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Training on Application-Based Numeracy Literacy E-Assessment Development to Support AKM Readiness for Junior High School Teachers in Aceh Tamiang

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Abstract: The purpose of this service activity is to increase teachers' knowledge, understanding, skills and creativity in preparing application-based Numeracy Literacy E-Assessments in supporting AKM readiness. The method of service activities is education and mentoring which consists of the preparation stage, implementation stage, and monitoring and evaluation stage. Pretest and posttest were conducted with 17 participants to determine the increase in participants' knowledge in the preparation of application-based Numeracy Literacy E-Assessment in supporting AKM readiness. Participant satisfaction with the service activities was measured using a questionnaire consisting of 12 indicators. The obtained data were analyzed using descriptive analysis. The results achieved from the implementation stage are the production of application-based numeracy literacy assessment products made by the participants themselves. The results of the evaluation stage by giving pretest and posttest showed that there was an increase in participants' knowledge in preparing application-based numeracy literacy assessments in the medium category with an n-gain value of 0.47. The results of the participant satisfaction questionnaire showed that 73.25% of the participants were satisfied while the other 26.75% were very satisfied with the service activities that had been carried out.

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Introduction

Literacy and numeracy assessment is an evaluation process conducted to assess students' ability to understand, use and analyze numerical information and data. It includes the ability to read, write and understand numerical information, as well as the ability to use numerical information and data to make decisions and solve problems. These skills are essential in the modern world, where the use of technology and data analysis are becoming increasingly important (Chesa & Nafi'ah, 2022). To measure the level of students' literacy and numeracy skills, the Ministry of Education and Culture organized the AKM (Minimum Competency Assessment) to replace the UN (National Exam). AKM is followed by grade VIII students at the junior high school / MTs level (Teresia, 2021). Students work on questions in the AKM application which can be accessed via desktop or mobile version (Android) so students need skills in addition to understanding questions as well as skills in using digital technology.

In this digital era, the use of technology in education is becoming increasingly important. Application-based Numeracy Literacy E-Assessment can be an effective tool to assess students' ability in numeracy literacy (Hasanah & Hakim, 2022). In the implementation of AKM, there are still various obstacles experienced including the lack of resources and

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support. The implementation of AKM requires sufficient resources and support, including human resources, technology, and time. The lack of these resources can hinder the implementation of effective and efficient assessments (Patimah et al., 2023). There is also a lack of teacher training and development. Teachers play an important role in the implementation of IMR, but the lack of training and professional development can hinder their ability to accurately and effectively assess students' abilities (Widiyanto & Desstya, 2023). The next obstacle is the lack of evaluation and assessment. The lack of evaluation and assessment of the assessment process and results can hinder the improvement and enhancement of assessment quality in the future (Sari & Sayekti, 2022).

Junior high school teachers have an important role in supporting students' readiness to take the AKM. Teachers need to get used to using technology in learning assessment so that students also become accustomed to the use of technology which makes it easier to improve students' literacy and numeracy skills (D, D., Khasanah, M., & Putri, A. M., 2021). However, in reality in the field, there are still many junior high school teachers who do not know or understand the various types of digital assessments that can be used by teachers to facilitate assessment quickly, accurately, effectively and efficiently (Afandi et al., 2023), one of which is at SMP Negeri 1 Manyak Payed.

SMP Negeri 1 Manyak Payed is one of the schools located on the Banda Aceh - Medan km road 457 Tualang Cut, Tualang Baru, Kec. Manyak Payed, Kab. Aceh Tamiang Province Aceh. The results of interviews with school principals found that the problem is that teachers rarely use digital-based assessments, and still often use traditional forms of assessment such as using paper and pencil tests. This is due to the lack of education and training of teachers regarding the forms of digital-based assessments and how to compile them so that they can be implemented in learning by teachers in the classroom. SMP Negeri 1 Manyak Payed is also included in the list of schools targeted by the Kampus Mengajar batch 7 in 2024. This means that the level of literacy and numeracy of students in the school is also still low and needs to be improved.

The solution that can be done to overcome partner problems, especially for teachers, is through training on the preparation of Application-Based Numeracy Literacy E-Assessment in Supporting AKM Readiness for Teachers. Through the training, teachers are expected to understand how to use the application-based Numeracy Literacy E-Assessment to assess students' abilities and provide constructive feedback. The training also aims to improve teachers' skills in using technology in education. So that the purposes of this community service activity are : (1) To increase partner knowledge and understanding regarding application-based numeracy literacy e-assessments in supporting AKM readiness. (2) To increase partner skills and creativity in compiling application-based numeracy literacy e-assessments in supporting AKM readiness.

Method

The method of service activities carried out consists of training and mentoring in the preparation of application-based numeracy literacy e-assessments in supporting AKM readiness for junior high school teachers. This activity is based on blended learning, where there are face-to-face activities (offline) and independent activities (online) with assistance from the service team. Details of the stages of service activities can be seen in Figure 1.

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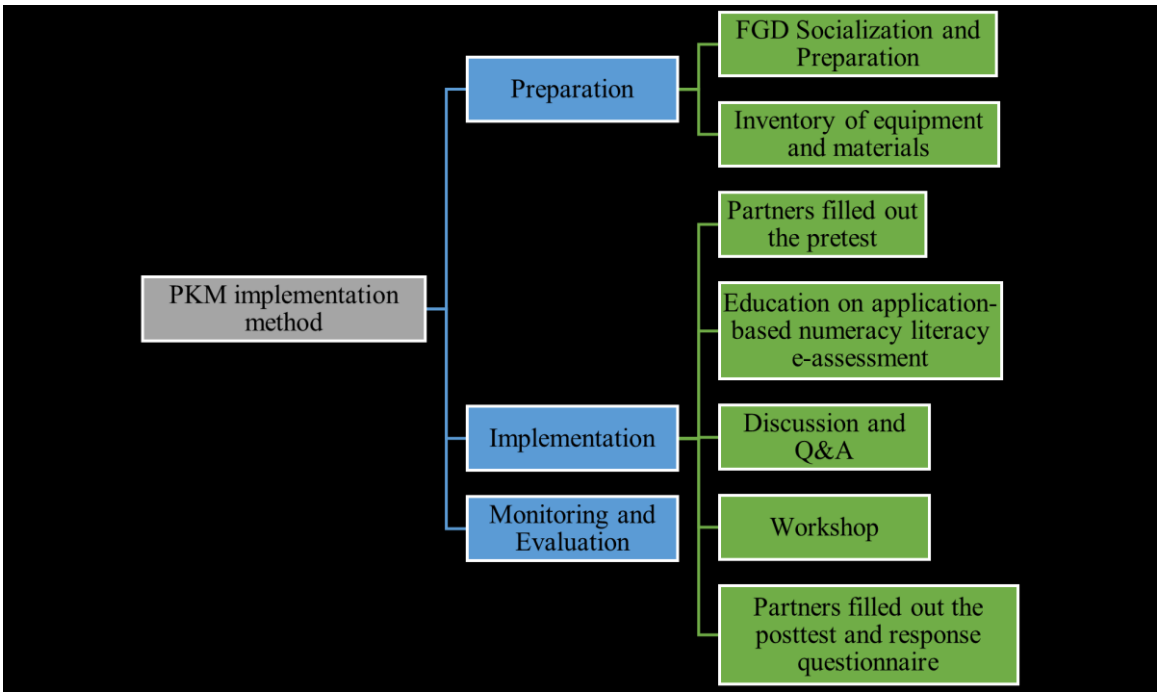

Figure 1. Chart of the Stages of Service Activities

The instrument to evaluate this community service activity is in the form of pretest and posttest questions. The purpose of the posttest is to see the increase in participants' knowledge in compiling application-based numeracy literacy e-assessments compared to the pretest results after the education and workshop activities. At the end of the activity, the team also provided a response questionnaire to get feedback from participants on the community service activities that had been carried out. The obtained data were analyzed using descriptive analysis.

Result and Discussion

This service is carried out in stages consisting of the preparation stage, implementation stage, and evaluation stage.

1) Preparation Stage

The service team made preparations starting with the location survey. The coordination that has been carried out with partner leaders has prioritized the problems to be solved and the solutions offered to solve these problems. The solution offered is to carry out educational and mentoring activities to increase teachers' knowledge, understanding, skills and creativity in preparing application-based numeracy literacy e-assessments to support AKM readiness. Coordination with partner leaders also agreed on the time and place for implementing the activities. At this stage, the implementers have prepared all equipment and materials for education and workshops consisting of application-based numeracy literacy e-assessment development guidelines, PowerPoint presentations, pretest questions, posttest questions, and participant satisfaction questionnaires for service activities.

2) Implementation Stage

a) Educating

The first stage in the implementation of educational activities is the delivery of remarks. The remarks were delivered by the head of the service and the leader of the partner, namely

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the principal. Furthermore, the service team gave a pretest to the participants. The pretest is in the form of 10 questions about the application-based numeracy literacy e-assessment on Google Forms which can be answered using the participants' smartphones and laptops. This pretest was guided by the service team because there were some participants who had difficulty in accessing the pretest questions. The pretest results showed that the participants' initial knowledge of the application-based numeracy literacy e-assessment varied greatly with the lowest score of 40 and the highest score of 100, with an average of 73.53. After the pretest, the activity continued with the delivery of material on how to support AKM readiness through the preparation of application-based numeracy literacy e-assessments. The material was delivered by the service team, in turn, using PowerPoint and a guidebook for preparing application-based numeracy literacy e-assessments assisted by an LCD Projector. After the delivery of the material, a question and answer session was held about the training material. The enthusiasm of the participants was very high as seen from the many questions.

Figure 2. Material Delivery by the PKM Team

b) Workshop

The first stage in the implementation of workshop activities is the delivery of remarks. The remarks were delivered by the head of the service and the leader of the partner, namely the principal. Furthermore, the service team divided the participants into two groups of 9-10 people. The service team provided examples of how to prepare numeracy literacy e-assessments based on the Plikers and Nearpod applications. Furthermore, the service team dispersed to each group to guide participants in preparing numeracy literacy e-assessments based on the Plikers and Nearpod applications. After guiding the participants to develop the e-assessment, a question-and-answer session was held with the participants about the workshop material. In the question-and-answer session, participants were more enthusiastic as seen from the increasing number of participants who asked questions. The final activity in the implementation stage was the submission of the product of the preparation of numeracy literacy e-assessment based on Plickers and Nearpod applications by the participants.

Figure 3. Participants test the use of the Plickers application guided by students

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3) Evaluation Stage

At the evaluation stage, the service team gave a posttest to all participants. The posttest given still uses the same questions as the pretest which consists of 10 questions. The posttest aims to see the increase in participants' knowledge in the preparation of application-based numeracy literacy e-assessments compared to the pretest results after the education and workshop activities. The posttest results showed that the participants' posttest scores on the preparation of application-based numeracy literacy e-assessments were relatively high, with the lowest score of 50 while most of them obtained the highest score of 100, with an average of 85.88. Based on the average pretest and posttest scores, the n-gain value was then determined to see the amount of increase in participants' knowledge about application-based numeracy literacy e-assessments before and after the activity. The n-gain value obtained shows that there is an increase in participants' knowledge in developing application-based numeracy literacy e-assessments in the moderate category with an n-gain value of 0.47 as summarized in Table 1.

The increase in teacher knowledge is due to the enthusiasm and enthusiasm of teachers in participating in the activities by actively asking questions and directly practicing the use of the assessment application. This finding is in line with the results of the service by Pursitasari et al. (2022) that the enthusiasm of teachers in participating in the training increased teachers' understanding of the science literacy e-assessment training material. Training activities have successfully improved teachers' knowledge and skills in developing assessment tools (Yamtinah et al., 2022; Handayani et al., 2023).

Table 1. Average Pretest, Posttest, and N-Gain Score

Value	Average
Pretest	73,53
Posttest	85,88
N-gain	0,47

At the evaluation stage, the team also provided a response questionnaire to get feedback from participants on the service activities that had been carried out. The following Table 2 summarizes the participants' responses to the activities carried out.

Table 2. Participants' Responses to the Implemented Service Activities

No.	Indicators	Response (%)			
		SS	S	KS	TS
1.	The suitability of the material to the needs of the participants	10,53	89,47	0	0
2.	Suitability of activities to the expectations of participants	5,26	94,74	0	0
3.	The attractiveness of the presentation of the material by the speaker	0	100	0	0
4.	Clarity of the material presented	5,26	94,74	0	0
5.	The suitability of the time provided for the delivery of the material	5,26	94,74	0	0
6.	Participants are interested in participating in activities	57,89	42,11	0	0
7.	The team provides services according to needs	42,11	57,89	0	0
8.	Sustainability of activities	5,26	94,74	0	0
9.	Follow-up to complaints/ questions/ problems	36,84	63,16	0	0
10.	The usefulness of the activities carried out	63,16	36,84	0	0
11.	Activities increase the intelligence of participants	57,89	42,11	0	0

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12.	Participant satisfaction with activities	31,58	68,42	0	0
	Average	26,75	73,25	0	0

Notes: SS = Strongly Agree, S = Agree, KS = Disagree, TS = Disagree.

In general, the participants' responses to the service activities carried out were positive where the majority of participants gave an agree response, while the rest strongly agreed. No one gave a disagree or disagree response. Based on the data in Table 2, 73.25% of the participants were satisfied while 26.75% were very satisfied with the service activities that had been carried out. This result is also in accordance with the activities of the service team in the previous year, namely that teachers were satisfied with self-development activities in the form of training held (Putri et al., 2023; Oktaviani et al., 2023). Until now, there are still many schools that are still in the process of implementing AKM, including SMP Negeri 1 Manyak Payed. Therefore, contributions from many parties including academics are needed to prepare the AKM through coaching to schools (Widarti et al., 2023). The results of this service are expected that teachers and students can implement the use of e-assessments in preparing for AKM (Sariningsih et al., 2022).

This community service activity will continue where the community service team will monitor teachers online through the WhatsApp group in implementing the use of e-assessment based on numeracy literacy in the classroom. Teachers can also communicate with each other and ask questions in the group online.

Conclusion

The results achieved in this activity were the production of application-based numeracy literacy assessment products made by the participants themselves. The results of the pretest and posttest showed that there was an increase in participants' knowledge in preparing application-based numeracy literacy assessments in the moderate category with an n-gain value of 0.47. As many as 73.25% of participants were satisfied while 26.75% were very satisfied with the service activities that had been carried out.

Recommendation

The recommended suggestion for teachers as participants of the activity is to be able to implement the application-based numeracy literacy assessment products that have been made in learning, as well as develop application-based numeracy literacy assessments on other themes and topics. Recommendation for the education office in the future can conduct activities in the form of competency development for teachers in schools on an ongoing basis, especially in the field of technology in learning.

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References

Afandi, et al. (2023). Tantangan dan Strategi dalam Menggunakan Assessment untuk Meningkatkan Pembelajaran di Era Digital. *Prosiding Santika 3: Seminar Nasional Tadris Matematika UIN K.H.Abdurrahman Wahid Pekalongan*.

Vol. 5, No. 4 (November 2024)
E-ISSN : 2722-5097
Pg : 519-525

Chesa, N., Nafi'ah, B.A. (2022). Asesmen Kompetensi Minimum (AKM) Kelas Sekolah Dasar Sebagai Sarana Evaluasi Kemampuan Literasi Dan Numerasi Siswa. *Jurnal Pendidikan Dasar*, 13(2), 67-86.

D, D., Khasanah, M., & Putri, A. M. (2021). PENGUATAN LITERASI, NUMERASI, DAN ADAPTASI TEKNOLOGI PADA PEMBELAJARAN DI SEKOLAH: (Sebuah Upaya Menghadapi Era Digital dan Disrupsi). *Eksponen*, *11*(2), 25–35. https://doi.org/10.47637/eksponen.v11i2.381.

Handayani, L., Rusilowati, A., Mindyarto, B. N., Astuti, B., Sutikno, S., Prayitno, W. S. W., Kusuma, G. S., Maulana, H. C., Salsabila, A. N., & Vivadi, M. R. (2023). Peningkatan Keterampilan Menyusun Stimulus Asesmen Literasi Numerasi Guru IPA Kabupaten Banjarnegara. *E-Dimas: Jurnal Pengabdian Kepada Masyarakat*, 14(4), 842–850. https://doi.org/10.26877/e-dimas.v14i4.17344

Hasanah, M., Hakim, T.F.L. (2022). Analisis Kebijakan Pemerintah Pada Assesmen Kompetensi Minimum (AKM) Sebagai Bentuk Perubahan Ujian Nasional (UN). *Irsyaduna*, 1(3), 252-260.

Oktaviani, C., Seprianto, S., & Putri, M.D. (2023). COACHING CLINIC MODUL PROJEK PENGUATAN PROFIL PELAJAR PANCASILA BAGI GURU SMP DI LANGSA SEBAGAI PENDUKUNG PENGEMBANGAN KARAKTER PESERTA DIDIK. *Jurnal Abdi Insani*.

Patimah, P., Syamsi, A., Fadia, L. (2023). Problem Implementasi Asesmen Kompetensi Minimum Di Madrasah Ibtidaiyah Dan Sekolah Dasar. *SITTAH: Journal of Primary Education*, 4(2), 97-110.

Pursitasari, I. D., Permanasari, A., & Jaenudin, D. (2022). Pelatihan Penyusunan E-Asesmen Literasi Sains Berbasis AKM Bagi Guru IPA SMP di Kabupaten Bogor. *Jurnal Pemberdayaan Masyarakat*, 1(1), 26–33. https://doi.org/10.46843/jmp.v1i1.265

Putri, M. D., Syahputra Yani, A. F., & Dini Fitria. (2023). Optimalisasi Kompetensi Profesional Guru Sekolah Menengah Pertama Melalui Kegiatan Pengembangan Asesmen Formatif Literasi Sains. *JPM (Jurnal Pemberdayaan Masyarakat)*, *8*(2), 241–247. https://doi.org/10.21067/jpm.v8i2.9176.

Sari, V.P., Sayekti, I.C. (2022). Evaluasi Pelaksanaan Asesmen Kompetensi Minimum (AKM) pada Kompetensi Dasar Literasi Membaca Peserta Didik Sekolah Dasar. *Basicedu*, 6(3), 5237-5243.

Sariningsih, R., Kadarisma, G., & Ristiana, G. (2022). PKM: Pelatihan Penyusunan Soal Akm Bagi Guru di Kabupaten Pangandaran. *Abdimas Siliwangi*, 5(2), 357–366.

Teresia, W. (2021). Asesmen Nasional 2021. Medan: Guepedia.

Widarti, H. R., Rokhim, D. A., & Syafruddin, A. B. (2023). Peningkatan Pemahaman Pelaku Pendidikan MGMP Kimia Se-Sidoarjo Terhadap Asesmen Kompetensi Minimum Melalui Penggunaan Aplikasi Pintarin . Id Improving the Understanding of Education Actors in the Consensus of Chemistry Subject Teachers in through Pintarin. *Jurnal Pengabdian Kepada Masyarakat*, 7(4), 694–710.

Widiyanto, R.R., Desstya, A. (2023). Evaluasi Pelaksanaan Asesmen Kompetensi Minimum (AKM) Pada Kompetensi Dasar Literasi Sains Siswa Sekolah Dasar. *Jurnal Inovasi Pendidikan dan Pembelajaran Sekolah Dasar*, 7(2), 296-309.

Yamtinah, S., Utami, B., Mulyani, B., Masykuri, M., dan Ulfa, M. (2022). Pendampingan Penyusunan Instrumen Asesmen Kompetensi Minimum (AKM) sebagai Upaya Penguatan Kemampuan Guru. *Proceeding Seminar Nasional Kimia dan Pendidikan Kimia XIII FKIP UNS*, 56-65.

