ISSN 2303-0992
ISSN online 2621-3176
Matematika dan Pembelajaran
Volume 10, No. 1, June 2022, h. 13-25

MERDEKA MENGAJAR PLATFORM AS A SUPPORT FOR THE QUALITY OF MATHEMATICS LEARNING IN EAST JAVA

Nur Isnaini Budiarti
SMP PGRI 1 Buduran Sidoarjo

isnainibudiarti95@gmail.com

Abstract

Freedom of learning is a breakthrough in the openness of the learning process that provides learning experiences. The implementation of independent learning is expected to improve the quality of learning, especially in mathematics learning. This study aims to determine the use of the Merdeka Mengajar Platform (MMP) to support the quality of mathematics learning. This research is a quantitative descriptive study with the subject of research as many as 30 respondents of mathematics teachers who have used the MMP. Data collection techniques use online questionnaires and limited interviews. The results showed that the use of the Merdeka Mengajar Platform is constructive for teachers in developing their potential to inspire and teach better, where around 87.6% of respondents agreed that the use of the MMP plays a role in helping to develop teacher competencies through inspirational video features, independent training, and proof of work and 86.6% of respondents also agree that the use of the Merdeka Mengajar Platform plays a role in helping learning activities teaching through student assessment features and teaching tools.
Keywords: Merdeka Mengajar Platform; Mathematics Learning

Citation: Budiarti, N. I. 2022. *Merdeka Mengajar* Platform As a Support for the Quality of Mathematics Learning in East Java. *Matematika dan Pembelajaran*, 10(1), 13-25. DOI: http://dx.doi.org/10.33477/mp.v10i1.2858

INTRODUCTION

Mathematics is one subject that exists at every level of education, ranging from the primary, secondary, and even higher education levels. Mathematics is considered a tool that can facilitate work to become more effective, economical, and efficient (Permata, et al., 2018). Unfortunately, mathematics lessons have always been a scary scourge for students in Indonesia because, in the mindset of students, it is ingrained that mathematics is a difficult lesson (Enny & Sihotang, 2021). Therefore, an independent learning program is expected to improve the

quality of mathematics learning in Indonesia. The Ministry of Education and Culture issued a policy for developing the Independent Curriculum, which was given to education units as an additional option to restore learning. Referring to the conditions of the COVID-19 pandemic, which caused many obstacles in the learning process in academic units, which had a significant enough impact that required carrying out learning from home. The freedom of learning that the minister of education has initiated is a breakthrough as an openness to the learning process from home, which can later provide a learning experience without having to be required by completeness standards and graduation standards (Tiwikrama & Afad, 2021). The implementation of independent learning is expected to improve the quality of learning, especially in mathematics learning. Implementing the Merdeka Curriculum during the pandemic on mathematics learning today makes students and teachers more creative, innovative, and of course, more advanced in the use of technology (Hilda et al., 2022). In implementing the independent learning curriculum, the Ministry of Education and Culture developed the MMP. This educational platform is a driving companion for educators in realizing Pancasila Students who have Learning, Teaching, and Work features. MMP provides equal opportunities for teachers to continue to learn and develop their competencies whenever and wherever teachers are. The "Learning" feature in MMP provides independent training facilities for teachers and education staff to obtain quality training materials by accessing them independently (Kemendikbudristek, 2021). Another learning feature is inspirational videos. This feature provides an opportunity for teachers to get a variety of inspirational videos to develop themselves with unlimited access (Kemendikbudristek, 2021). With this "Learning" feature, it is hoped that teachers, especially mathematics teachers, can also develop the quality of their competence in carrying out mathematics learning.

MMP provides a reference for teachers to develop teaching practices following the Independent Curriculum. In the "Teaching" feature, there is a teaching device feature that teachers can use in developing themselves. There are

more than 2000 references for teaching tools based on the Independent Curriculum (Kemendikbudristek, 2021). The student assessment feature developed aims to help teachers carry out diagnostic analysis related to student abilities in literacy and numeracy so that it can be applied to learning following the stage of student achievement and development (Kemendikbudristek, 2021). Therefore, through this assessment feature, mathematics teachers can map the abilities of each student, especially numeracy skills, so that they can apply mathematics learning following their abilities. MMP encourages teachers to continue working and provides a forum for sharing good practices. Another feature is "Berkarya," where this feature is to provides "Proof of My Work," which is the best practice of the results of learning implementation, especially related to learning best practices in the Independent Curriculum, teachers and education staff can build a portfolio of their work so that they can share inspiration and collaborate so that teachers can move forward together (Kemendikbudristek, 2021). With this feature, it is hoped that mathematics teachers can discuss and share teaching experiences to create more innovative and fun learning.

Prabowo et al (2021) stated that technological knowledge, especially the use of MMP and the creation of learning media used as content from MMP, is something that needs to be done so that teachers have the necessary skills in teaching and learning activities. In other words, MMP can be a friend for teachers in developing themselves to inspire and teach better. Therefore, the use of MMP is expected to improve educators' competence, including mathematics teachers, to carry out more innovative and interesting mathematics learning activities. From the explanation above, the researcher aims to examine the use of the MMP to support the quality of mathematics learning in East Java.

METHOD

This research is descriptive research with a quantitative approach. Descriptive research produces descriptive data in the form of written or spoken

words from people or observable behaviors (Moleong, 2010). The subjects in this study were 30 respondents who were mathematics teachers ranging from elementary school/ Islamic elementary school, junior high school/ Islamic junior high school to high school/ Islamic high school/ vocation high school in the East Java region, specifically in Sidoarjo, Mojokerto and Surabaya. Purposive sampling techniques selected them. These, namely mathematics teachers, had accessed and used MMP. This research was conducted for one month, from April 18, 2022, to May 17, 2022. The data collection techniques used are online questionnaires and limited interviews using a google form which is then shared with respondents. The questionnaires used previously have been tested for validity and reliability. The questionnaire has 14 statement items with validity between 0.613 – 0.908 and an alpha reliability coefficient of 0.773. Respondents chose one of the most appropriate options for the statements in the questionnaire. The data obtained will be analyzed and calculated on average using a Likert scale, then calculated the percentage to determine the use of MMP to support the quality of mathematics learning. The Likert scale measures the attitudes, opinions, and perceptions of a person or group of people about social phenomena (Sugiyono, 2018). This Likert measurement scale measures approval with a score of 1–5. A description of the division of scores and categories is shown in Table 1.

Table 1. Likert Scale Score and Categories

Category	Score
Very Agreeable (SS)	5
Agree (S)	4
Lack of consent (KS)	3
Disagree (TS)	2
Highly Disagreed (STS)	1

Source: (Sugiyono, 2018)

Data analysis in this study uses an interactive analysis model which includes data collection, data reduction, data presentation and conclusion drawing which is carried out interactively and lasts continuously until it is complete. The

data from this study is in the form of opinions of mathematics teachers regarding the use of MMP as a support for the quality of mathematics learning in terms of developing teacher competencies and teaching and learning activities.

RESULT AND DISCUSSION

Basically, MMP is a technology application provided by the Ministry of Education and Culture for teachers to be a driving companion for teachers in teaching, learning and working. Through this platform, teachers can access various teaching device references as well as various good practices to continue to develop their competencies. This can be seen from the purpose and benefits of the Merdeka Mengajar Platform described in Figure 1.

Figure 1. Illustration of the Purpose and Benefits of MMP

Teachers and principals can log in to MMP by using a google account with a domain belajar.id (learning account) or madrasah.kemenag.go.id (madrasah account). MMP can be accessed through a browser with a https://guru.kemdikbud.go.id/ link or through an application that can be downloaded on the Google Play Store (android). The results showed that the majority of 86.7% of respondents stated that they could access MMP easily, but 13.3% of respondents experienced little difficulty in accessing MMP as presented in Figure 2.

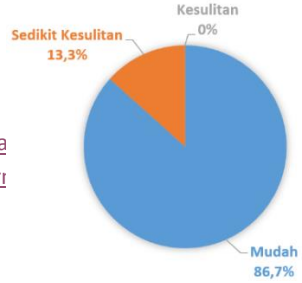

Figure 2. Graph of Respondents' Ease of Accessing MMP

MMP is presented in the form of web-based or android-based, so that users can access it through smartphones or computers or laptops. As seen in Figure 3, the results showed that the majority of respondents (60%) accessed the Merdeka Mengajar Platform using smartphones

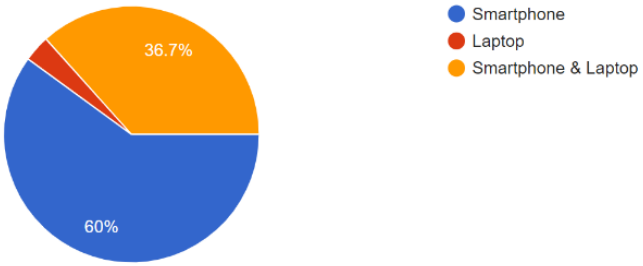

Figure 3. Trend Graph of The Types of Devices Used to Access MMP

The results showed that the use of MMP in mathematics learning was as follows. Most of the respondents (73.4%) were active in accessing MMP with an activeness rate of 26.7% very often and 46.7% accessing frequently. This shows that the products/features available in MMP can provide the information and references needed so that they are often accessed by respondents. This is in line with the results of research by Susilawati et al (2021) which shows that 80.4% of respondents are active in accessing information related to the Pancasila Student Profile in MMP because the provision of information is very interesting so that it is often accessed by users. The level of activeness of respondents in accessing MMP can be seen in Figure 4.

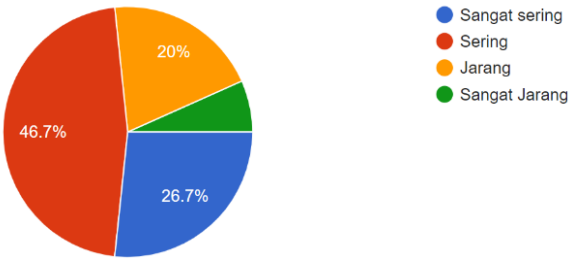

Figure 4. Graph of Respondents' Activeness in Accessing MMP

Each feature contained in MMP has a role in terms of teacher development and teaching and learning activities. This opinion was obtained from the results of the average filling out of the questionnaire of respondents related to the use of MMP as a support for the quality of mathematics learning. The average was obtained based on the score of each respondent's choice using a likert scale with answer choices from strongly agreed, agreed, disagreed, disagreed, and strongly disagreed with consecutive scores from 5 to 1. The average results of the questionnaire score on the role of using the Merdeka Mengajar Platform as a support for the quality of mathematics learning can be seen in Table 2 and Table 3.

Table 2. Average Results of Questionnaires using the Independent Teaching Platform on Teacher Development Features

Product/ feature	*Statement*	*SS (5)*	*S (4)*	*KS (3)*	*TS (2)*	*STS (1)*	*Mean*
Teacher Development: 1. Inspirational video 2. Self training 3. Proof of work	Various information and inspiration I got in the use of MMP supported my development as a teacher/ mathematics teacher.	19 (63,3%)	11 (36,7%)	0 (0%)	0 (0%)	0 (0%)	4,63
	variety of inspirational videos available on MMP added to my insight as an educator.	10 (33,3%)	20 (66,7%)	0 (0%)	0 (0%)	0 (0%)	4,33
	Mathematics learning videos uploaded by colleagues on the evidence of work feature in MMP can inspire me to carry out mathematics learning.	12 (40%)	18 (60%)	0 (0%)	0 (0%)	0 (0%)	4,4
	The various independent training materials available at MMP helped develop my potential as a mathematics teacher.	12 (40%)	18 (60%)	0 (0%)	0 (0%)	0 (0%)	4,4
	The MMP application can be a good forum for discussions related to the	15 (50%)	15 (50%)	0 (0%)	0 (0%)	0 (0%)	4,5

implementation of mathematics learning through feedback from peers.						
The use of MMP helped develop my creativity in working as a mathematics teacher/ teacher.	8 (26,7%)	21 (70%)	1 (3,3%)	0 (0%)	0 (0%)	4,23
After using MMP, the mathematics learning I applied was more innovative.	7 (23,3%)	23 (76,7%)	0 (0%)	0 (0%)	0 (0%)	4,23
The various features/products contained in MMP helped improve my competence in teaching mathematics.	9 (30%)	21 (70%)	0 (0%)	0 (0%)	0 (0%)	4,3
Average overall score						**4,378**

From the results of filling out the questionnaire for the use of MMP in the Teacher Development feature, the results obtained an average overall score of 4,378. This means that of the 8 statements contained in the questionnaire, it can be said that around 87.6% of respondents on average agreed with each statement regarding the use of MMP in terms of teacher development. So it can also be said that the use of MMP plays a role in helping to develop teacher competencies through inspirational video features, independent training, and proof of work.

The above is also supported by the results of interviews with respondents. Respondents stated that a lot of inspiration was obtained after accessing the inspiration video feature in MMP, including teacher competence in teaching and educating effectively, managing classes by creating a pleasant learning environment, innovating in carrying out relevant learning processes, and creating quality mathematics learning through appropriate and fun learning methods in order to encourage students to hone their skills by Optimal. Through the self-training features accessed by respondents in MMP, they stated that the materials in the self-training feature can help develop their potential in terms of understanding and recognizing themselves as an educator, understanding the needs and characteristics of students, planning structured and competent learning. In addition, respondents

also stated that after exploring learning videos on the evidence of work feature in MMP uploaded by colleagues, it can provide inspiration and innovation that can be applied in mathematics learning.

Table 3. Average Results of Questionnaires on the Role of Using the Independent Teaching Platform in the Teaching and Learning Activity Feature

Product/ feature	*Statement*	*SS (5)*	*S (4)*	*KS (3)*	*TS (2)*	*STS (1)*	*Mean*
Teaching and Learning Activities: 1. Student assessment 2. Lesson plan	Various teaching material inspirations (teaching materials, teaching modules, project modules, textbooks) available at MMP can support mathematics learning activities.	12 (40%)	17 (56%)	1 (3,3%)	0 (0%)	0 (0%)	4,37
	I can access the teaching tools contained in MMP easily as my reference in carrying out the mathematics learning process.	10 (33,3%)	19 (63,3%)	1 (3,3%)	0 (0%)	0 (0%)	4,3
	The student assessment feature in MMP can help me quickly perform a diagnostic numeracy analysis of how each of my students is capable.	10 (33,3%)	19 (63,3%)	1 (3,3%)	0 (0%)	0 (0%)	4,3
	Through the student assessment feature at MMP, I can find out the extent to which my students understand the material I present.	7 (23,3%)	22 (73,3%)	1 (3,3%)	0 (0%)	0 (0%)	4,2
	Through the student assessment feature at MMP, I can find out the extent to which my students understand the material I present.	9 (30%)	20 (66,7%)	1 (3,3%)	0 (0%)	0 (0%)	4,27
	Various features/products available in MMP can support the quality of mathematics learning.	16 (53,3%)	14 (46,7%)	0 (0%)	0 (0%)	0 (0%)	4,53
	Average overall score						**4,328**

From the results of filling out the questionnaire for the use of MMP in the Teaching and Learning Activities feature, the results obtained an average overall score of 4,328. This means that from the 6 statements contained in the questionnaire, it can be said that around 86.6% of respondents on average agree with each statement related to the use of MMP in teaching and learning activities. So it can also be said that the use of MMP plays a role in helping teaching and learning activities through student assessment features and teaching tools. This is also supported by the results of interviews with respondents. Some respondents stated that the use of the numeracy assessment feature contained in MMP provides benefits to be able to find out the level of ability of each student so that respondents can apply learning by adjusting their students' abilities. In addition, respondents also accessed teaching device features in MMP such as teaching materials, teaching modules, project modules, or textbooks that can be used as their reference in carrying out mathematics learning.

Based on the results of the presentation above, the use of MMP plays a role in supporting the quality of mathematics learning. The use of MMP can be used as an effort to develop teacher competencies and can be used as a means in teaching and learning activities, one of which is in mathematics learning. This is in line with research by Prabowo, et al (2021) who stated that technological knowledge, especially the use of MMP, is a very necessary thing to do so that teachers and education personnel have the necessary skills in teaching and learning activities. In other words, this MMP can be used by teachers including mathematics teachers to be able to increase their potential in order to create more interesting and fun learning and in accordance with the abilities of students with the skills they have, so that they can achieve learning goals optimally.

No application of any kind is perfect, and neither is this MMP. The use of MMP has advantages that can support the quality of mathematics learning and also has disadvantages that need to be developed again. According to respondents, this MMP has advantages that can support the quality of mathematics learning,

including 1) Developing competencies as a mathematics teacher to teach more innovative and fun, 2) Providing learning inspiration that can be applied in mathematics learning, 3) Many available teaching materials and modules can be used as references in supporting mathematics learning. In addition to having advantages, MMP also has shortcomings that need to be corrected or developed again, including according to respondents, namely: 1) For educators who do not have a google account with a domain belajar.id or madrasah.kemenag.go.id difficulty accessing, 2) Input student data on class features is done manually one by one so.

Based on respondents' statements regarding the advantages and disadvantages of using MMP in mathematics learning, it can be seen that the features / products available in this MMP provide various information, references, inspiration and innovations of teachers in carrying out teaching and learning activities so that they can support the quality of mathematics learning. However, MMP still needs development and updates in order to provide even better services for all users. This is in line with research by Susilawati and Sarifuddin (2021) stating that MMP is an application that "grows", so that it will continue to develop both features, menus, and content.

CONCLUSION

Based on the results of research and discussions that have been explained earlier, the use of MMP is constructive for teachers in developing their potential to inspire and teach better, where around 87.6% of respondents agree that the use of MMP plays a role in helping to develop teacher competencies through inspirational video features, independent training, and proof of work and 86.6% of respondents also agree that the use of MMP plays a role in helping teaching and learning activities through the feature student assessment and teaching tools so that this MMP can be used as a means of supporting the quality of mathematics learning.

Based on the research data, there are several suggestions/inputs for the MMP development team to improve service quality according to the needs and

input from users. The suggestions and inputs in question, namely MMP, need to continue to be developed and improved in terms of content/service quality and strategies for implementing MMP to be more effective. Teachers who are not fluent in using MMP must improve their ICT skills so that they can explore MMP independently, and socialization related to the use of MMP is needed for all teachers in Indonesia need to access and utilize MMP optimally.

REFERENCES

Enny, Y., & Sihotang, H. (2021). Penerapan Sistem Prodigy Math Game sebagai Implementasi Merdeka Belajar dalam Meningkatkan Minat Belajar Siswa Menengah Atas. *Jurnal Ilmu Pendidikan*, 3(6), 3919 - 3927. https://edukatif.org/index.php/edukatif/index

Hilda, N. R., dkk. (2022). Implementasi Merdeka Belajar Dalam Meningkatkan Mutu Pembelajaran Matematika Selama Pandemi. *Jurnal ilmiah fakultas keguruan dan ilmu pendidikan,* 8(1), 110-119.

Kementrian Pendidikan, Kebudayaan, Riset dan Teknologi. (2021). *Peran Platform Merdeka Mengajar dalam Implementasi Kurikulum Merdeka*. Diakses dari https://kurikulum.gtk.kemdikbud.go.id/detail-ikm/

Moleong, Lexy J. (2010). *Metodologi Penelitian Kualitatif*. Bandung: Remaja Rosdakarya.

Permata, dkk. (2018). Pembelajaran Matematika SMP Dalam Perspektif Landasan Filsafat Konstruktivisme. *Jurnal Elektronik Pembelajaran Matematika*, 5(1), 32-43. https://jurnal.uns.ac.id/jpm/article/view/26022

Prabowo, D. A., dkk. (2021). Sosialisasi Aplikasi Merdeka Mengajar dan Pengisian Konten Pembelajaran Pada SMKN 3 Seluma Untuk Mendukung Program SMK-PK Tahun 2021. *Jurnal Pengabdian Masyarakat Teknologi Terbarukan*, 1(2), 55-60.

Sugiyono. (2018). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Bandung: Alfabeta

Susilawati, E., & Sarifuddin, S. (2021). Internalisasi Nilai Pancasila dalam Pembelajaran Melalui Penerapan Profil Pelajar Pancasila Berbantuan Platform Merdeka Mengajar. *Jurnal Teknologi Pendidikan*, 25(2), 155-167.