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EQUIPPING TEACHERS WITH 21ST CENTURY SKILLS: TRAINING ON WEBSITE AND ICT-BASED LEARNING MEDIA CREATION

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Abstract

Teachers in the twenty-first century need to be digitally literate in order to raise the calibre of instruction. According to a scenario analysis conducted at SMAN 1 Sindue Tobata, over 80% of instructors require training in the development of ICT and website-based learning materials since doing so lowers student involvement and the quality of instruction. Teachers were given extensive training to enable them to build and utilise digital learning resources in order to solve this problem. Because of this, over 90% of the trainees were able to develop online and ICT platforms to provide engaging and useful learning materials. As a result, this training not only helps instructors meet their skill demands, but it also greatly enhances the teaching and learning process in the digital age. For the training programme to continue supporting teachers' professional growth in the future, sustainability is crucial. This project, financed by the Directorate of Research, Technology and Community Service (DRTPM), with contract number Manual.164/E5/DT.05.00.2024, is to assist in the enhancement of the quality of instruction.
Keywords: Equipping Teachers, Training, Website and ICT-based

INTRODUCTION

Education is currently undergoing major changes as 21st century skills such as critical thinking, creativity, collaboration, and digital literacy are emerging (Kalmikova & Vindece, 2021; Loh et al., 2021). These skills are required by teachers so that they can adjust to current educational demands and prepare students to face future challenges. (Azzajjad & Ahmar, 2020; van Heerden et al., 2023). PkM that focuses on ICT-based learning media training helps teachers acquire these skills. Many educators in different regions still lack the necessary knowledge and skills to use information and communication technology (ICT) effectively in their teaching. PkM training can teach teachers how to use technology to create engaging and

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interactive learning media. This improves teachers' competence and confidence in teaching.

Students' daily lives now involve technology. When teachers learn to use ICT in learning (Satria Ahmar & Fath Azzajjad, n.d.; Urme & Barua, 2023)), they can make learning experiences more relevant and contextualised, which increases student interest and motivation. This PkM helps teachers become better at utilising technology in learning. ICT-based learning media creation training also enables teachers to utilise a variety of digital resources, which can be accessed for free or at low cost (Sulistianingtyas et al., 2022; Tambunan, 2023). This helps teachers overcome the limitations of physical resources and enrich students' learning experience through various digital contents.

ICT training encourages teachers to be more creative and innovative in creating learning materials. They can use a variety of digital tools to tailor materials to students' needs and characteristics, which helps achieve more effective learning objectives. Through the PkM activities, teachers are provided with 21st century skills. This activity not only provides them with new knowledge, but also gives them the motivation to continue learning and developing themselves. Teachers who have actively participated in ICT training tend to keep looking for new ways to improve their learning, which results in a culture of continuous learning.

Current government education policy supports the use of information and communication technology (ICT) in education. (Tashtoush et al., 2023). Government policies to improve the quality of education and expand the use of technology in schools are in line with the implementation of PkM which focuses on ICT-based learning media training.

Initial results show that the level of knowledge and skills of teachers in creating ICT and website-based learning media still needs to be improved. This is very important because interesting and interactive learning media is needed to increase students' motivation to learn and to optimise the learning process. The purpose of this training is to equip SMA Negeri 1 Sindue Tobata teachers with modern skills, especially in making learning media using ICT and websites. With this training, teachers are expected to: 1) Master various tools and platforms to create interesting and interactive educational media, 2) Apply learning design principles when creating media, 3) Use the media that have been created to improve learning in the classroom, 4) Develop a digital portfolio as a professional teacher.

Figure 1. Illustration of SWOT Analysis of PkM Activities

SMA Negeri 1 Sindue Tobata, which is located in Donggala Regency and has a lot of natural beauty, is very important to produce quality young generation. However, SMA Negeri 1 Sindue Tobata faces problems in providing engaging and efficient learning in today's technological era, as do schools across the region. Not using Information and Communication Technology (ICT) in the learning process is one of the problems often faced.

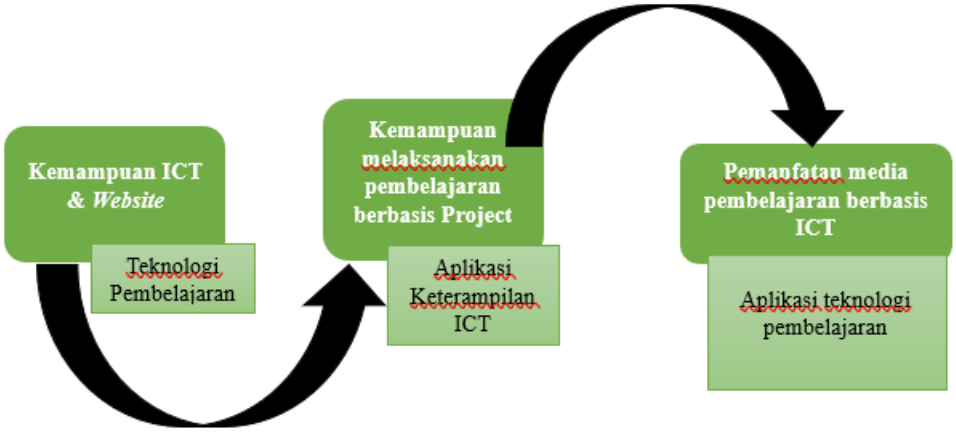

Figure 2. Flow of Problem Solving at SMAN 1 SIndue Tobata

At SMAN 1 Sindue Tobata, Community Service (PkM) activities with the theme "Equipping Teachers with 21st Century Skills: ICT-Based Learning Media Creation Training" are essential to support a more modern and effective educational transformation. 21st century skills such as digital literacy, critical thinking, collaboration, and creativity must be possessed by educators in this school to achieve success in modern learning.

This training will help teachers use information and communication technology (ICT) to create interactive and engaging learning media. This will not only improve teachers' ability to deliver material, but will also motivate students to learn in a more interesting and developmentally appropriate way. SMAN 1 Sindue Tobata will also be very fortunate as it is in an environment with limited access and requires better teacher skills in using digital resources. This also supports the government's policy to expand the use of ICT in education and improve the quality of education in remote areas. Therefore, this PkM activity is a strategic step to improve the quality of education at SMAN 1 Sindue Tobata and prepare students to face challenges around the world.

IMPLEMENTATION METHOD

Training should be tailored to the needs and level of understanding of teachers at SMAN 1 Sindue Tobata. This can be achieved by conducting an initial survey or talking to teachers to find out which parts need more help and support. After the training, it is important to provide ongoing support and guidance to teachers. This could be regular debriefing sessions, mentoring with the training teacher, or access to additional resources that help you apply the skills you have learnt. During the training, there should be sufficient time for hands-on practice and application of the material. Teachers should have the opportunity to try out new skills in a safe environment and get feedback that helps them get better. (Maaranen & Stenberg, 2020; Merelo et al., 2024).

To ensure that the training is truly useful and to improve teachers' skills in the use of ICT media and website development, regular evaluation is essential. By conducting continuous evaluation, we can discover which areas need improvement and make immediate improvements. To support the development of ICT and website development skills of SMAN 1 Sindue Tobata teachers, a holistic and sustainable approach should be applied. This includes not only one-time training, but also ongoing professional development programmes and integration of technology in the school culture. By applying this approach consistently and sustainably, it is expected that teachers' abilities in using ICT media and creating websites will improve over time. As a result, the quality of learning and teaching at SMAN 1 Sindue Tobata will improve.

Educational institutions, communities and the PkM team must work together to address these issues. One way to achieve this goal is to provide ongoing training and mentoring, improve access to information technology infrastructure, obtain resources to support inclusive technology education programmes, increase teachers' awareness and interest in developing information technology skills, and create websites. As a result, teachers will have the ability to prepare themselves for the upcoming challenges and provide quality education to their students.

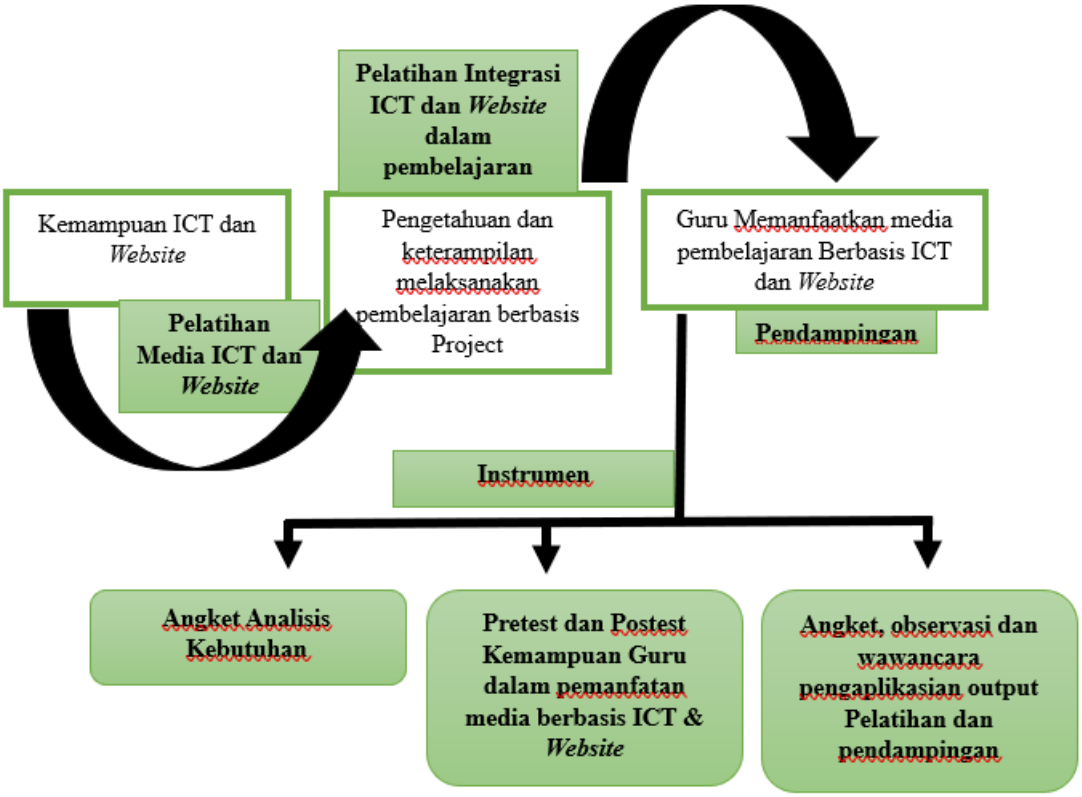

Figure3. Solution and achievement of the PkM programme

Through ICT media and website training, it is easier for teachers to utilise PMM and create space for collaboration between teachers to share experiences, strategies and resources related to the use of technology in learning. This can enrich the learning experience and support the formation of an inclusive and sustainable learning community.

RESULTS AND DISCUSSION

PkM activities bridge the realisation of ICT and website development skills for teachers. PkM can provide training to teachers on the use of information and communication technology (ICT) and website creation. Training can cover a range of topics, from basic computer use to more complex website development. Technology can help PkM teams work with teachers to create new learning materials. This could be in the form of creating modules, making learning videos, or creating learning applications that are in line with the curriculum.

The results of the Needs Analysis of training activities for teachers at SMAN 1 Sindue Tobata are as follows:

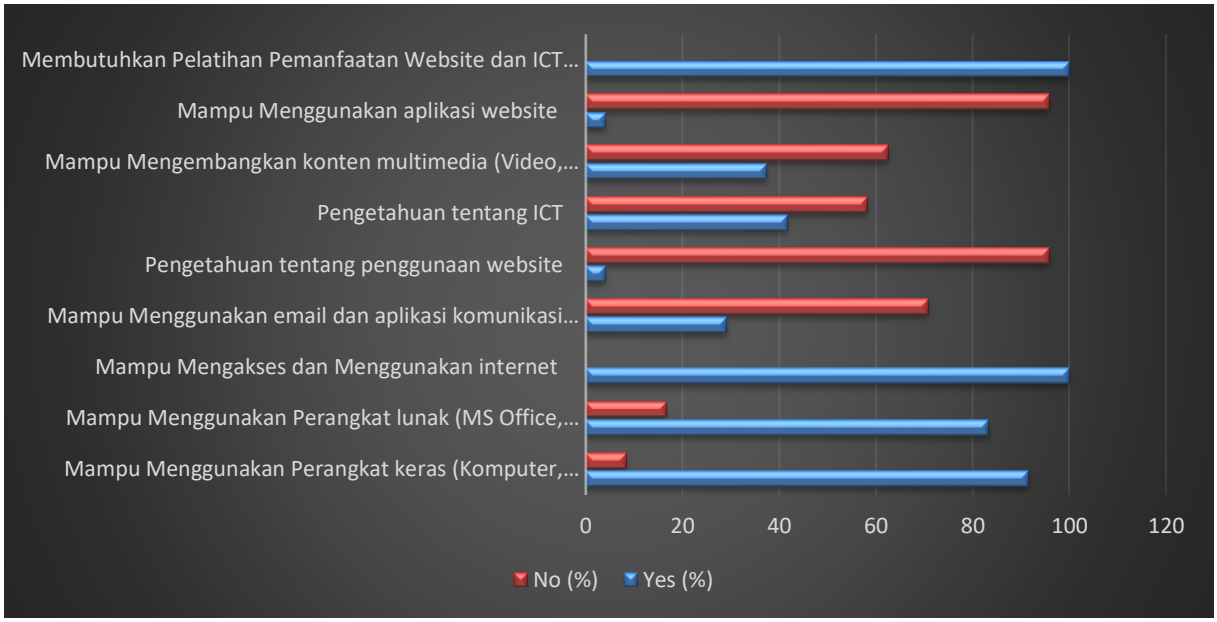

Figure 4. Training Needs Analysis on the Utilisation of Website and ICT in Learning

As a result of the needs analysis conducted at SMAN 1 Sindue Tobata, more than 80 per cent of teachers are proficient in using hardware and software. However, under 75 per cent of students do not know how to use websites and information and communication technology (ICT) in learning. This shows that, although most teachers know the basics of technology, they still need additional training to utilise ICT effectively in the learning process. To improve their skills in integrating technology into the curriculum, this training is essential. Ultimately, it can improve the quality of learning and support students' development in the digital era. Therefore, teachers at SMAN 1 Sindue Tobata would greatly benefit from planned and continuous training.

The following is information before and after the training in measuring the achievement of knowledge and skills in the use of websites and ICT media in teaching:

Table 1. Outcome Measurement of Training Activities

Ability measurement overview	Before Training (People and %)		After Training (People and %)	
	Yes	No	Yes	No
Able to create interactive learning videos, edit HTML for websites, create attractive graphic designs and presentations with ease, translate text into various languages	5 (20.83%)	19 (79.17%)	24 (100%)	0
Create attractive graphic designs and presentations with ease	2 (8.33%)	22 (91.67%)	23 (95.83%)	1 (4.17%)
Able to understand HTML code writing features	2 (8.33%)	22 (91.67%)	23 (95.83%)	1 (4.17%)
Able to make interactive PPT in Canva	10 (41.67%)	14 (58.33%)	24 (100%)	0
Able to create various learning media using ICT	2 (8.33%)	22 (91.67%)	23 (95.83%)	1 (4.17%)
Edit HTML for websites, create attractive graphic designs and presentations with ease	0	24	23 (95.83%)	1

Outcome evaluation results of the training activities at SMAN 1 Sindue Tobata show that teachers have improved their skills in graphic design and website usage. Before the training, teachers had below 50% proficiency in both areas. However, their proficiency increased dramatically to more than 90% after the training, demonstrating how effective the training was in equipping teachers with the necessary skills to face the challenges of the digital era.

Teachers' ability to use Canva was similar. Before the training, only less than 50% of teachers were able to use it, but after the training, all teachers managed to create their own learning media. This improvement shows that the training not only provided new knowledge but also increased teachers' confidence in using technology.

Here, a clear causal relationship is seen that structured and comprehensive training is essential for improving skills. With better skills in graphic design and digital media, teachers can deliver lessons better, which means better learning in the classroom. (Grande-De-prado et al., 2020; Long & Nie, 2021; Satria Ahmar et al., 2023).. This training has a huge positive effect. It not only helps teachers in doing their jobs, but also encourages creativity and innovation in managing learning media. As a result, not only do students' learning experiences become better, but also students' motivation and interest in learning increases. This has a positive impact on student learning outcomes at SMAN 1 Sindue Tobata.

Figure 5. Series of Training Activities

The quality of education depends largely on its educators. Learning with information and communication technology (ICT) is very important in the modern era. Thus, training teachers in the use of websites and ICT is essential so that they can implement interesting and effective learning methods. SMAN 1 Sindue Tobata has organised several trainings to help its teachers become better in this area.

ICT-based learning is expected to improve the efficiency and effectiveness of education as technology advances. However, some teachers lack the ability to utilise this technology. Therefore, to fulfil this need, systematic and continuous training is essential.

The school principal and education stakeholders participate in the preparation of the training. This is done to ensure that the training provided is in line with the needs of the teachers and the objectives of the school. Education is provided in several sessions which include:

a. Introduction to Technology, Teachers are introduced to various technology tools and platforms that can be used to help students learn.
b. Practical Use of Websites, This session discusses how to create and manage learning websites and how to incorporate them into the learning process.
c. Interactive Learning Media, Participants are given instructions on how to use this media to capture students' attention and increase their participation.

After the training, teachers have become better at using technology and learning media. They are more confident to use various information technology tools to support the learning process. Teachers started using new methods to teach, such as online quizzes, discussion forums on the school web and videos.

The use of technology in learning increases students' interest and desire (Azzajjad et al., 2024; Carolina, 2022; Marjuni & Harun, 2019).. Because it is easy and quick to get information, students are more engaged and active in learning. Education stakeholders,

including parents and communities, strongly hope that this training programme can be continued. They recognise the importance of training sustainability to ensure that teachers can continue to develop their skills along with technological advances.

CONCLUSION

The results of community service at SMAN 1 Sindue Tobata, Donggala Regency, showed that the training provided successfully met the needs of teachers in improving their skills in the use of websites and information and communication technology (ICT) to create learning media products. The needs analysis of the coordination activities showed that more than 80% of teachers at SMAN 1 Sindue Tobata still need training on websites and ICT. This shows how important it is to improve teachers' ability to optimally utilise technology in the learning process.

More than 90 per cent of teachers who participated in the training said that they were able to use websites and ICT to create various learning media effectively and efficiently in the implementation of Learning Using Media (PMM). Thus, the training not only improved teachers' technical skills but also helped improve the teaching and learning process in schools. This conclusion confirms that the sustainability of the training programme is crucial to help teachers continue to develop so that they can adapt to the demands of education in the digital era and improve overall student learning outcomes.

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