Dedicated:
Journal of Community Services
(Pengabdian kepada Masyarakat)
https://ejournal.upi.edu/index.php/dedicated/

Empowering teachers to create learning animation videos with an assessment as learning approach

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ABSTRACT

The technological age dragged other fields to use technology, including video games. As a result, video games are increasingly popular with school children, especially elementary school children. Even though teachers are the front line to divert children's attention from playing games to learning animations, the teacher working group of Rayon 18 South Sulawesi has limitations in making interesting videos even though they have carried out several activities. Therefore, empowering teachers is a solution to apply research results by participating in training to make learning animation videos using the assessment as a learning approach. The activity was attended by 35 elementary school teachers from the rayon for one day with three sessions. The direction of the line of training participants' understanding ability increases where the post-test score is higher than the pre-test. The correlation between questions shows a consistent increase. Likewise, this increases teacher skills in installing applications, applying video applications to create videos, and increasing teacher skills in creating animated learning videos. Teachers feel satisfied receiving the benefits of taking part in training in making learning animation videos. Therefore, teachers can increase creativity by creating learning animation videos so students are more interested and focused on learning.

ARTICLE INFO

Article History:
Received: 4 Aug 2023
Revised: 14 Oct 2023
Accepted: 18 Oct 2023
Available online: 24 Oct 2023
Publish: 8 Dec 2023

Keyword:
Assessment as learning; empowering teacher; learning animation

Open access
Dedicated: Journal of Community Services (Pengabdian kepada Masyarakat) is a peer-reviewed open-access journal

ABSTRAK

Era teknologi menyeret bidang lain untuk menggunakan teknologi termasuk video game. Alhasil, video game semakin digemari oleh anak-anak sekolah, khususnya anak sekolah dasar. Meskipun guru merupakan garda terdepan untuk mengalihkan perhatian anak dari bermain game ke bermain animasi pembelajaran, namun Kelompok Kerja Guru Rayon 18 Sulawesi Selatan memiliki keterbatasan dalam membuat video yang menarik meskipun telah melakukan beberapa kegiatan. Oleh karena itu, pemberdayaan guru menjadi solusi untuk menerapkan hasil penelitian dengan mengikuti pelatihan pembuatan video animasi pembelajaran dengan pendekatan asesmen sebagai pembelajaran. Kegiatan diikuti oleh 35 orang guru SD rayon selama satu hari dengan tiga sesi. Arah garis kemampuan pemahaman peserta diklat meningkat dimana skor post-test lebih tinggi dibandingkan pre-test. Korelasi antar pertanyaan menunjukkan peningkatan konsisten. Begitu pula dengan peningkatan keterampilan guru dalam menginstal aplikasi, peningkatan keterampilan guru dalam menerapkan aplikasi video untuk membuat video, dan peningkatan keterampilan guru dalam membuat video animasi pembelajaran. Guru merasa puas menerima manfaat mengikuti pelatihan pembuatan video animasi pembelajaran. Oleh karena itu, guru dapat meningkatkan kreativitas untuk membuat video animasi pembelajaran agar siswa tertarik belajar dan lebih fokus dalam belajar.

Kata Kunci: *Animasi pembelajaran; pemberdayaan guru; penilaian sebagai pembelajaran*

How to cite (APA 7)
Rukli, R., H, N., & Nurindah. (2023). Empowering teachers to create learning animation videos with an assessment as learning approach. *Dedicated: Journal of Community Services (Pengabdian kepada Masyarakat), 1*(2), 239-254.

Peer review
This article has been peer-reviewed through the journal's standard double-blind peer review, where both the reviewers and authors are anonymised during review.

https://doi.org/10.17509/dedicated.v1i2.63358

INTRODUCTION

Education is one of the key aspects in developing the potential of individuals and society in order to achieve optimal results (Sulaiman & Neviryani, 2021). In it, teachers have a very significant role so that they escape oppression (Ajat & Hambali, 2021). Agustyaningrum and Himmi (2022) stated that teachers are not only transmitters of information but also guides, motivators, and assessors in the learning process and evaluate themselves (Al-Mwzaiji & Alzubi, 2022; Seekis et al., 2023). To achieve effectiveness in education, teachers must continue developing teaching methods relevant to current developments, including utilizing technology as a learning aid. One technology that is increasingly being used in learning is animated videos.

Animated videos are a dynamic and engaging form of media that can be used to explain difficult concepts in a way that is easier for students to understand (Achmad et al., 2021; Karunianingsih et al., 2022). In this context, teachers can become creative educational content producers by creating interesting Learning Animation Videos (LAV). However, using this technology is not without challenges. The Teacher Working Group (TWG) Rayon 18 Soppeng Regency, one of the teacher groups, experienced obstacles in making videos, especially LAV. Several training activities and special meetings discussed the application of learning technology but have not achieved maximum results. Activities involved from and for TWG members are shown in **Figure 1**.

Figure 1. Apply IT in Learning
Source: Documentation from partners, 2020

The question that arises is how teachers can ensure that the animated videos they create are truly effective in supporting student learning. Does the video achieve the desired learning objectives? This is where the Assessment as Learning (AaL) approach becomes relevant.

The AaL approach is a concept that emphasizes that evaluation in learning is not only about measuring student achievement but also about how students can learn from the evaluation process (Yin et al., 2022; Lam, 2020; Lakhtakia et al., 2022). In creating LAV, AaL can be a useful guide for teachers to design the video so that it is not only a teaching tool but also a valuable evaluation tool. In the context

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of LAV creation, AaL offers some valuable guidance. First, teachers must clearly understand the learning objectives they want to achieve using this animated video. What should students learn after watching the video? Second, teachers must design videos to allow students to interact with the material actively. This can involve thought-provoking questions, exercises, or assignments that students must complete after watching the video. Apart from that, AaL also emphasizes the importance of feedback in learning. Teachers should design videos in a way that allows them to provide feedback to students about the extent to which they have achieved the learning objectives. This may involve using quizzes, reflective questions, or even formative assessments that allow teachers to identify areas where students need improvement.

How can teachers integrate the AaL approach in creating LAVs? First of all, teachers need to understand that the video is not only a teaching tool but also an evaluation tool. Therefore, they must plan videos carefully to reflect the desired learning objectives. For example, if the learning goal is to understand a particular mathematical concept, an animated video should be designed to explain it clearly and illustrate it with relevant examples. However, the video should also include evaluation elements, such as questions that check students' understanding of the concept. This allows students to measure the extent to which they have understood the material, and teachers can use student responses to assess whether learning objectives have been achieved.

In addition, teachers should also consider how the video can stimulate critical thinking and reflection. Well-designed animated videos provide obvious answers and ask questions encouraging students to think more deeply about the material they are learning. In this way, the video is a passive and active teaching tool supporting the learning process.

Although the AaL approach offers various benefits in LAV creation, several challenges must be overcome. First, designing animated videos with evaluation elements can be complex. Teachers must think carefully about presenting questions or assignments in videos so students can respond well to them. Second, providing feedback in the context of animated videos can also be challenging. How can teachers provide effective feedback to students after they watch videos? This could involve online learning platforms allowing teachers to track student responses and provide individualized feedback. Apart from that, teachers also need to consider how to measure the extent to which students have learned through animated videos. Is there a way to objectively measure their understanding? This may involve the use of computer-based assessments or relevant tests.

Research results implemented in the TWG regarding LAV are Nurindah and Nurhikmah (2021) study, namely Android-based learning media, Hasyim et al. (2020), while the assistance approach uses the results of Rukli's survey with the AaL approach (Rukli & Iqramsyar, 2022). The combination of LAV and the AaL approach is an innovation in making LAV, especially for TWG. It is hoped that this will support them in independent campus learning, namely that the community will use the results of the lecturers' work. Therefore, the service aims to empower the TWG in overcoming obstacles, namely increasing abilities and skills to create LAVs using the AaL approach.

Literature Review

Learning animation videos

Animated video is a moving image originating from various objects, which are then arranged to move according to a predetermined path at any given time. Even though this definition has shifted according to developments, the essence remains the same: animated videos refer to dynamic images with two or three dimensions. LAV is not only a post-COVID-19 trend but is a barometer indicator of the Industrial

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Revolution (RI) 4.0 (Arifin et al., 2022). Before Covid 19, RI 4.0 had begun to boost the application of distance learning technology and the use of learning videos via YouTube, other channels, applications, and websites (Putry et al., 2020). With the increasing application of information technology, teachers need competent knowledge and skills to stem negative flows for students. However, limiting or prohibiting students from bringing cell phones to school requires proportional wisdom. Studies show that most participants preferred the LAV teaching approach and were highly interested in digitally sharing information from educational animations (Bello-Bravo et al., 2018).

Cell phones can make students addicted to playing games, so they have difficulty concentrating or forget to study. However, studies show that cell phones have benefits for students and teachers. Teachers and students with cellphones can communicate directly (on time) by calling and SMS. Also, HP has several features for creating LAVs, making it easier for teachers to develop LAVs to divert students' attention to learning material. There is only one key: the video is interesting in game-like animation and even better. Studies show that animated videos are a learning medium that can be used to improve explanatory text-writing skills (Puspita et al., 2023). Likewise, the animated videos are intended to help anyone interested in increasing the validity of decisions based on assessments, including educators, certification and licensing test developers, and personnel selection (Karakolidis et al., 2021).

Assessment as learning

AaL is an approach that involves learning subjects and owning that learning. Reflective involvement of teaching subjects in all stages. Besides that, AaL places the learning subject as a learning agent while the tutor is positioned as the coach of the process (Dann, 2014). However, AaL's approach to training or research is new because it encourages subjects to be more accessible and responsible in determining targets and processes. Marks and processes are essential in an assistance activity that respects all the initial conditions of the subject. The AaL study shows that the benefits of AaL-oriented teaching can increase the efficiency and quality of writing, assessment and feedback literacy, and a sense of ownership and resilience as a writer. However, students face challenges, such as conflicts between AaL training and summative assessment requirements in the curriculum, a lack of ongoing teacher support in assessment tasks (Xiang, 2022), and self-regulated learning (Chen & Bonner, 2020).

METHODS

Approach

Service implementation involves empowering theory and practice regarding LAV with the AaL approach. This method places the subject in the central position for activities (Guengerich, 2013; Shmallo, 2019; Rukli & Iqramsyar, 2022). This follows the results of partner discussions with the service team where partners experienced problems creating LAV. Additionally, partners had participated in training several times but were not optimal.

Participant

The service participants came from elementary school teachers in the TWG working area of Soppeng District Rayon 18. The number of teachers taking part in the activity was 35 people. The teachers come from school delegates appointed by the school principal. The envoy's request letter came from a letter

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signed by the head of the TWG, the head of the service team, and the coordinator of the school's technical implementation unit to the principal. The delegation's information also uses the principal's WA group route.

Empowerment Stages

There are four stages of empowerment using the AaL approach: preparation, implementation, monitoring, and evaluation, and reporting, emphasizing aspects of the implementation process. Before carrying out the implementation, identify the readiness of participants regarding the availability of an Android cellphone or laptop and sufficient internet quota to take part in the presentation of LAV material and check participant attendance. Apart from that, providing direction to the service team so that it is following their respective duties and responsibilities. The implementation of empowerment contains three materials: introducing and installing video applications on the teacher's cellphone, practicing the application on the teacher's cellphone, making learning videos, and creating LAV. The process for implementing each material is as follows. Carrying out a pre-test for empowering participants, forming a group of five teachers where the senior teacher is the group leader, presenting theory, and then practicing each material using the AaL approach. Experts present the material. At the end of the activity, each material carries out a post-test on the participants.

Instruments and data analysis

The service instrument uses pre-tests and post-tests to measure understanding while tracking improvement in ability skills using pre-test and post-test results with four options, namely very easy, easy, difficult, and difficult to practice, with a target of 85%. Data analysis uses SPSS analysis with the help of the Excel application for data input and presentation. Descriptive statistical tests use bar and line charts. The inferential statistical test uses Pearson correlation with a significance level of 0.05.

RESULTS AND DISCUSSION

Teacher's ability to install applications

The aspects described are how familiar teachers are with the types of applications available on cell phones, the extent to which they understand how to install them on their devices, and how often they use them in daily learning activities. Teacher empowerment activities create learning videos in **Figure 2**.

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Figure 2. Team Providing Materials
Source: Documentation from the service team, 2023

The video application installation materials consist of three parts. The three sections are made up of six description questions accompanied by pre-test and post-test scores with five statistical values shown in **Figure 3**.

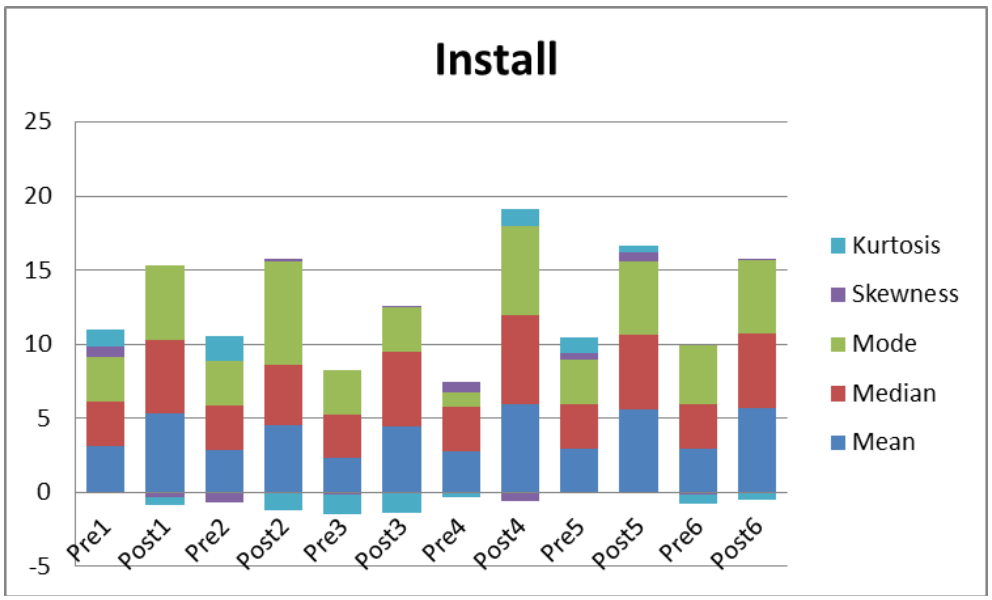

Figure 3. Teacher's ability to install applications on cellphones.
Source: Documentation from the service team, 2023

The highest score cumulatively was at post 4, where the mean and median were the highest. This means that the average ability of teachers to install video applications on cell phones is very high. The highest difference between the post-test and pre-test means refers to question 4 with a description of the question 'Why is it important to include sound effects in LAV, and where are the sound sources that can be used? The lowest post-test and pre-test averages refer to question 2: ' What is the role of animation software in the LAV creation process, and how do you choose the right software according to your needs?'. The total mean difference between the pretest and posttest was 14.69.

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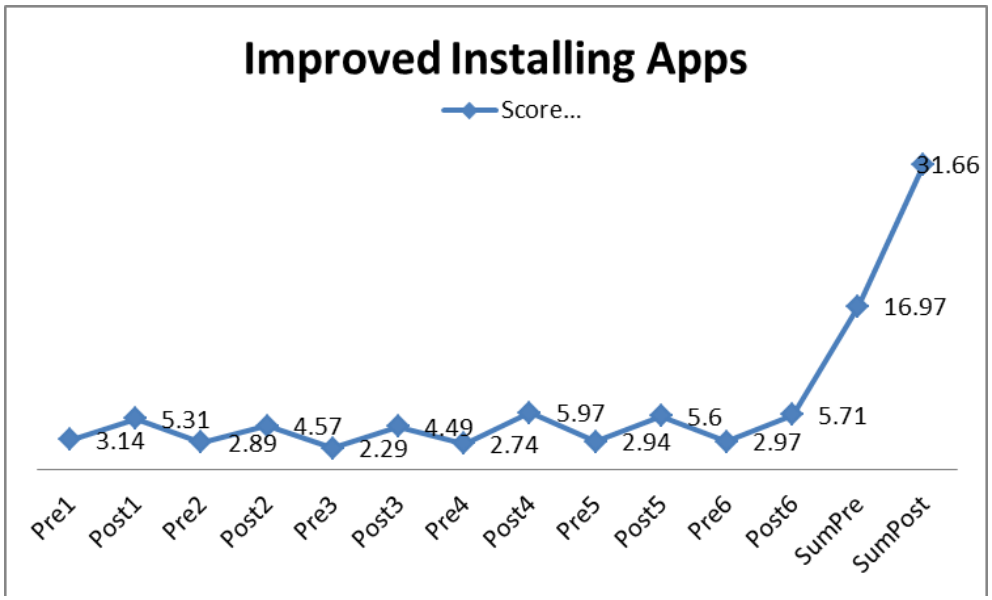

Figure 4. Trend of Pre and Post Test Scores
Source: Documentation from the service team, 2023

Figure 4 shows the direction of the line from pre-test to post-test in the direction from bottom left to top right. This shows that teachers have an increased level of understanding regarding the ability to install video applications on their cell phones. The line direction increases between the pre-test and the post-test on all questions. This means there is an increase in the teacher's ability to install video applications on cell phones after receiving material related to installing applications on cell phones. In general, teachers can better understand and master the types of applications used in the video process on YouTube, such as e-learning applications and online learning platforms, even if they are only limited to hearing from fellow teachers because they are not naturally autonomous.

In total, the post-test results show that teachers have the ability to install these applications on their own devices. This reflects their level of readiness to integrate technology into the learning process. However, some teachers still need additional guidance in installing applications, especially those less experienced using technology. This is similar to the capabilities of Czech teachers, where the factors that greatly impact the acceptance of e-learning courses include the voluntary participation of teachers in the course and the positive expectations one had before the course started. Doing the system independently and subjective evaluation of various aspects of the course also plays an important role. However, factors such as teacher age, gender, school type, previous experience with e-learning, individual habits in completing voluntary assignments and taking notes, and pre-course involvement are not contributing factors (Do et al., 2021).

The skills of installing video applications on teachers' cell phones have all improved. The difference in percentage increase was 51, with the highest increase being 131% while the lowest was 80%. Overall, the average percentage increase in skills in installing video applications on teachers' cell phones was 97%. The results of the correlation test of the relationship between the pre-test and post-test scores for each section are in **Table 1**.

The correlation test between the pre and post-test scores for each question was significant with sig < 0.05 except for the pre and post-test scores on the second question with a correlation of 0.273. The average correlation between pre-test and post-test scores from the six questions was 73%. This means that the empowerment given to partners can have a relationship between previous understanding and

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understanding after training in installing video applications on teachers' cellphones evenly, where the increase is normal, namely from bottom left to top right.

Table 1. Application Install Correlation Test

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	Pre1 & Post1	35	0.821	0,000
Pair 2	Pre2 & Post2	35	0.273	0.113
Pair 3	Pre3 & Post3	35	0.604	0,000
Pair 4	Pre4 & Post4	35	0.648	0,000
Pair 5	Pre5 & Post5	35	0.680	0,000
Pair 6	Pre6 & Post6	35	0.527	0.001
Pair 7	SumPre & SumPost	35	0.726	0,000

Source: Documentation from the service team, 2023

This relationship is reflected in their increased understanding of how to install applications and their ability to resolve problems during installation. These results indicate that the training approach adopted effectively improves teachers' technical skills in managing video applications on mobile phones. This can encourage teachers to carry out online learning where teachers are ready to implement e-learning. In particular, teachers are prepared regarding technical skills, attitudes toward online learning, time management, and time commitment. However, studies show that few teachers are ready regarding experience with online learning and teaching (Gaganao et al., 2022). However, after the training, when asked, 97% of teachers were committed to implementing how to install applications when teaching in class.

The teacher's ability to apply animated video applications

The material for implementing the animated video application on the teacher's Android cellphone consists of three parts. There are 6 six description questions used with the description results as follows. The highest difference between the post-test and pre-test averages was in question two, with the question description 'mention the initial steps that teachers must follow to start and create learning videos with the Canva application'. The difference between the post-test and pre-test means was the lowest in the fifth question: 'What sound and music features are available in Canva to improve the quality of LAV?'.

The highest mean was during the post-test question 2, with a high average pre-test score even though it was not the highest. Likewise, the lowest norm during the pre-test was in question 6, with a common post-test standard, although not the lowest. This means that there is a tendency for a high pre-test to have a high post-test, and vice versa, although it only applies to the middle mean.

The total mean difference between the pretest and posttest is 35.35 in **Figure 5**. This shows that the teacher's ability has increased sharply in implementing learning videos. However, videos have been proven to help teachers reflect on video lessons in class and contribute to their professional development. Studies show that videos enable teachers, mentors, and colleagues to analyze teaching from different perspectives (Körkkö et al., 2019).

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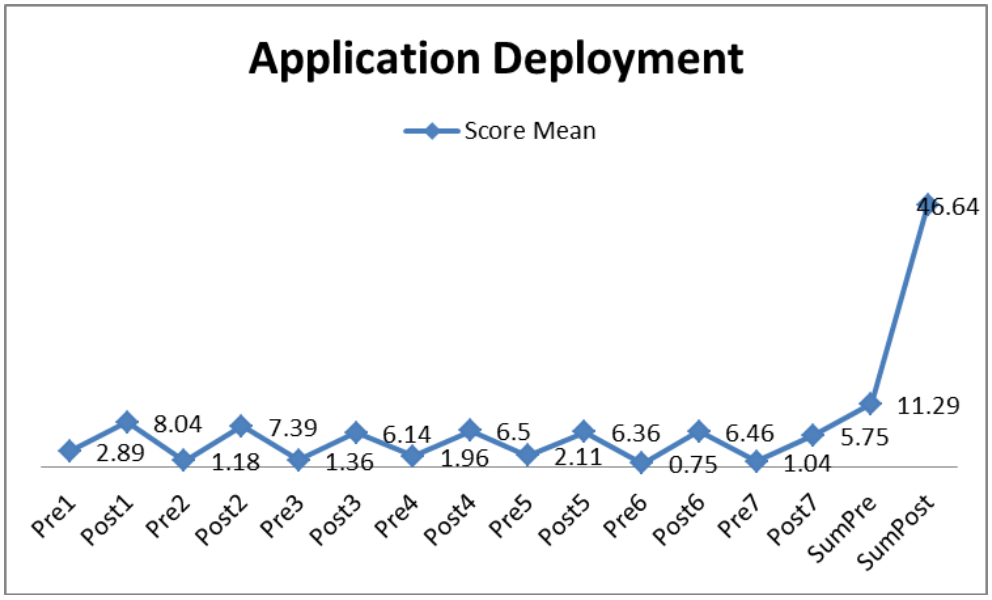

Figure 5. Ability to Implement Video Applications
Source: Documentation from the service team, 2023

Most teachers have gained an adequate understanding of basic video concepts and have good skills in using video software. Additionally, the majority have integrated video into their teaching methods. Evaluation of teachers' ability to implement video applications is an important step in understanding the extent to which this technology has been used effectively in educational contexts. This assessment involves analysis of several descriptive questions related to teachers' understanding of applying video applications, teachers' fluency in operating the required software, and their ability to plan and integrate videos into the learning process.

The skill of implementing the video application on the teacher's cellphone is that the difference in percentage increase is 12, with the highest growth being 92% while the lowest being 80%. Overall, the average percentage increase in skills in applying video applications on teachers' cell phones was 86%, greater than the original target of 85%. This means that teachers have high motivation to implement video applications in the classroom.

Table 2. Correlation Test for Implementing Video Applications

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	Pre1 & Post1	28	0.21	0.284
Pair 2	Pre2 & Post2	28	0.286	0.14
Pair 3	Pre3 & Post3	28	0.498	0.007
Pair 4	Pre4 & Post4	28	0.379	0.047
Pair 5	Pre5 & Post5	28	0.284	0.142
Pair 6	Pre6 & Post6	28	0.245	0.209
Pair 7	Pre7 & Post7	28	0.085	0.667
Pair 8	SumPre & SumPost	28	0.558	0.002

Source: Documentation from the service team, 2023

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The correlation test applies the video application on the teacher's cellphone with a significance level 0.05 in **Table 2**. The results show that there is a significant difference between the pre-test and post-test individually for each question or simultaneously where sig < 0.05. This means that the empowerment given to partners can increase their understanding of implementing video applications on teachers' cell phones. The video application supports their self-reflection. Several factors, including a lack of guidance for individual and collaborative reflection, may limit its impact on their professional development. Using video applications as a monitoring tool is considered challenging in several ways, especially because video clips taken out of context cannot capture the atmosphere, environment, and culture of the classroom and thus do not provide a sufficient basis for observing classroom learning (Körkkö et al., 2019). Video application is increasingly widespread and has become a tool in the learning process, but still pays attention to short-duration music features (Husin et al., 2019). Besides that, teacher training must include elements that emphasize the application of technology in the pedagogical process of teaching mathematics (Moreno et al., 2020).

Teacher's ability to make LAV

The study involved observation and analysis of various aspects, including teachers' understanding of animation concepts, technical skills in using animation devices and software, and the extent to which teachers have integrated animation videos into their teaching methods. The materials for making LAV consist of three parts. There are six description questions used with the description results as follows. Changes in the level of understanding make the LAV almost the same. The highest difference between the post-test and pre-test averages was in question two with the question description 'name several popular animated video applications that are suitable for teachers' cellphones, and explain the advantages of each application'. The lowest difference between the post-test and pre-test averages was on question one: ' What is the role of animation software in the LAV creation process, and how do you choose the right software according to your needs?' The total mean difference between the pretest and posttest was 12.74.

Preliminary descriptive results indicate that most teachers have gained an adequate understanding of the basic concepts of animation. They understand basic principles such as motion, time, and space in the context of animation. This understanding is important because it helps teachers design animations that suit learning objectives.

Figure 6 shows LAV data trends. The increase in LAV-making skills shows a difference in percentage increase of 36, with the highest growth being 110% and the lowest 74%. Overall, the average percentage increase in skills in installing video applications on teachers' cell phones was 97%. This means that teachers' interest in participating in empowerment is very high.

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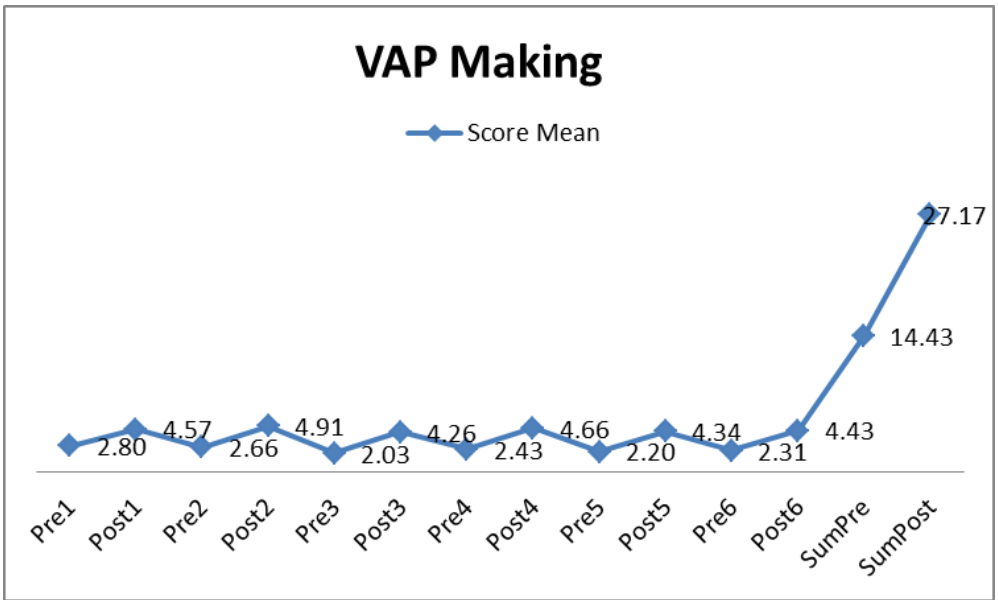

Figure 6. LAV Data Trends
Source: Documentation from the service team, 2023

Teachers' technical skills in using animation devices and software are also tested. The results show that most teachers have sufficient skills to use the hardware and software needed to create animated videos. They can draw, edit, and combine animation elements quite smoothly.

Furthermore, the evaluation includes how much teachers have integrated animated videos into their teaching methods. The results show that most teachers have tried integrating animated videos into learning, especially in subjects that allow dynamic visuals, such as science and mathematics. These improvements include their ability to create animated videos, edit them, and integrate them into the learning process.

Test the difference in understanding of making LAV using the paired t-test with a significance level 0.05 in **Table 3**. The results show that there is a significant difference between the pre-test and post-test individually for each question or simultaneously where sig < 0.05. This means that the empowerment given to partners can increase their understanding ability in creating LAVs.

Table 3. Correlation Test

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Pair 1	Pre1 & Post1	35	0.821	0,000
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Source: Documentation from the service team, 2023

The service results show that teachers can be key agents in producing innovative and interesting learning materials using animated videos. This will help increase students' interest and understanding of the learning material. In addition, these results guide educational institutions to design more effective training programs using animated videos in learning. This will enable more teachers to utilize animation technology in their teaching process. The study results show that animated videos effectively increase knowledge about first aid in cases of tooth avulsion among elementary school teachers (Katthika et al., 2020). Likewise, the study showed that animated videos of making oral solid dosage forms as instructional aids improved learning (Yellepeddi & Roberson, 2016).

Furthermore, teachers must have high motivation when participating in training. The study showed a positive and significant relationship between teachers' beliefs about their digital competence and their beliefs about the ease of use of technology and the perceived usefulness of technology in teaching; the latter is positively correlated with technology use intentions (Antonietti et al., 2022; Saavedra et al., 2022). Therefore, understanding the factors that interact with teachers' acceptance of technology and intentions to use technology is important for designing teacher training to increase the success of technology integration and promote connectivity between various vocational education learning locations.

Empowering teachers to install video applications on cell phones is the first step for teachers to get to know video applications on cell phones, even though teachers have been using cell phones to communicate for a long time. A cellphone is a very important communication tool for anyone so they don't miss out on information, for example, Canva. The Canva application helps and makes it easier for teachers to create educational videos that can motivate students and motivate educators to be more creative in implementing learning (Melinia & Nugroho, 2022; Ilham et al., 2022; Nasution et al., 2023). Therefore, teachers in TWG who have been empowered can learn to install these applications on their cellphones so that video applications, especially Canva, can provide meaning to classroom learning. Empowering teachers to apply video applications to create learning videos is the next stage, where teachers become familiar with video applications on cell phones so that teachers can use them as a communication tool and help teachers make learning videos. Learning videos are a good medium for teachers to explain material in class.

Empowering teachers to make animated learning videos is the next stage after teachers make learning videos. Teachers can use cell phones or laptops not only as communication tools and can help teachers make videos but also create animated videos that imitate games on students' cell phones. Animated videos are a dynamic medium for teachers to explain material in class but are also a tool to divert students' attention to focus on learning at school. Studies show that students understand material better in video form, it is fun, like playing games, and students do not feel burdened by assignments. According to Doush *et al.* (2022), interactive and fun learning has an impact on increasing students' interest in learning and can improve the learning experience of people with visual disabilities. However, Lee et al. (2021) stated that cell phones can hinder classroom learning. However, Gikas and Grant (2013) state that when used appropriately, mobile devices and the use of social media create opportunities for interaction, provide opportunities for collaboration and allow students to engage in content creation and communication using social media with the help of constant connectivity, although Xiang et al. (2023) argue that with limited use.

This study shows that the innovative application of the AaL approach in making LAV is more promising in the future. With the involvement of teachers in assisting with the AaL approach, learning material is

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made more interesting, deeper, and broader so that learning targets are achieved optimally. On the other hand, students still enjoy it as students often play games without knowing the time. Therefore, assistance with the AaL approach is a reference in carrying out complete, transparent, and accurate training, learning, or assessment in the future.

Even though the assistance meets the expected targets, both knowledge competency and skill competency, several difficulties in implementing activities must be considered. The level of teacher readiness regarding the ability to recognize and operate an Android cellphone varies greatly, so it requires more time in the form of collaboration. Teachers' experience in making videos is also very limited, especially related to learning material. Likewise, making LAV so that the animation is more dynamic requires deeper polishing. Therefore, it takes several days for the teacher to make LAV more dynamic according to the demands of the lesson material.

Based on this, the next development opportunity is assistance regarding the features in LAV to make it more dynamic and interesting. For example, audio, text, and video backgrounds are more attractive, so students are more interested. Apart from that, there is a need for other applications besides the Canva application to create animated videos that are better and easier for teachers to do according to learning demands. Likewise, using digital graphic drawing pen tablets or similar tools in making animated videos needs to be socialized to other teachers so that LAV can be spread more quickly and evenly to other schools.

CONCLUSION

The ability of teachers to install video applications on cell phones shows that there is a significantly increased and even relationship between each question and all questions. This shows the importance of appropriate empowerment in increasing teachers' technical competence in learning technology with the AaL approach. The ability of teachers to apply animated video applications in learning shows that most teachers have obtained adequate understanding and skills regarding animated video applications. In addition, the calculation of the percentage increase in skills shows a significant increase after teachers receive empowerment with the AaL approach. The ability of teachers to make LAVs shows that most teachers have a good understanding of animation concepts and adequate technical skills in making LAVs. In addition, the training or empowerment provided has increased their understanding and ability to make LAVs using the AaL approach. Likewise, the skill level increased after following the empowerment with the AaL approach in installing video applications on cellphones, implementing video applications, and creating LAVs, which exceeded the target limit of 85%.

AUTHOR'S NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. The author confirms that the data and content of the article are free from plagiarism. This PKM is financed from grant funds with contract number 027/KONTR-PENMAS/VII/1445/2023 from the Directorate of Research, Technology and Community Service, Ministry of Education and Culture. Therefore, we would like to thank the Ministry of Education and Culture Minister.

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