2(3), 953–969. <https://doi.org/10.31004/jptam.v2i5.74>
- Midayanti, A., Mustafida, F., & Afifulloh, M. (2023). Peran Guru dalam Meningkatkan Prestasi Belajar Siswa di Madrasah Ibtidaiyah. *JPMI: Jurnal Pendidikan Madrasah Ibtidaiyah*, 5(4), 76–86. <https://jim.unisma.ac.id/index.php/JPMI/article/view/23122>
- Miles, M. B., Huberman, A. M., & Saldana, J. (2014). *Qualitative Data Analysis; A Methods Sourcebook*. Arizona State: Sage
- Mulyani, H., & Insani, M. N. (2023). Kompetensi Guru Sekolah Penggerak dalam Menyusun Modul Ajar Kurikulum Merdeka. *Jurnal Lingkar Mutu Pendidikan*, 20(1), 1–10. <https://doi.org/10.54124/jlmp.v20i1.95>
- Munawir, M., Auliya, D. R. A., & Shufiyah, S. S. (2024). Implementasi Kurikulum Merdeka pada Mata Pelajaran Agama Islam di Madrasah Ibtidaiyah. *Al-Madrasah: Jurnal Ilmiah Pendidikan Madrasah Ibtidaiyah*, 8(1), 34–43. <http://dx.doi.org/10.35931/am.v8i1.2544>
- Nurhidaya, N., Lundeto, A., & Luma, M. (2021). Peran Guru Kelas dalam Pembentukan Karakter Siswa Kelas III di Madrasah Ibtidaiyah. *Journal of Elementary Educational Research*, 1(2), 56–67. <https://doi.org/10.30984/jeer.v1i2.68>
- Nuruningsih, S., & Palupi, R. E. A. (2021). Peningkatan Kompetensi Guru dalam Penyusunan Rencana Pelaksanaan Pembelajaran (RPP) dengan Metode Focus Group Discussion pada Kegiatan In House Training (IHT) bagi Guru di SDN Pondok 03. *Jurnal Dimensi Pendidikan dan Pembelajaran*, 9(1), 51–57. <http://dx.doi.org/10.24269/dpp.v9i1.3470>
- Pangestuti, T. (2022). Implementasi Proyek Penguatan Profil Pelajar Pancasila untuk Meningkatkan Kompetensi Guru Melalui In House Training di SDN Sisir 06 Batu. *Jurnal Pendidikan Taman Widya Humaniora (JPTWH)*, 1(3), 516–537. <https://jurnal.widyahumaniora.org/index.php/jptwh/article/view/73>
- Rismawanda, H., & Mustika, D. (2024). Kemampuan Guru dalam Menyusun Modul Ajar pada Kurikulum Merdeka di Sekolah Dasar. *Aulad: Journal on Early Childhood*, 7(1), 32–42. <https://doi.org/10.31004/aulad.v7i1.575>
- Rizal, M., Iqbal, M., & Rahima, R. (2022). Pelatihan Merancang Modul Proyek Profil Pelajar Pancasila Bagi Guru SDN 6 Peusangan Selatan Melalui In House Training Sekolah Penggerak. *Community*

- Development Journal: Jurnal Pengabdian Masyarakat*, 3(3), 1574–1580.  
<https://doi.org/10.31004/cdj.v3i3.6878>
- Suhartini, T. (2021). In House Training (IHT) Meningkatkan Kompetensi Guru dalam Menyusun RPP Merdeka Belajar. *JANACITTA*, 4(1), 45–56. <https://doi.org/10.35473/jnctt.v4i1.919>
- Saifullah, A. (2023). Peningkatan Kompetensi Guru dalam Implementasi Kurikulum Merdeka Belajar Melalui In House Training (IHT) di MTs Negeri 1 Sidoarjo. *Innovative: Journal of Social Science Research*, 3(2), 515–528. <https://j-innovative.org/index.php/Innovative/article/view/354>
- Sutama. (2019). *Metode Penelitian Kuantitatif, Kualitatif, PTK, Mix Metod, R & D*. Sukoharjo: CV Jasmine.
- Tasmini, T. (2022). Peningkatan Kompetensi Guru Melalui Program In House Training Penyusunan Bahan Ajar Berbasis Kearifan Lokal di SD Negeri 117 Rejang Lebong. *Indonesian Journal of Social Science Education (IJSSE)*, 4(2), 191–98. <http://dx.doi.org/10.29300/ijssse.v4i2.8228>
- Virgiyanti, D., Dewi, I. K., & Zuliani, R. (2023). Peningkatan Kompetensi Guru dalam Implementasi Kurikulum Merdeka (IKM) Melalui In House Training (IHT) di SDIT Darul Ulum. *Anwarul*, 3(4), 751–766. <https://doi.org/10.58578/anwarul.v3i4.1335>
- Wulandari, R. I., & Ichsan, I. (2023). Optimalisasi Peran Guru dan Orang Tua dalam Meningkatkan Karakter Religius Peserta Didik Madrasah Ibtidaiyah. *Alifbata: Jurnal Pendidikan Dasar*, 3(1), 1–11. <https://doi.org/10.51700/alifbata.v3i1.411>
- Yuhaga, Y. (2023). Increasing Teachers' Skills in Developing Merdeka Curriculum Teaching Modules Through Training In SD Negeri 1 Pandran Raya Teweh Tengah District North Barito Regency Semester I, Academic Year 2021/2022. *Anterior Jurnal*, 22(1), 52–58. <https://doi.org/10.33084/anterior.v22i1.4197>