

Improving MGMP teachers' self-efficacy through technical guidance in learning from home program

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ARTICLE INFO	ABSTRACT
<p>Article history Received: 2021-05-09 Revised: 2021-06-07 Accepted: 2021-08-09 Published: 2021-08-13</p> <p>Keywords Learning community Learn from home Self-efficacy</p>	<p>The target of this technical guidance was secondary teachers of natural sciences, social sciences, and language who were members of the Teachers Professional Development Forum or Musyarawah Guru Mata Pelajaran (MGMP) in Siak Kecil, Bengkalis Regency. This training aimed to provide digital literacy strengthening for teachers in designing, implementing, and evaluating home-learning programs. This technical guidance was carried out through an online platform (Zoom) and offline mentoring in the MGMP discussion forum. The technical guidance mechanism consists of training and simulations in designing digital learning media in PowerPoint presentations, video monologues, e-student worksheets, and e-modules using software applications such as Filmora, Explee, Sigil, and Kinemaster. The results of this technical guidance were increasing self-efficacy with indicators of confidence in completing tasks (high), internal motivation (high), persistence (high), and being able to overcome obstacles and difficulties (high). There was also an increase in teachers' digital literacy in the aspects of data awareness (good), data analysis skills (sufficient), and ability to focus (excellent). The assessment of the results also showed that participants could design and use applications to carry out digital learning from home. Overall, this technical guidance positively impacted teachers' Continuing Professional Development (CPD), especially secondary teachers in Siak Kecil and Lubuk Dalam Sub-districts in Riau Province.</p>
<p>Kata kunci Belajar dari rumah Komunitas belajar Self-efficacy</p>  	<p>Meningkatkan efikasi diri guru MGMP melalui bimbingan teknis program belajar dari rumah. Target dari bimbingan teknis ini adalah guru-guru sekolah menengah IPA, IPS, dan bahasa yang merupakan anggota dari Forum Pengembangan Profesi Guru atau Musyawarah Guru Mata Pelajaran (MGMP) di Siak Kecil, Kabupaten Bengkalis. Pelatihan ini diselenggarakan dengan tujuan memberikan penguatan literasi digital bagi guru dalam merancang, melaksanakan, dan mengevaluasi program belajar dari rumah (home-learning program). Bimbingan teknis ini dilakukan melalui platform online (zoom) dan pendampingan offline dalam forum diskusi MGMP. Adapun mekanisme bimbingan teknis dilakukan dengan pelatihan dan simulasi perancangan media pembelajaran digital melalui PowerPoint, video monolog, lembar kerja e-student, dan e-module menggunakan aplikasi perangkat lunak seperti Filmora, Explee, Sigil, dan Kinemaster. Hasil dari bimbingan teknis ini didapati adanya peningkatan self-efficacy dengan indikator kepercayaan diri dalam menyelesaikan tugas (tinggi), motivasi internal (tinggi), ketekunan (tinggi), dan kemampuan mengatasi hambatan dan kesulitan (tinggi). Peningkatan literasi digital guru juga terjadi pada aspek kesadaran data (baik), keterampilan Analisa data (cukup), dan kemampuan untuk fokus (sangat baik). Penilaian hasil juga menunjukkan bahwa peserta dapat merancang dan menggunakan aplikasi untuk melakukan pembelajaran digital dari rumah (Learning from Home). Secara keseluruhan, bimbingan teknis ini berdampak positif terhadap Pengembangan Keprofesian Berkelanjutan (PKB) guru, khususnya guru sekolah menengah di Kecamatan Siak Kecil dan Lubuk Dalam Provinsi Riau.</p> <p>Copyright © 2021, Suryawati et al This is an open access article under the CC-BY-SA license</p> 

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INTRODUCTION

Improving the quality of teachers is one of the most significant concerns of government these days. This concern is because the teacher plays a very central role for successful learning in the classroom. One factor of a student's successful learning depends on how a teacher acts a role as a manager and a professional director in encouraging students to learn. This statement is similar to Blazar and Kraft (2017), who state that efforts to improve the quality of teacher need to be focused on because teachers play an essential factor in education to improve student abilities and eventually affect the long-term success of students.

The government has made efforts to improve the quality of teachers, one of which is to make standardization. According to the Regulation of The Minister of National Education No. 16 the Year 2007, teachers must have pedagogical, personal, social, and professional competencies. Teacher professional development is intended to meet three needs. Firstly, the social needs to increase an efficient and humane education system and make adaptations to meet social needs. Secondly, the need to find ways in helping the academics develop their personalities broadly. Thirdly, the needs to develop and encourage academics' personal life, as well as helping students develop their desires and beliefs to fulfill personal demands following their basic potential.

Improving teacher's competence can be carried out through Sustainable Professional Development or *Pengembangan Keprofesionalan Berkelanjutan* (PKB). According to Rusdarti et al. (2018), the goal of PKB is to help someone achieve a higher standard of work (for those who work) and higher learning outcomes (for those who learn) more effectively. PKB for teachers can be done through self-development activities, scientific publications, and/or innovative work (Rahyasih et al., 2020). The implementation of PKB can be integrated through the empowerment of the learning community through the Teachers Professional Development Forum (MGMP).

Due to the coronavirus pandemic, everyone has been suggested to do physical distancing in order to stop the spread of the virus, including the teaching and learning process at secondary schools in Bengkalis Regency. In 2020, the local education department in the regency released a new policy and guidance on the learning-from-home program. Since then, it has been essential for teachers to switch their teaching styles to these new conditions. Teachers should plan, implement and evaluate learning without face-to-face sessions in the school classrooms. This home-based learning program demanded teachers' abilities in the digital literacy aspect. As argued by König et al. (2020), during covid-19 pandemic, teachers face significant challenges in adapting to online teaching and maintain communication with students using digital technology advances to support the learning and development of students.

In a survey conducted by some lecturers and students, there were still many teachers who had difficulties in planning, implementing, and evaluating the distance learning process. One major factor is the low digital literacy skills of teachers and the lack of facilities and infrastructure that support it. According to recent research by Pratolo and Solikhati (2020), teachers were still experiencing difficulties in practicing digital literacy, mainly due to internal factors, that is, the ability of teachers to use technology; meanwhile, the external factors, such as lack of sources of technology, limited school funds to purchase high-tech devices as well as students' readiness and willingness to use innovative technology. Thus, teachers' professional competence of digital literacy in designing instructional media during a pandemic could be improved through online seminars, workshops, and courses.

In order to facilitate successful learning in this pandemic situation, teachers have been forced to apply information, communication, and technology (ICT) in their classes. ICT skills can be improved if teachers have high self-efficacy to manage their teaching. This is similar to a study conducted by König et al. (2020), self-efficacy is a relevant factor to face the challenges encountered by teachers in achieving competency. According to Wangid et al. (2020), self-efficacy is a process that results from a decision, belief, or appreciation about how far individual estimates his ability to carry out certain tasks or actions needed to achieve the desired results.

Self-efficacy that teachers have is a decisive factor in developing digital learning media either in the form of e-texts (PPT presentations, student's worksheets, handouts, and modules), audio-video, video scribe, and virtual reality using the application Filmora, Explee, Sigil, Kinemaster. Lacks of digital proficiency (literacy, fluency, and mastery) become obstacles when teachers develop digital learning resources. Teachers still find it difficult to start looking for information and follow tutorials or training given even though teacher's motivation to learn is high. Therefore, it requires systematic and structured training and mentoring in accordance with the potential of the teacher. The intended training is training to improve teachers' digital literacy skills and teacher's self-efficacy in designing, implementing, and evaluating learning from home program. The form of training carried out is a combination of online platform using the Zoom Cloud Meeting and offline at MGMP in Siak Kecil District. The target of community engagement training program is secondary teachers who were members of the Siak Kecil Teacher Professional Development Forum (MGMP). Participants who took part in online activities and direct mentoring at the MGMP were 54 people.

METHOD

The community empowerment activities in Siak Kecil District were attended by 54 participants who were language, science, social studies, and mathematics teachers from SMPN 1 Siak Kecil, SMPN 2 Siak Kecil, SMPN 3 Siak Kecil, SMPN 4 Siak Kecil, and SMPN 5 Siak Kecil. This activity took place online and offline from 21 July to 31 August 2020. During the pandemic, teachers were trained to use online learning platforms in lesson planning, learning, and evaluation. The method used in this community engagement program was done by holding seminar and workshops online and offline to secondary school teachers at the Teachers Professional Development Forum (MGMP). These workshops were to

strengthen digital literacy of teachers who taught different subjects in Lubuk Dalam Siak and Siak Kecil. The application of this training can be described as follows: (1) Theoretical study on the concept of digital teaching materials as a form of sustainable professional development of teachers. Through workshops, teacher community, or the Teacher Professional Development Forum (MGMP) through online learning technical guidance activities to strengthen digital literacy. (2) Creating digital learning media, namely, PPT presentation slides, monologue videos, e-worksheets, and e-modules using software applications such as Filmora, Explee, Sigil, and Kinemaster. (3) Technical guidance activities in creating digital learning media for teachers so that they could apply such skills independently for their classes.

Data were collected using Google forms distributed to see teachers' digital literacy skills before and after training and measuring teacher's self-efficacy as an impact of the training. Then, the data were analyzed descriptively.

RESULTS AND DISCUSSION

The community engagement activities in Siak Kecil Sub-district were attended by 54 participants who were teachers of language, science, social studies, and mathematics from SMPN 1 Siak Kecil, SMPN 2 Siak Kecil, SMPN 3 Siak Kecil, SMPN 4 Siak Kecil, and SMPN 5 Siak Kecil. These activities took place online and offline from 21 July to 31 August 2020. During these times, teachers were trained to use online learning platforms in lesson planning, the learning process, and learning evaluation.

This community development project for strengthening digital literacy was appreciated by teachers in the Siak Kecil sub-district as it received warm welcome from the school. This community engagement had succeeded in helping teachers who were members of the MGMP in Siak Kecil Sub-district understand online learning using various platforms to support planning, implementation, and evaluation of learning activities from home. Teachers also understood the background and importance of digital literacy skills in learning from home. Our initiative to strengthen the understanding of digital literacy made teachers confident to teach using online platforms during the Covid-19 pandemic.

This community engagement project consisted of 8 meetings which included a number of advanced activities: Meeting 1 was an online public seminar as well as orientation and socialization of the project. Meeting 2 was also conducted online through the Zoom Meeting platform and discussed the training syllabus for face-to-face sessions MGMP teachers in Siak Kecil and Lubuk Dalam Sub-districts. Meeting 3 was held offline at SMPN 1 Siak Kecil which discussed general overview of effective online learning (learning from home). Meeting 4 was also held face-to-face at SMPN 1 Siak Kecil and discussed applications for Distance Learning (PJJ) and assistance in using PJJ applications. Meeting 5 was also held at SMPN 1 Siak Kecil, which discussed the creating digital learning media. Meeting 6 was held at SMPN 1 Siak Kecil and discussed the uses of Google Classroom, Google Meet, Kahoot and Quizziz in online learning. Activities at the 7th meeting were carried out to record literacy books at SMPN 1 Siak Kecil and presented "Thank You" gift to SMPN 1 Siak Kecil. The 8th meeting was a public webinar discussing the results of the training. Documentation of online public lecture and offline training workshops in SMPN 1 Siak Kecil can be seen in Figure 1 and Figure 2.



Figure 1. Meeting 1: Orientation and socialisation (online)



Figure 2. Meeting 6: Training (Tutoring at MGMP)

This activity helped teachers practice teaching using online learning platforms and guided teachers in planning, implementing, and evaluating online learning. Training through MGMP was a form of sustainable professional development (SPD) that created teachers a room for self-improvement by creating innovative teaching tools and materials that could support the learning process during the pandemic. The innovative multimedia products produced by the teacher from this training were learning media and monologue videos. Learning media and monologue videos could be used as primary and supplementary learning resources for online learning. Examples of instructional media and videos produced by teachers can be seen in Figure 3 and Figure 4.

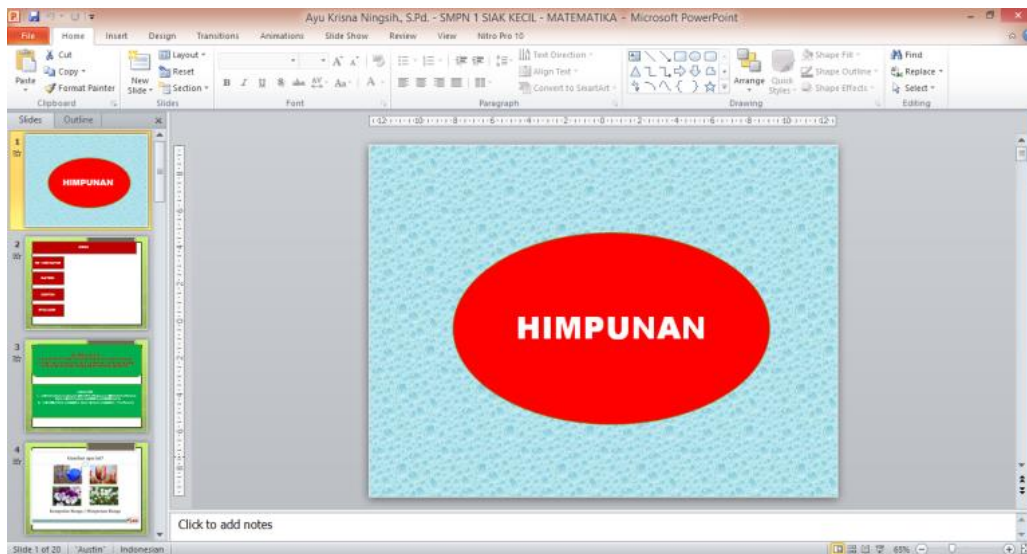


Figure 3. Sample learning media: interactive PowerPoint presentation



Figure 4. Sample monologue video

Figure 3 and Figure 4 show new knowledge and skill the teachers gained from the training. The PowerPoint presentation slides and monologue videos produced by teachers in this training were considered good by trainers and could be used as independent learning resources for students. The increase in teachers' skills about using online learning platforms and making technology-based learning media had shown the improvement of teachers' digital literacy skills which were key skills that teachers must have to support the learning process during distance learning. Digital literacy skills were determined through four indicators: computer literacy, information literacy, visual literacy and media literacy. A person who has digital literacy is characterized by the fact that he understands technological trends, is ready to work with applied technology innovations, gadgets, and also understands the benefits of technology for both the development of society and themselves (Anisimova, 2020). One of the goals of this community engagement project was to improve the teachers' skills in the aspect of digital literacy in planning, implementing and evaluating the home-based learning. The digital literacy skills of secondary school teachers in Siak Sub-district before and after this training workshops can be seen in Figure 5.

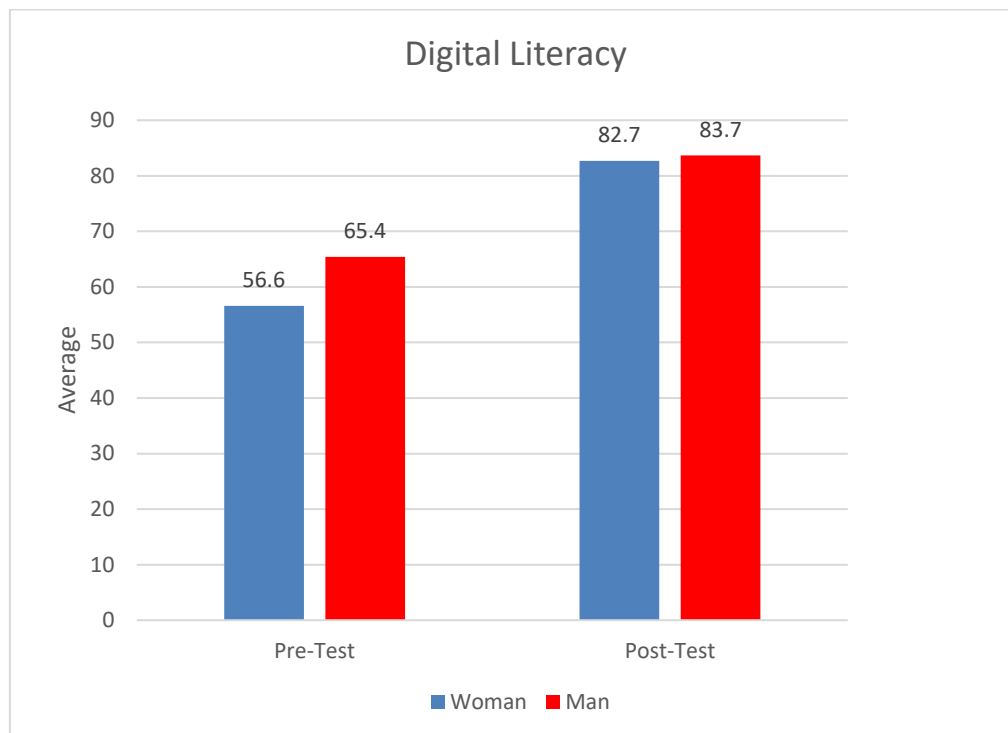


Figure 5. Average scores of pre-test and post-test teacher's digital literacy based on gender

Figure 5 shows that there was a difference between the digital literacy skills of male and female teachers. This difference was not that much, but it could be said that digital literacy was influenced by gender. This result was similar to that of Marini et al. (2020), who state that women have lower digital literacy skills than men because of several limitations, namely mobility, educational level, time, economy, and cultural patriarchy. Figure 5 also shows an increase in the digital literacy skills of both genders from pre-test to post-test. When the pre-test was conducted, teachers' digital literacy skills were still in the poor category, with 56.6 for female teachers and 65.4 for male teachers. After training sessions, the digital literacy skills of male and female teachers increased into the high category. These results were, of course, following the objectives of implementing this community empowerment program to strengthen the teachers' capacity to develop digital learning media through learning-from-home programs.

This community development program consisted of 8 sessions that trained teachers in using online learning platforms, trained teachers in planning learning media for online learning, and trained teachers in making evaluation questions using online platforms such as Kahoot and Quizziz. The training materials in the eight meetings provided additional digital literacy strengthening for teachers so they could plan, implement and evaluate the online learning process properly. This is in accordance with the opinion of Akayoğlu et al. (2020), digital literacy is shown from technical skills (how to use digital tools and functional skills (how to use digital tools for professional and personal purposes. Strengthening digital literacy is very useful for the achievement of learning objectives.

Teachers having good digital literacy skills can be seen from the smooth implementation of their online learning. The success of the learning process will be followed by the ability of students the using the technology in learning and be able to understand the material presented. This concept is supported by Liza and Andriyanti (2020) who state that students' high enthusiasm for digital technology and sufficient knowledge and skills about digital technology from a young age will increase the students' knowledge of devices, applications, terminology, and technical matters related to digital technology and science.

Digital literacy skills are also supported by an individual's level of self-efficacy. Self-efficacy is a person's self-belief in his ability to solve problems, complete tasks without comparing with other people's abilities so that they can achieve success in learning achievement (Ningsih & Hayati, 2020). One factor that supports the smooth running of learning activities at school both face-to-face and online is teacher's self-efficacy. Teachers must have high self-efficacy so that they are willing to develop digital learning media in the form of PowerPoints slides, monologue videos, e-worksheets, and e-modules using software applications such as Filmora, Explee, Sigil, Kinemaster. Therefore, this community empowerment aimed to provide high self-efficacy for teachers in Siak Kecil Sub-district. The results of the self-efficacy of teachers in Siak District after this training based on gender can be seen in Figure 6.

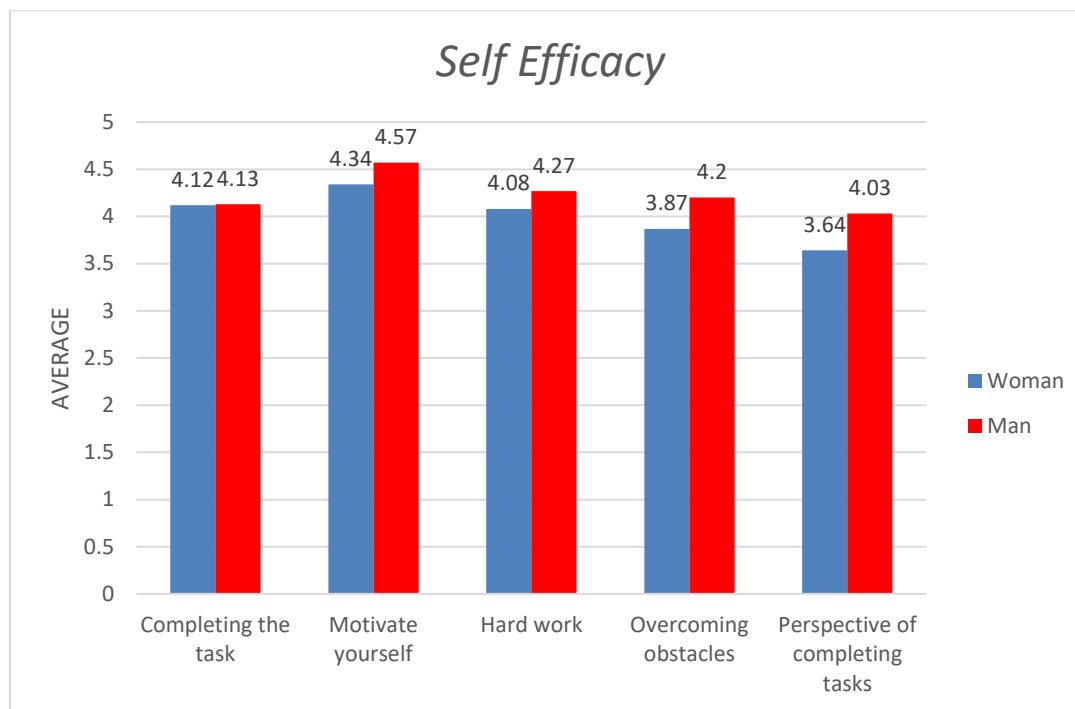


Figure 6. Average scores of teacher's self-efficacy based on gender

Figure 6 shows that the teacher's self-efficacy was in a high category where male and female teacher respondent gave 'agree' answers. However, if seen from the high and low graphs on each indicator, male teachers had better self-efficacy than female counterparts, although the difference was not that significant. This is similar to the study of Peter and Benardatte (2020), who state that self-efficacy is not significantly influenced by gender. Female and male teachers who had high self-efficacy improved performance in school and control fatigue at work. Low self-efficacy indicates a lack of personal achievement, causing fatigue in carrying out work.

Figure 6 also shows that the task's indicator managed to score 4.12 for women and 4.13 for men. This indicator showed that the teacher's self-efficacy towards his belief in completing a task by utilizing technology was in the high category. This self-efficacy could reach a high category because previously, the teachers were introduced to several technologies and platforms that support learning from home. Their experience encourages teachers to carry out learning activities. This result was similar to those reported by Poulou et al. (2019), who state that the length of experience also determines the teacher's self-efficacy. Experienced teachers will have a higher level of self-efficacy than those who are not experienced.

The indicator that described the highest ability was indicator 2, namely the self-motivation, which score 4.34 for women and 4.57 for men. This showed that both male and female teachers were able to motivate themselves to improve their professionalism. The training sessions held could be one factor supporting teachers' motivation in planning, implementing, and evaluating the learning process from home. Similarly, Pujaningsih and Ambarwati (2020) say that teachers' self-efficacy in teaching needs to be developed through adequate preparation and training programs to provide field experience for participating teachers in preparing and implementing learning.

The lowest indicator was indicator 5, the perspective for completing tasks, score 3.64 (sufficient) for women and 4.03 (moderate) for men, which illustrated that the perspective that male teachers are better at completing tasks using software than female teachers. This indicator resulted in a low score because of the teacher's lack of confidence to complete given tasks. This lack of confidence can be caused by a lack of experience in using specialized software. This result was similar to that found in Putri and Fakhruddiana (2019), teachers' self-efficacy is influenced by four factors, namely previous success experiences, other people's experiences, verbal persuasion, and physical conditions and affections. The relationship between career length and experience of mastering a job can also explain a person's level of self-efficacy.

The level of self-efficacy will be in line with the teacher's ability to manage class during the learning process (Poulou et al., 2019). According to Fatmawati et al. (2020), the form of willingness to self-efficacy of teachers can be seen from the ability to do tasks well and will not show procrastination or postponement of work that can harm teachers and school institutions. Self-efficacy indicates a teacher's confidence in his ability to improve his performance in creating successful learning. However, self-efficacy can be influenced by the teacher's experiences. This community engagement project provided additional knowledge to teachers about technology and procedures for implementing learning from home (online) to improve teachers' digital literacy. Moreover, a high level of self-efficacy in planning, implementing, and evaluating the learning was believed to boost such improvement for both male and female teachers.

CONCLUSION

The mentoring carried out for six weeks online on the Zoom platform and offline in the Siak Kecil sub-district had a positive impact on improving teacher performance and self-efficacy. This can be seen that 90% (49 participants) submitted training assignments in the form of lesson designs and digital learning media in the form of PPT slides, monologue videos, e-LKPD, and e-modules using a simple application. Overall, there is no difference in self-efficacy between male and female teachers. All participants have good self-efficacy. Self-efficacy will be very necessary when the teacher manages the class during the learning process.

From this training, the results of strengthening the digital literacy of teachers can be identified from the ability of teachers to create learning resources and technology-based learning media. The increase in digital literacy in this training was also supported by the level of the teacher's self-efficacy, which was one of the factors that support the successful learning carried out by the teacher. The obstacles to this community engagement project were limited time for its implementation and limited space to explain the training material in more detail. The training participants are expected to be able to implement the knowledge and expertise that has been provided, apply the draft worksheet that has been prepared, and make learning media designs that apply the principles of effective and fun distance learning. Thus, this project is a pivotal action in achieving one of the Sustainable Development Program (SDG) goals, name quality of education. Through the technical guidance, this work has promoted a lifelong learning for all.

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