
Training on the Development of Constructivist-Based Teaching Modules for Educational Practitioners at SMAN 3 Sidoarjo

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Abstract. Within the framework of the Merdeka Curriculum, educators are directed to guide and teach students in accordance with their characteristics, interests, and talents. The development of the independent learning concept within the Merdeka Curriculum can be directed towards differentiated learning. The method implemented involves providing socialization and training to teachers at SMAN 3 Sidoarjo in the creation of teaching modules with the application of constructive methods. The instrument used as a measure of the success of this community service activity is a post-activity questionnaire consisting of 7 questions. There were 70 participants from SMAN 3 Sidoarjo involved in this community service, which took place at SMAN 3 Sidoarjo. Participants in the community service displayed a positive response (average score of 98.32) regarding participant satisfaction, alignment of participant expectations with the activity, the competence of facilitators and presenters, the effectiveness or responsiveness of facilitators and presenters, and participant interest. The results of this community service can be implemented in the process of creating differentiated teaching modules at SMAN 3 Sidoarjo.

Key Words: Merdeka Curriculum, teaching modules, differentiated learning

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INTRODUCTION

Indonesia has experienced frequent curriculum changes and revisions (Daga, 2021). These changes have evolved from the previous curriculum structures, such as KTSP and K-13, to the current Merdeka Curriculum introduced by Nadiem Makarim, the Minister of Education, Culture, Research, and Technology. The Merdeka Curriculum represents a revision and improvement of the Curriculum-13. Within the Merdeka Curriculum, educators are directed to guide and teach students according to their individual needs, intellectual levels, backgrounds, talents, interests, and readiness for learning (Marlina, 2023), assessed at the beginning of the learning process. To realize the concept of independent learning within the Merdeka Curriculum, differentiation in teaching is essential (Kurnia Fitra, 2022). Differentiated learning allows students the freedom to explore and deepen their understanding based on their preferences and abilities (Ultra Gusteti, 2022). Differentiated learning also aligns with various aspects of the Merdeka Curriculum, including the Pancasila learner profile (Martanti et al., 2021), which encompasses the moral values of Pancasila education (Wadu et al., 2019).

Changes in the Merdeka Curriculum also influenced the transformation of educational tools, including Lesson Plans (RPP), which now incorporate Teaching Modules. Teaching modules are designed materials that implement the Learning Objectives Flow (ATP) developed through Learning Outcomes (CP), with a focus on the Pancasila learner profile (Setiawan et al., 2022). Teaching modules are a vital replacement for RPPs in the Merdeka Curriculum and play a crucial role in ensuring that the learning process achieves its intended objectives. Therefore, educators must comprehend the concepts of creating teaching modules to maximize the effectiveness and meaningfulness of the teaching process.

Within the teaching modules of the Merdeka Curriculum are included tools, instructions, methods, and guidelines related to systematically designed learning tailored to students' needs, developmental stages, and characteristics. In the Merdeka Curriculum, educators are granted the freedom to choose, develop, and use teaching module formats while adhering to its three essential components: learning objectives, learning activities, and assessment (Hanifah et al., 2023). In other words, during the development of teaching modules, teachers have flexibility in various aspects, guided by the Learning and Assessment Guidelines (Setiawan et al., 2022). The primary goal of teaching module

development outlined in the Learning and Assessment Guidelines is to create teaching materials that serve as a guide for educators during the learning process. This aligns with the core principle of the Merdeka Curriculum, which emphasizes the liberation of both educators and students, empowering them to face the era of disruption and fostering independence (Tedjokoesoemo et al., 2020).

However, in practice, it has been observed that the curriculum changes and the development of teaching materials, particularly for differentiated learning, pose challenges for many educators (Rindayati et al., 2022). These challenges stem from both external and internal factors. External factors include the continued dominance of teacher and student textbooks and the demand for creative and innovative development of teaching materials. Internal factors involve educators' limited understanding of the techniques for creating teaching modules (Maulida, 2022) and the changes in the Merdeka Curriculum that emphasize themed principles and procedures, making it difficult for educators to think about integrated teaching material development (Indarwati, 2021). Hence, there is a need for training and the application of constructivist methods to assist educators facing difficulties.

The constructivist method can be applied by providing instruction and training to educators, focusing on specific teachers. The aim is to enhance the potential of these educators through continuous training, seminars, workshops, and teaching to make them more professional in their work and the development of teaching materials, as expected (Barlian et al., 2022).

PROBLEM

The issue at hand is the insufficient understanding among educators when it comes to designing and creating differentiated teaching modules within the Merdeka Curriculum. In order to address this problem, a community service activity has been organized, focusing on training in the development of differentiated teaching modules based on constructivist methods, with the target audience being the teachers at SMAN 3 Sidoarjo.

METHOD OF IMPLEMENTATION

This training activity is conducted through a combination of online (virtual) and offline (in-person) methods, involving a total of 70 teachers from SMAN 3 Sidoarjo. The approach employed includes socialization and training sessions for the teachers, focusing

on the development of teaching modules with the application of constructivist methods. The training, carried out as a community service initiative, is divided into two sessions. The first session was held online through Zoom Meeting platform on July 13, 2023, which discuss about introduction and socialization of differentiated learning, planning for diagnostic assessment, developing diagnostic, summative, and formative assessment items based on Minimum Competency Assessment (MCA), and creating differentiated teaching modules or Lesson Plans (RPP). The second session was held offline (in-person) in SMAN 3 Sidoarjo on July 20, 2023. The session was facilitated by faculty members from the Department of Chemistry at Universitas Negeri Malang and undergraduate students majoring in Chemistry Education at Universitas Negeri Malang. This session discusses about hands-on training in the development of teaching modules and practical implementation of constructivist methods in module creation. The community service activities are conducted sequentially, with a clear outline of the stages involved. The following are the steps of the community service activity.

Table 1. Community Service Activity Schedule

Session	Date	Material	Method
1	July 13, 2023	Socialization of differentiated learning Socialization of planning for diagnostic assessment, developing diagnostic, summative, and formative assessment items based on Minimum Competency Assessment (MCA) Socialization of creating differentiated teaching modules or Lesson Plans (RPP)	Online
2	July 20, 2023	Hands-on training in the development of teaching modules and practical implementation of constructivist methods in module creation	Offline

The project implementers are required to engage in coordination with their partners, specifically SMAN 3 Sidoarjo, concerning the adjustment of the community service activity schedule. An evaluation of this community service training activity is deemed necessary in order to assess its strengths and weaknesses in implementation. The



measurement tools or indicators employed for gauging the success of the activity include the utilization of surveys.

RESULT AND DISCUSSION

A. Overview of Activity Implementation

The Community Service Activity organized by the Community Service Team from the Department of Chemistry at Universitas Negeri Malang, with the theme "Dissemination and Optimization of Differentiated Teaching Module Development," at SMAN 3 Sidoarjo, has proceeded smoothly and successfully. This community service training activity was conducted in both online (virtual) and offline (physical) modes. The implementation of the training activities as part of community service took place twice, with the first agenda encompassing the socialization of differentiated learning, diagnostic planning, diagnostic questions, summative and formative questions based on Minimum Competence Assessment (MCA), and the creation of differentiated teaching modules or Lesson Plans (RPP). This initial agenda was held on July 13, 2023, from 8:00 AM to 10:10 AM through the Zoom Meeting platform.

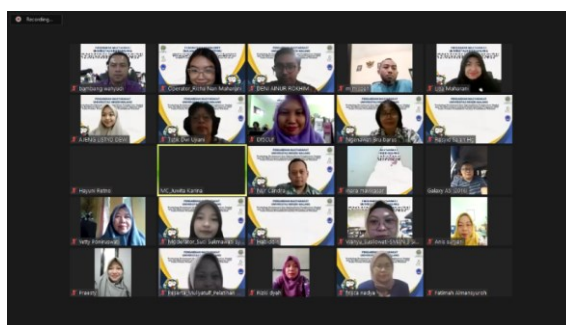


Figure 1. Implementation of community service activities in an online format

The first agenda was carried out systematically, involving preparations related to the requirements for online implementation, including content delivery, event facilitators, operators, and internet connectivity. The second agenda involved training on the development of teaching modules, which took place on July 20th and was conducted in person at SMAN 3 Sidoarjo by lecturers from the Department of Chemistry at Universitas Negeri Malang and undergraduate students majoring in Chemistry Education from the same university.

The online implementation of these activities has yielded numerous benefits through the optimal utilization of technology and the internet. This approach has ensured

uninterrupted connectivity among participants in the community service training, transcending the constraints of physical space and time, enabling engagement from anywhere and at any time. The online format of these activities has streamlined interactions between both presenters and participants, eliminating the need for face-to-face meetings (Maknun et al., 2022).



Figure 2. Implementation of community service activities in an offline format

Furthermore, the in-person community service training has proven to be beneficial both for the participants and the executing team. The execution team can readily monitor and provide direct guidance to the participants, facilitating a real-time assessment of their understanding.

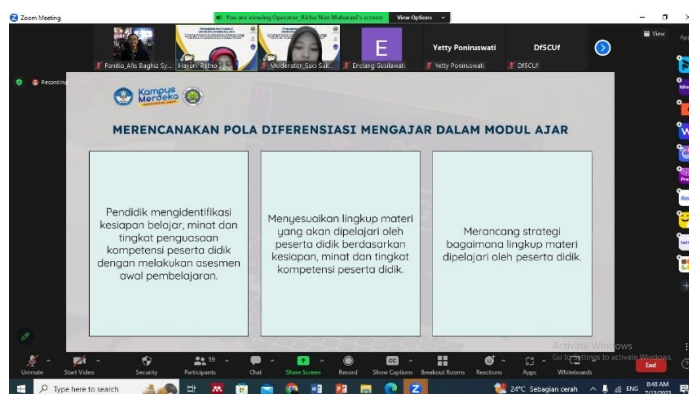


Figure 3. Dissemination on chemistry misconceptions and conceptual errors by Prof. Dr. Hayuni Retno Widarti, M.Si.

B. Socialization Activities on differentiated learning, diagnostic planning, diagnostic questions, summative and formative questions based on Minimum Competence Assessment (MCA), and the Development of Differentiated Teaching Modules

The community service activity commenced with an opening ceremony and prayer led by the Master of Ceremony. It was followed by a presentation delivered by the first speaker, Prof. Dr. Hayuni Retno Widarti, M.Si., on differentiated learning, as depicted in

Figure 3. The presentation encompassed various topics, including planning patterns and differentiation techniques in teaching for educators at SMAN 3 Sidoarjo, specifically in the creation of teaching modules. This planning took into consideration the readiness and competencies of the learners, tailoring the scope of the material accordingly. Subsequently, educators could more effectively design strategies to ensure the comprehension of the subject matter by each learner. During the presentation, the speaker also imparted knowledge pertaining to the concept of differentiated learning.

During the first session, an explanation of differentiated learning was provided, along with its significance, to the teachers at SMAN 3 Sidoarjo, serving as a reference for their future teaching module development. Subsequently, the second session focused on the presentation of topics related to diagnostic planning, diagnostic questions, summative and formative assessments based on Minimum Competence Assessment (MCA). This session was delivered by the second speaker, Habiddin Ph.D. The presentation covered information about the instruments required for planning MCA-based diagnostic questions. It also elaborated on the components of MCA that learners should possess, including reading literacy and numeracy skills. Reading literacy is defined as the ability of learners to comprehend, implement, and interact with written texts. Numeracy skills refer to the ability to represent events by solving problems and making decisions by utilizing mathematical knowledge.

The final session involved the dissemination of information on the creation of differentiated teaching modules or Lesson Plans (RPP), presented by Nur Candra Eka Setiawan, S.Si., M.Pd. Following the presentation by each speaker, a question-and-answer session was conducted. This Q&A session proceeded smoothly, with enthusiastic participation from the attendees.

C. Training Activities on the Development of Differentiated Teaching Modules as an Implementation Substitute for Lesson Plans among Educational Practitioners in School Education

This training activity was conducted in person (offline) at SMAN 3 Sidoarjo and commenced with a prayer, followed by opening remarks from the activity's chief organizer, Prof. Dr. Hayuni Retno Widarti, M.Si. Additionally, Dr. Imam J, S.Pd., M.M., the supervisor of the Chemistry Teachers' Working Group (MGMP Kimia) for SMA (Senior

High School) in Sidoarjo Regency, delivered a welcoming address. The event proceeded with a group photo session for documentation purposes.

The event consisted of two sessions. The first session involved the presentation of materials, while the second session was a question and answer. The material presentation session lasted for 60 minutes and focused on the creation of differentiated teaching modules as an alternative implementation to Lesson Plans among educational practitioners in school education. Following the material presentation session, a question and answer was conducted, facilitated by the Master of Ceremony. Once all sessions were concluded, the event was closed with a prayer.



Figure 4. Group photo from the event.

After the training activity concluded, participants were provided with a post-training questionnaire. The results from this questionnaire were utilized as a quantitative measurement tool to assess the success of the training and determine whether its objectives were achieved or not. The post-training questionnaire results are presented in Table 2.

Table 2. Results of the Post-Training Questionnaire on Constructivist Method-Based Teaching Module Development for Educational Practitioners at SMAN 3 Sidoarjo

No	Evaluation Aspects	Evaluation Results (%)			Total (%)
		Good	Sufficient	Insufficient	
1	Participant satisfaction	91,6	8,4	-	100
2	Alignment with participant expectations	100	-	-	100
3	Competence of presenters	100	-	-	100
4	Presenter promptness and responsiveness	100	-	-	100
5	Participant interest	100	-	-	100

Table 2 indicates that the implementation of community service activities has proceeded smoothly, with positive evaluations across various aspects assessed, including participant satisfaction, alignment with participant expectations, competence of presenters, promptness, and responsiveness of presenters, as well as participant interest. However, it is worth noting that some participants rated satisfaction as "cukup" (sufficient), which may be attributed to the limited duration of the in-person training. This observation aligns with the feedback provided by participants through post-training questionnaires, suggesting a need for more time during the in-person training component based on their recommendations.

CONCLUSION

Based on the results and discussions presented above, it can be concluded that the training on the development of differentiated teaching modules has been successfully conducted. The aim of this community service project is to facilitate the implementation of differentiated teaching module creation at SMAN 3 Sidoarjo by providing MCA-based questions to students, thereby better preparing them for the National Assessment.

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Original Title:

Pelatihan Pembuatan Modul Ajar berbasis Metode Konstruktif terhadap Pelaku Pendidikan SMAN 3 Sidoarjo

Abstrak. Dalam Kurikulum Merdeka, pendidik diarahkan membimbing dan mengajar peserta didik sesuai dengan karakteristik, minat dan bakatnya. Pengembangan konsep merdeka belajar dalam Kurikulum Merdeka ini dapat diarahkan ke dalam pembelajaran berdiferensiasi. Metode yang dilaksanakan adalah dengan pemberian sosialisasi dan pelatihan terhadap guru-guru di SMAN 3 Sidoarjo dalam pembuatan modul ajar dengan penerapan konstruktif metode. Instrumen yang digunakan sebagai alat ukur keberhasilan kegiatan dalam kegiatan pengabdian masyarakat ini adalah angket pasca kegiatan dengan 7 pertanyaan. Subjek dalam pengabdian ini sebanyak 70 orang dari SMAN 3 Sidoarjo. Sedangkan lokasi pengabdian bertempat di SMAN 3 Sidoarjo. Peserta kegiatan pengabdian memilih respons positif (skor rata-rata sebesar 98,32) terhadap aspek kepuasan peserta, kesesuaian harapan peserta terhadap kegiatan, kompetensi pemateri dan pengisi acara, kecekatan atau ketanggapan pemateri dan pengisi acara serta minat peserta. Hasil pengabdian ini adalah dapat diimplementasikan dalam proses pembuatan modul ajar berdiferensiasi di SMAN 3 Sidoarjo.

Kata kunci: Kurikulum Merdeka, modul ajar & pembelajaran berdiferensiasi.