ENHANCING TEACHERS' PROFESSIONAL DEVELOPMENT BY IMPLEMENTING SMART APPS CREATOR (SAC)

Aliva Rosdiana[1*], Aan Widiyono[2], Nurul Nisah[2], Muhammad Najih Al Azizi[1], Lola Aulia Putri[2]

[1]Pendidikan Bahasa Inggris, Universitas Islam Nadlatul Ulama (Unisnu) Jepara
[2]Pendidikan Guru Sekolah Dasar (PGSD), Universitas Islam Nadlatul Ulama (Unisnu) Jepara

*Corresponding author
Email : alivarosdiana@unisnu.ac.id

Abstrak

Paradigma baru pembelajaran menyikapi pergeseran cara pendekatan pendidikan dan pembelajaran di era modern. Smart Apps Creator (SAC) merupakan aplikasi baru berbasis digital untuk membantu guru menciptakan lingkungan belajar yang efektif. Sebagai media pembelajaran berbasis android, SAC memiliki memori jangka panjang yang dapat disimpan tanpa memerlukan keahlian coding karena mudah digunakan oleh para pendidik. Pengabdian kepada masyarakat ini bertujuan untuk meningkatkan pengembangan profesionalitas guru dalam penerapan smart apps Creator (SAC) dengan memberikan pengetahuan dan pelatihan penerapan SAC kepada guru dan pemangku kepentingan di SDN 2 Pekalongan Jepara. Metode kegiatan yang digunakan meliputi ekspositori, tanya jawab, demonstrasi, dan evaluasi. Hasil dari kegiatan ini setelah dilakukan post-test kepada 22 guru dan pemangku kepentingan adalah 81% guru sebagai peserta mengaku mendapatkan pencerahan ide, pengetahuan dan keterampilan meningkat. Selain itu, rata-rata nilai post-test yang disampaikan lebih tinggi yaitu 95 dibandingkan dengan rata-rata nilai pre-test yaitu 48. Sebagian besar guru mengharapkan adanya program pelatihan berkelanjutan sebagai tindak lanjut dari pengabdian masyarakat.

Kata kunci: *Smart Apps Creator (SAC), SDN 2 Pekalongan Jepara, Pengabdian Masyarakat, Media Pembelajaran Berbasis Android, Multimedia Interaktif*

Abstract

New paradigm of learning addresses the shift of how education and learning approaches in the modern era. Smart Apps Creator (SAC) constitutes a new digital-based application to assist teachers create an effective learning environment. As android-based learning media, SAC has a long-term memory to be stored without requiring coding expertise since it is easy to use by educators. This community service is aimed at enhancing teachers' professional development in implementing smart apps creator (SAC) by providing teachers and stakeholders at SDN 2 Pekalongan Jepara knowledge and training of applying SAC. The activity method employed includes expository, Q&A, demonstration, and evaluation. The result of this activity after getting a post-test conducted to 22 teachers and stakeholders is that 81% teachers as participants claimed having enlightened ideas, knowledge and skill improved. Besides, the score average of post-test delivered was a higher score of 95 than the average of pretest scores of 48. Most teachers expected a sustainable training program as the follow-up of community service.

Keywords: *Smart Apps Creator (SAC), SDN 2 Pekalongan Jepara, Community Service, Android-Based Learning Media, Interactive Multimedia*

INTRODUCTION

Many excellent educational learning apps are available to assist students improve their study habits and more organized wherever they are and whatever they do to access these tools. Conceptual of Pancasila student profile is expected becomes a part of multimedia interactive as an outcome to be conducted in Indonesia as ideal learning to create progressive education to enable students to pay attention to their well-being and empower them as learners (Diputra & Sujana, 2023; Saputra, 2023).

Smart Apps Creator (SAC) is an application of interactive media made and created for mobile device and iphone OS (iOS) to build multimedia content without programming code. The advantage using SAC is that file is easily and feasibly saved with HTML 5, exe, and APK for users to apply it. The display is in forms of PPT and e-book to ease users capture information material delivered even without internet after users download the file. The usage of mobile phones, especially smartphones, is not something unusual for people not to use it in their daily activity.

Smart Apps Creator (SAC) becomes new paradigm of 21st learning century (Nengsih et al, 2022) which turns print books into digital versions that seek to facilitate students with adequate knowledge about different learning experience and the ability to think critically to solve the problems they face (Ahadiat et al., 2023). It becomes a challenge for teachers to create material to support students' critical thinking with their basic knowledge and schemes to develop SAC to fulfill students' need of experience learning such as in learning science (Jaiz, et al, 2022; Khotimah et al., 2023; Rani, 2022), math (Sopiah & Saputra, 2023; Mahuda et al., 2021), informatics (Septiani & Zakaria, 2022), Islamic religious education (Khasanah & Rusman, 2021), English (Rizki et al., 2022), history (Fahri, 2022),and music (Apriyani & Ramdhan, 2022).

For the sake of education, teachers are required to be professional competence in mastering particular subjects based on their background of the study and in employing digital application to enhance their professional skill as well, such as employing SAC (Tasyakuri et al.,, 2022). The significant point of using SAC is that it motivates students (Yuberti et al., 2021) and foster students' interest in learning (Sugiyono, 2023; Amalia, 2022; Septiani & Zakaria, 2022) since interactive e-modules are provided in mobile phone (Ramanda & Yogica, 2023) to support Merdeka Belajar Curriculum (Agustin & Hardini, 2023) in order to be able to access easily to apply and to learn everywhere even tutorial in practical lesson (Yallah & Huda, 2022). Common problems of teachers address the lack of ideas facilitating learning media which support students' critical thinking. Whereas learning media has a significant strategic role to attract interest and motivate students at learning outcomes process (Prasetio & Musril, 2021). Employing mobile phone (i.e. smartphone) to upgrade material provided for students flexibly access and easily conduct activity independently, SAC is the solution to overcome teachers' problem to evaluate students (Pangesti, 2021; Habiburrahman et al., 2023). By optimizing SAC, students gain a learning goal to comprehend materials conceptually and factually, particularly using mobile learning and mobile quiz (Siregar & Fitrianingsih, 2023).

Universitas Islam Nahdlatul Ulama (Unisnu) lecturer service team were aware that teachers' challenge in promoting students as independent learners was lack of ideas to create material that would trigger creativity of students in solving problems. This team was inspired by the success of community service actors in assisting teachers to apply SAC to solve students' literacy problems (Rahmi & Sari, 2021). Teachers as partners in community service conducted by Unisnu lecturer service team feel that lesson hours are not adequate time to facilitate warm-up lesson as well as follow-up lesson to students to bring students become active and enthusiastic in class learning since teachers still conduct conventional teaching style using text book and students' worksheet book.

By community service, the lecturer team trained teachers and stakeholders of SDN 2 Pekalongan Jepara to make material using SAC which then the product of SAC is put into a mobile phone. There are 14 teachers who follow the practice of making SAC. By this training, it enhanced the teachers and the stakeholders into professional developments expected. The activity conducted expository and demonstration as the method. The result of community service activity denoted enhancement of teachers' knowledge and skill of creating SAC. It is aimed at enhancing teachers' professional development in implementing smart apps creator (SAC) creatively in making material which invite students to be critical thinkers and to be able to solve problems through questions as evaluation made by providing teachers and stakeholders at SDN 2 Pekalongan Jepara knowledge and training of applying SAC.

METHOD

The method of this activity was expository and demonstration. This community service was conduct-ed to 22 teachers of SDN 2 Pekalongan Jepara. Initially, teachers as partners in this community were explained about interactive digital SAC work. After conducting the expository, Q&A was conducted to give teachers an opportunity to ask to be answered by a community-service team who conducted as speakers. After teachers' partners as participants understood the work of SAC process through explanation, the activity was continued to demons-trate. Lecturer-service team trained teachers through demonstration to create SAC step-by-step practi-cally. As evaluation, teachers are asked to answer questionnaire instruments to find out the effective-ness of activity. During activities, teachers are given gird instrument with 11 criteria to measure the activity with indicator score of 1 (poor), 2 (fair), 3 (good), 4 (very good), and 5 (excellent) to represent the following information of material and components of instructors:
1) The material provided increases the level of skills and knowledge.
2) The training material is easy to understand and easy to apply in learning.
3) The material provided met the expectations and needs of the scope of work.
4) The instructors mastered the material.
5) The instructors mastered the application of SAC practically.
6) The instructors explained the material using language easy to be understood

7) The instructors accompanied participants during training
8) Material and learning objective was intertwined during activity process
9) The instructors gave participants the opportunity to ask for questions and share opinions during activity.
10) The instructors showed exemplary behavior during the activity.
11) The instructors were able to answer participants' questions.

Questionnaires of pre-test and post-test about SAC application were given to determine the success rate of community service activities(Table 1).

Table 1. Pre-Test and Post-Test Questionnaire

Question	Answer options
1. What is the main purpose of using Smart Apps Creator (SAC) in the context of learning media?	A. Create a commercial application B. Improve programming skills C. Improve students' learning experience D. Generate additional income
2. What differentiates Smart Apps Creator (SAC) from traditional methods of creating learning materials?	A. It does not require special hardware B. It requires deep programming skills C. It requires high licensing fees D. It does not support multimedia content
3. How does SAC support personalization of learning?	A. By providing the same results to all students B. By enabling learning content which attracts students C. By limiting the choice of learning content D. By only supporting text material without variations.
4. How do you add images, audio or video when creating an application in Smart Apps Creator?	A. Click the Animation menu B. Click the Template menu C. Click the Insert menu D. Click the Page menu
5. Who is SAC generally suitable for as a user in an educational context?	A. Only for teachers with a strong technical background B. Only for students with experience in application development C. Good for teachers and students without deep programming background D. Not suitable for education
6. How do you add slide interactions to move to the next slide in creating SAC-based learning media?	A. Interaction-touch-object-flip page-add B. Interaction-hide-object-flip page-add C. Interaction-touch-object-back-add D. Interaction-hide-switch page-add
7. When creating SAC, how do you convert an HTML file into an APK?	A. Save B. Output C. Import page D. Save As
8. What types of learning content suitable to create SAC?	A. Text material only B. Text and image materials C. Multimedia content such as video, audio and game-based practice questions D. Image content only

RESULT AND DISCUSSION

Teachers of SDN 2 Pekalongan Jepara realized that digital technology is a new paradigm that gave them new knowledge and skill as a challenge to implement, especially applying Smart Apps Creator (SAC). It is not uncommon for schools to provide their teachers to collaborate with professional teachers and educators in aims at contributing teachers' professional development (Mahato, 2021). When the questionnaire is given as a pre-test, most of them encounter difficulty to recognize SAC and the process of it due to lack of knowledge, lack of time to prepare, and lack of training. The problem experienced also becomes the reasons for other universities and academics in previous studies to conduct community-services and researches to enhance teachers' professional development in aimed at contributing knowledge and mentoring interactive multimedia applying SAC (Masnuri et al., 2021; Wiyanti et al., 2021; Putra et al., 2023; Wahdah et al., 2022; Zikra & Yanti, 2022). This model is relevant to solve problems faced in making students active participants.

Several models of interactive learning are able to be applied using SAC, such as gamification (Naatonis et al., 2023), e-modul with PQ4R (preview, questions, read, reflect, recite, review) strategy (Agustin & Hardini, 2023), discussion-based google jamboard (Siagian, et al., 2023), and so forth. By community-service activity, teachers are motivated to create SAC through 4 actions as a method, involving expository, Q&A, demonstration, and evaluation. The activities were held two days on 16 October 2023 (expository and Q&A) and on 17 October 2023 (demonstration and evaluation). Before community-service was conducted, Universitas Islam Nahdlatul Ulama (Unisnu) service team conducted school-visits to coordinate and to make preparations. The following are the steps of action-service.

Expository

Before expository activity began, teachers are observed to figure out their needs through their experience using interactive multimedia to support their teaching-learning through an ice-breaking quiz of guessing the name of picture applications. This ice-breaking was conducted to seek how far the teacher's insight into digital applications. Ice-breaking is a game action to motivate not only deal with willingness, attention, and concentration of readiness to learn (Adi et al., 2021), but also to identify the teachers' insight toward digital application used to support their teaching-learning. Besides, the strategy utilized based on auditory-kinesthetic-visual learning style is believed to be able to achieve students' learning-outcome (Suryani et al., 2023).

The community-service team conducted coordination with teachers as partners to design training plans. Then, the community-service team transmits knowledge about SAC as an expository strategy. The strategy given was the idea of writing a module including learning material and test of evaluation. Having good idea is urgent owned by teachers since creativity to critical-thinking was significantly implemented as the soul of writing in order to avoid plagiarism of other people's writing (Rosdiana et al., 2022; Rosdiana et al., 2022). Therefore, teachers have to have a strategy to guide students to create ideas of writing and inserting pictures (Rosdiana & Amalia, 2023) by application content.

Smart Apps Creator (SAC) gave teachers new experience in different learning with expectation to enhance students' learning to the goal in addressing students' needs, to provide opportunities for teacher to apply interactive multimedia using SAC, to provide students with opportunities to self-monitor and to self-assess their behavior and record the results through test evaluation, and to provide tiered tasks for students.

Fig 1. Socialization about SAC multimedia

In the expository stage, the service team was conducted on October 16 at SD N 2 Pekalongan Jepara for 22 teachers. The lack of innovation in teaching experienced by teachers and teaching staff fostered the service team to deliver learning innovations based on SAC (Smart Apps Creator) technology was presented by Aliva Rosdiana, S.S., M.Pd. Lecturer in English Education at Unisnu Jepara (Fig, 1). The biggest problem in education for students is interest in learning. This is a challenge for schools, especially teachers and educational staff, regarding how to deliver creative and innovative learning. The development of digital technology always provides the latest displays to make it easier for users to apply according to their needs, one of which is using the Smart Apps Creator (SAC). The SAC application is an assisted media for teachers as a solution to make learning more interesting.

SAC multimedia builder helps teachers to provide student experience in the learning process so that the quality of learning increases and the learning methods become richer. Teachers have digital competence to the faster and efficient process of learning. Furthermore, the results of learning design products become quality, increase creativity, and produce learning which is innovative (Rachman, 2023). Several researchers have developed SAC for students such as at SD N Jabung 1, Panekan District, Magetan Regency (Elviana & Julianto, 2022), SMAIT Insan Mulia Boarding School Yogyakarta (Fahri, 2022), SDN Sumberagung 1 Semarang (Panggalih & Handayani, 2023), SMA swasta Kabupaten Bandung (Ferlianti et al., 2022), and so forth. Likewise, in community service programs, several service teams provide education for teachers, such as in the Limboto Regency Kindergarten (Juniarti & Ramadan, 2021).

SAC is supported on smartphones for its use. Considering that China is the largest smartphone user, Indonesia is in fourth place with 170.4 million users or 61.7% of the total population (Pusparisa, 2021). SAC interactive learning is the development of smartphone or Android-based learning media via desktop that is created without programming code. As a piece of software that can be used to create iOS and Android based applications, this application is designed without programming and can be created in HTML5 and EXE formats. The following is the SAC application for learning English to mention time/hours in grade 4 of elementary school.

The steps for applying material into SAC are as follows:
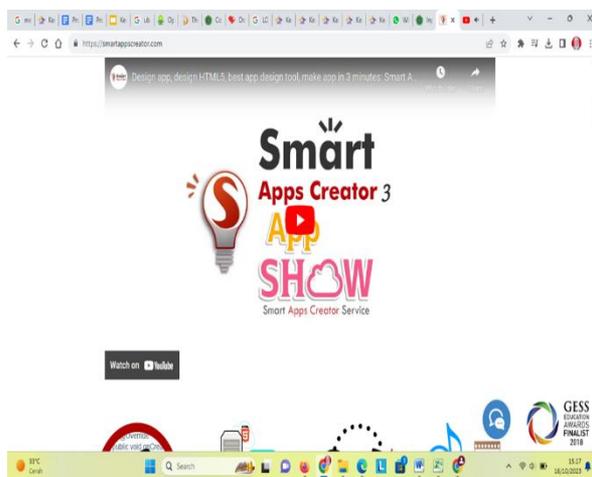1. Download the Smart Apps Creator application (Fig. 2)

Fig 2. Smart Apps Creator (SAC)

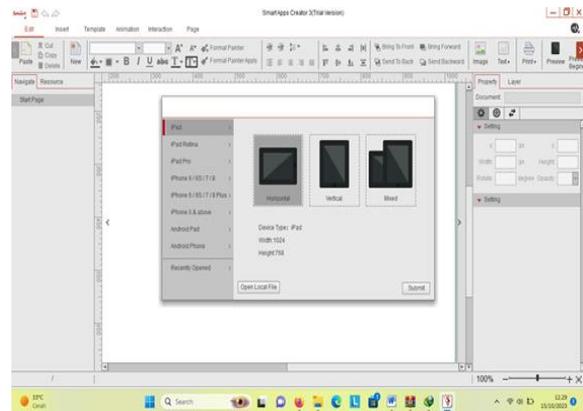2. Select the device used. Then press submit (Fig. 3)

Fig 3. Display the SAC start page

3. Start designing. Select a template then install it.

Fig 4. SAC layout view

Use the start page to create the main loading page. After that, in the default section, material, text, buttons, images and others are entered. In this section, then, learning media begins to create. The way to add an image to the smart apps creator start page is as follows Click start page (Fig. 5), choose (Fig. 6) and insert image (Fig. 7). Add audio in MP3 format and video in MP4 format. In the end of creating, save by clicking output then selecting device and saving in APK.
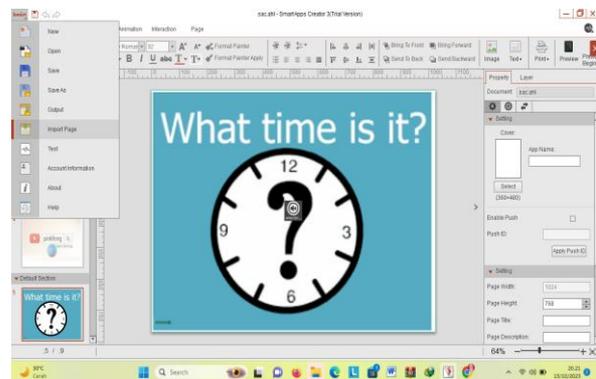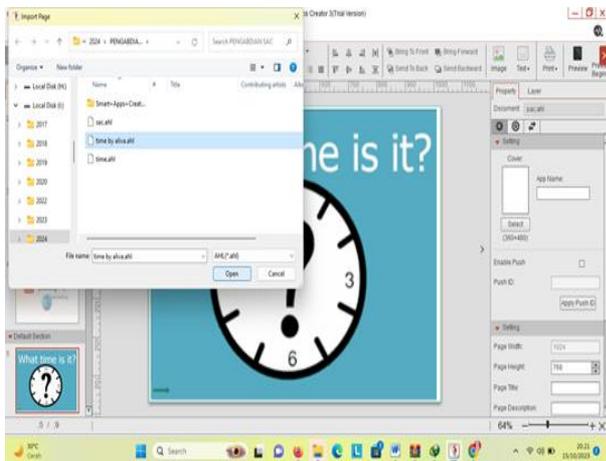

Fig 5. Material display

Fig 6. Format of ahl SAC

Fig 7. Image SAC

Question and Answer (Q&A)

The Community-service team of Unisnu accumulated questions from teachers as partners to be answered. The expectation was the problems faced were solved so that teachers could continue their activity stage to demonstration.

Demonstration

At the demonstration stage, the service team consisting of lecturers and students provided training for teachers at SDN 2 Pekalongan Jepara to create digital media based on smart apps creator (SAC) with the aim of producing innovative learning media products based on SAC (Smart apps creator) that were suitable for teachers to assist them in teaching activities. This activity was facilitated by Aan Widiyono, M.Pd. lecturer of PGSD Unisnu Jepara on October 17th, 2023. While participants were carrying out training on the application of digital media based on smart apps creator (SAC), the service team accompanied the participants as teachers at SDN 2 Pekalongan Jepara. During the mentoring process, the service team accompanies and monitors training activities

carried out by participants in creating digital media based on smart apps creator (SAC).

Evaluation

Discussion activity is part of evaluation to ascertain teachers gained knowledge, skill, and support to implement SAC creativity. Community service team conducted assessment by rubric provided and questionnaire about training material, interaction and participation among them, Q&A, and feedback. The activity result was successful as indicated by instrument rubric designed in bar chart below both material and instructor (Fig. 8).
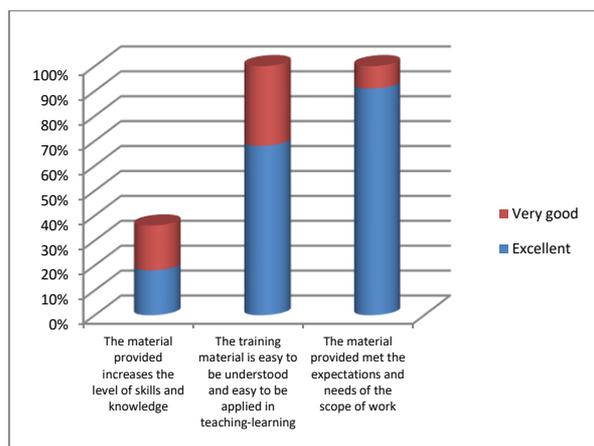

Fig 8. The result of the material provided accuracy

Evaluation is conducted through discussion and the instrument made is used to ascertain if the community-service activity was running well. Score percentage of the gird instrument is 80% and very good 20% from 3 criteria of the material provided accuracy are formulated. There were 18 out of 22 participants claimed that the material provided increases the level of skills and knowledge is 82% excellent and 4 of 22 participants is 18% very good, the training material claimed by 15 out of 22 participants was easy to understand and easy to apply in learning is 68% excellent and 7 out of 22 participants is 32% very good, the material provided claimed by 20 out of 22 participants met the expectations and needs of the scope of work is 91% excellent and 2 out of 22 participants is 9% very good. Score percentage of the gird instrument is 81% and very good 19% from 8 criteria of instructors' capability are formulated. They also claimed the instructor provided is 82% excellent and 18% very good in mastering material, 82% excellent and 18% very good in mastering the application of SAC practically, 77% excellent and 23% in explaining using easy language, 68% excellent and 32% very good in accompanying participants during training process, 77% excellent and 23% very good intertwine of material and objective, 91% excellent and 9% very good in giving opportunity of asking and sharing during activity, 86%

excellent and 14% very good in showing exemplary behavior, 86% excellent and 14% very good in answering participants' questions (Fig. 9).
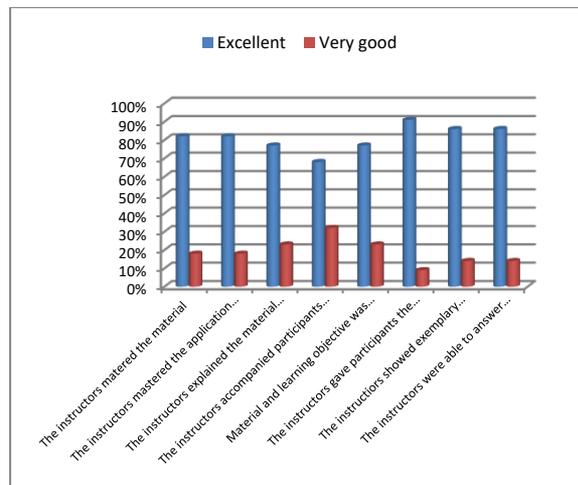

Fig 9. The result of instructor capability

In addition, the team of school-based community service also provided instruments of pre-test and post-test to ascertain participants' enhancement during activity. The participants chose the correct answers provided to four options of each question. There are questions provided to each pre-test and post-test to compare. The result of these tests increased after participants conducted the activity (see fig 10). The percentage indicates that the average post-test score is 95 higher than the average pretest score of 48. It means that participants' skill increased significantly shown by score (Fig. 10).
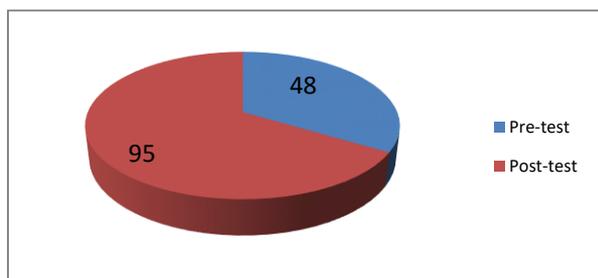

Fig 10. Comparison score of pre-test and post-test

CONCLUSION

Smart Apps Creator (SAC) is a digital application tool and an interactive multimedia that enables teachers to develop android-based learning media without acquiring coding expertise. By utilizing SAC, it assists 22 teachers to be creative in creating e-module to enhance students' interest in learning. The new paradigm of SAC gave teachers new knowledge to demonstrate due to lack of knowledge and lack training. The result of community service indicates that the activity was running well and illustrates the score percentage of gird instruments dealt with 3 criteria of the material provided are formulated is

excellent of 80% and very good 20%. Furthermore, the score percentage of gird instruments dealing with 8 criteria of instructors' capability is excellent of 81% and very good 19%. The pretest and posttest were given to ascertain that the mentoring conducted was accepted well. The average score of post-test indicates higher 95 than the average score of pretest of 48. By enhancing teachers' professional development mentored by community-service teams, it contributed to advancing Indonesian education. Most teachers expected a sustainable mentoring program as the follow-up of a school-based community digitally.

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