The Effect of Training on Teachers' Ability to Develop Quiziz Media to Train Students' Communication Skills

Fini Alfionita Umar*, Sri Wahyuni, Andreas Suparman, Rosi Vera, Ida Kaniawati, and Achmad Samsudin

Departement of Physics Education, Faculty of Mathematics and Science Education
Universitas Pendidikan Indonesia, Bandung, Indoensia
*finialfionita@upi.edu

Abstract: Communication skills are 21st-century skills that students must grow and develop. One learning innovation that is suitable for teachers to use to improve student's communication skills is the use of interactive learning media. Therefore, this research aims to measure teachers' skills in developing interactive media using the Quizizz platform to improve students' communication skills. This research uses a quantitative descriptive method with a pre-experimental research design. Activities are carried out through webinars, guidance and training over four weeks. A total of 21 teachers were selected as the mitre to have their skills measured, and it was found that their skills in using digital technology with web-based interactive media via the Quizizz platform had increased. The results of community service show that 61.9% of partners feel that their ability to design interactive learning media is very developed, and 38.1% feel that their ability to design interactive learning media is quite developed. Meanwhile, regarding the ability to design communication-oriented physics learning, 90.4% of partners felt very developed and 9.5% felt developed. This shows the success of implementing community service.
Keywords: communication skills; interactive learning media; quizizz.

How to cite: Umar, F. A., Wahyuni, S., Suparman, A., Vera, R., Kaniawati, I., & Samsudin, A. (2024). The effect of training on teachers' ability to develop quiziz media to train students' communication skills. *Bubungan Tinggi: Jurnal Pengabdian Masyarakat*, *6*(3), 596-605.

INTRODUCTION

The rapid development of information and communication technology (ICT) has led the world's nations into the era of industrial revolution 4.0. This is marked by the ability to exchange information so quickly, resulting in the process of globalisation. Currently, Indonesia is entering the 4.0 revolution era, which is expected to open up global competition in all aspects of life. Therefore, it is important to prepare superior human resources with 21st-century skills.

21st-century learning is learning that combines literacy, knowledge skills and competencies, skills and attitudes, and mastery of technology (Indarta et al., 2021). The four main principles in 21st-century learning are student-centred learning, focusing on group learning (education should be collaborative), emphasising contextual learning (learning should have context), and

integrating learning with society (the school should be integrated with society). In 21st-century learning, students need to have the following characteristics (Syahputra, 2018): (1) Critical thinking, problem-solving, communication skills, creativity, collaboration, and innovation; (2) Have the desire and ability to have digital literacy, the latest media, and ICT; and (3) Take initiative by being flexible and adaptive.

In 21st-century learning, teachers are facilitators, motivators, and inspirers. Teachers must be facilitators and motivators for students to find and utilise learning resources through digital advances. Some characteristics of teachers, according to Syahputra (2018), in 21st-century learning, namely: (1) Have a high interest in reading, (2) Have the ability to write scientific papers, (3) reative and innovative in carrying out learning, and (4) Culturally transformed.

This century emphasises students' growth and development of communication skills (Arslan, 2020; Trilling & Fadel, 2009). Communication is a complex process associated with sending, receiving, and interpreting messages. It is also a process of interaction with other individuals and the environment. Interactions between individuals influence each other's ideas, beliefs, and attitudes (Kishore, 2020).

Communication takes many forms and contains many components, including oral, written, auditory, visual, cross-cultural, and others (Bakos, 1997). Communication can be classified into two types: verbal and nonverbal (BHMAECC-II 2015; Kishore, 2020).

A structured arrangement of words transforms verbal communication into meaningful sentences. Language has three functions in creating effective communication: determining attitudes and behaviour, developing science and inheriting cultural values, and compiling a systematic idea (Buck & VanLear, 2002).

Verbal communication skills can be cultivated in the classroom with regard to the discipline to be tested. Competent speakers define eight basic verbal competencies, including (1) selecting an acceptable topic to communicate with and (2) speaking for a specified goal. (3) using appropriate supporting materials to achieve oral discourse; (4) delivering appropriate introductions and conclusions based on the topic; (5) communicating with appropriate language; (6) engaging the audience with the topic through vocal variety, speed, tone, and intensity; (7) speaking using correct grammar and pronunciation; and (8) representing related gestures or behaviours to support the message (Azizah et al., 2021).

According to Buck & VanLear (2002), Nonverbal communication, often known as silent language or sign language, serves a variety of functions, including persuading others, expressing sentiments and emotions beyond verbal expression, demonstrating identification, and supplementing or finishing perceived incomplete words. Nonverbal communication is a social process in which people use visual signals to transmit information to others while also interpreting and responding to them (Azizah et al. 2021).

Teachers must be creative and imaginative in their use of learning technologies in the classroom and in developing models, tactics, approaches, and teaching methodologies for the twenty-first century. Using interactive learning material in the classroom is one way to help students learn. According to the examination of partner concerns, one of the issues experienced by partners is a need for more ability to design and utilise interactive learning material.

Learning media with Quiziz utilises visuals to help students understand the subject matter. It is a fun, interactive learning medium. Quizzes can be played

in class (live) or as homework (homework).

Quizizz can present learning content in the form of quizzes and games, and it is designed to be effective and efficient and enhance student discovery, as well as students' active role and competitive participation in learning. To make learning in the classroom more dynamic, creative, fascinating, and less dull, students will be motivated to learn, which will improve their grasp of the subject matte (Pertiwi & Nurpratiwiningsih, 2022; Khairiyah et al., 2021).

Quizizz interactive learning media is seen as improving the quality of learning in the classroom by increasing student participation in discussions, student interest in understanding the material, and student learning motivation (Syukriady et al., 2023).

Based on the analysis of partner problems, it is known that one of the problems faced by partners is the lack of skills in developing and using interactive learning media easily and the lack of communication aspects in physics learning. Therefore, the aim of this study is to measure the skills of teachers as partners in preparing Quizizz interactive media to improve students' communication skills after mentoring and training.

METHOD

The method used in this community service activity is participatory action research (Mufida et al., 2022). The stages of this PAR consist of several stages, as shown in Figure 1.
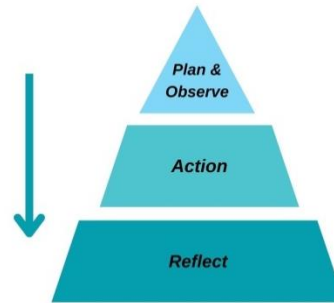

Figure 1 PAR Stages

In the early stages, prior to community service activities, observations and activity planning were conducted to assist partners in leveraging interactive media in learning, particularly to teach communication skills, one of the 21st-century skills. Furthermore, activity preparation was carried out, including webinars, mentorship, and training on the use of interactive learning media, particularly Quizizz, for partners.

The next stage was action (implementation). At this point, service was provided in the form of online WEBIMLAT (webinars, mentoring, and training), to improve physics teachers' expertise in using digital technology in learning via the Quizizz Training for Teachers platform, allowing teachers to design digital technology-based learning to train communication skills. This action lasted four weeks, from September 25 to October 25, 2021. In 2020, Master of Physics Education students at the University of Education Indonesia launched this initiative with financing from the UPI Institute for Research and Community Service (LPPM) and in collaboration with Quizizz Indonesia. Figure 2 depicts the flow of activities.

Figure 2 The flow of WEBIMLAT (Webinars. Mentoring, *Training*) activities

This WEBIMLAT activity was a series of webinars, mentoring, and training. The activity began with a webinar (online seminar) with material on learning loss and 21st-century learning, which was attended by 160 physics teachers from various regions of Indonesia. After that, it was continued with guidance on learning media material and using digital technology in learning. Then, we continued with Quizizz training. After that, a selection was made from 160 physics teachers among 21 selected participants to take part in intensive training in developing learning media to improve communication skills. In this study, the 21 selected physics teachers were the subjects. We then trained the selected physics teachers to design interactive learning to enhance students' communication skills using the Quizizz platform. Table 1 displays the complete demographics of the selected participants in this training.

Table 1 Demographic distribution of WEBIMLAT participants

Demographics		Number	Percentage (%)
Gender			
Male		4 Teachers	19
Female		19 Teachers	81
Age			
20-30	Years old	6	28.6
30-40	Years old	6	28.6
>40 Years Old		9	42.4
Total Participants		21 Teachers	

Meanwhile, the distribution of trainees based on provincial origin is shown in Figure 3.

Figure 3 Distribution of trainees by provincial origin

Participants came from three provinces: Banten, West Java, and Central Java. The highest number of participants, 18, came from West Java.

RESULT AND DISCUSSION

Mentoring and training were conducted to train physics teachers in designing and implementing web-based interactive learning and to develop one of the 21st-

century skills, namely communication skills. Table 2 describes the detailed

training activities and materials.

Table 2 Activity description

Activity & Time of Implementation	Activity Description
Webinar September 25, 2021	Learning Loss and 21st Century Learning Webinar
Webinar October 02, 2021	Innovative learning media
Training October 09, 2021	Quizizz Training
Mentoring, and Assistance, and Training October 10-15, 2021	Pretest completion and assignment creation guided by a mentor
October 16, 2021	Assignment submission
October 17-24, 2021	Task checking by mentor and task revision
October 25, 2021	Assignment collection and post-test

WEBIMLAT activities from the initial stage to the final stage can be seen briefly in Figure 4.
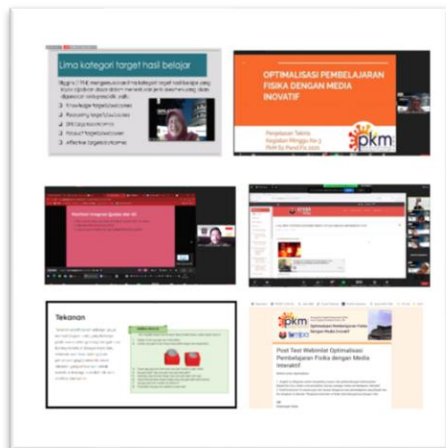

Figure 4 Documentation of WEBIMLAT agenda

Achievement in this activity was measured using a questionnaire. The pretest questionnaire consisted of 15 questions, with 11 questions using a Likert scale and four open-ended questions. Based on the results of the pretest questionnaire answered by 21 teachers before training and guidance, it is known that 57% have used web-based interactive learning media and 43% have never used it.

While related to the ability to design interactive learning media based on training communication skills, 53% of teachers admitted that they did not have sufficient ability to design interactive learning. These results are shown in the pie chart in Figure 3, parts a and b.
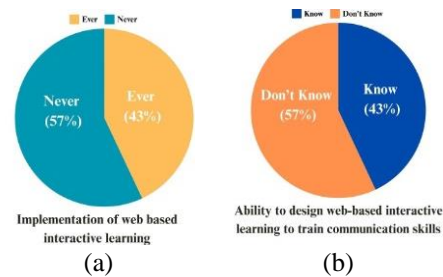

Figure 5 (a) Implementation of web-based interactive learning and (b) Ability to design web-based interactive learning

Figure 5 shows that 85% of teachers agreed that practising creative thinking skills in learning is very important. However, 70% of teachers stated that they need to gain the expertise to design learning that can train students' creative thinking skills.

We trained and mentored 21 physics teacher to create web-based interactive learning program that enhance students'

communication skills in their respective schools/ during the five-week training, teachers were give material through virtual meetings (Zoom) and guided to practice directly the material obtained by designing and implementing materials by making web-based interactive learning media using Quizizz.
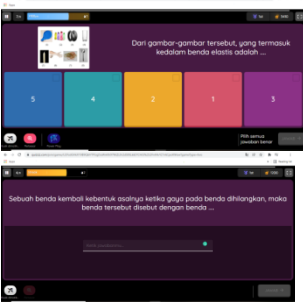
Physics teachers who joined the guidance and training designed presentations with physics material, accompanied by games, images, videos, simulations, interactive quizzes, and various links that can be accessed directly through Quizizz. Additionally, teachers receive training to create evaluation questions that align with communication skills indicators, specifically focusing on written communication (OECD, 2021).

Quizizz is an online and digital learning medium consisting of quizzes, surveys, games, discussions, and presentation slides that can be inserted with various media. The Quizizz application is described as a web tool for creating interactive learning that runs on devices and can be downloaded from the website www.quizizz.com (Safarati & Rahma, 2020; Zhao, 2019). Quizizz allows teachers to provide various learning resources from various digital platforms, such as YouTube, Virtual Lab Kemendikbud, articles from websites or documents that can be directly inserted into Quizizz, and various other features. With the various features provided by Quizizz, teachers can design and implement learning online and offline. Quizizz can also be maximised when face-to-face learning is limited. Students can access learning materials as teachers do during classroom learning, take quizzes made by teachers, get feedback from the results of assignments (quizzes), and access various learning resources that teachers have included in the presentation contained in the quiz. Table 3 shows the result of the design of interactive learning media using various features on Quizizz, which was designed by guidance and training participants.

Table 3 Interactive learning design by trainees

Description	Image
Results of Interactive Presentation Material Design by Participants	 Figure 6 (a) & (b) Results of material design by participants In the interactive presentations created by participants, participants designed presentations that contained: 1. Video related to the phenomenon of elasticity as an apperception. 2. Reading materials from other websites. 3. Materials and activities for students to do. 4. Interactive quiz consisting of different types of questions: multiple choice, fill-in, description, poll, and multiple answers. In this design, students did not just read the material; they could also follow the activities provided in the quiz because the material was presented with the guidance of student activities. Thus, this presentation involved full student activeness while the teacher only served as a facilitator.

Description	Image
Participant Design Evaluation Display Results	 Figure 7 (a) & (b) Evaluation design results by participants In interactive evaluation, physics teachers who participated in guidance and training can create various types of questions provided by Quiziz, including multiple-choice, fill-in-the-blank, more than one-answer selection, and open-ended questions. Students can use these types of questions to enhance their communication skills. After finishing the interactive quiz, students can also immediately get feedback, namely the value of all their work. The questions created by the teachers who participated in this program follow the PISA communication skills indicators: Articulating thoughts and ideas effectively using oral, written, and nonverbal communication skills in various forms and contexts. In this case, this guidance and training focus on the indicator of articulating thoughts and ideas using written skills. (Murray., et al, 2018; OECD, 2021).

Throughout the five-week mentoring and training program, participants were able to construct learning activities that made the best use of digital technology by creating web-based interactive media using the Quizizz platform. Participants, in this case, physics teachers, were also able to create activities and evaluations that used indicators to enhance communication skills.

Participants gathered their assignments through material presentations and learning evaluations after mentoring and training. Participants were requested to complete a post-test to determine their opinions (physics teachers) about the training provided and to assess the growth of teacher skills in producing creative learning media to educate communication skills. Figure 8 shows the post-test results to enhance teachers' ability to construct interactive learning material.
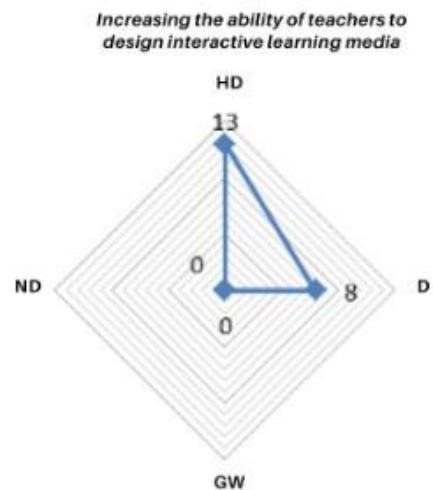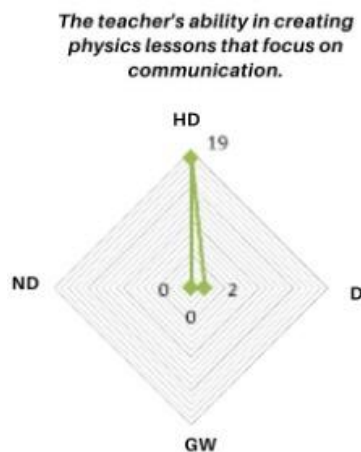

Description: HD Highly Developed; D: Developing; ND: Not Developing; GW: Getting Worse

Figure 8 Respond post-test results of improvement in teachers' ability to design teaching media

Based on the results of the post-test, it was found that the majority of teachers felt developed in designing web-based interactive learning media. This is because the learning media developed using Quizizz can be used to support the learning process of physics teachers. For more interactive learning, Quiziz media is easy to design and use. This is because Quizizz applies game-based applications. Quizizz is a visually appealing game-based learning platform that makes classroom games and exercises lively, active, and fun. Quizizz, as an educational platform, also applies the concept of gamified education. Quizizz has a colourful interface, avatars, music, and memes that make students feel like they are playing a game rather than taking an exam or exercising (Khusnah & Aprianti, 2023; Juita et al., 2023; MacNamara & Murphy, 2017).

Figure 9 shows the effects of the teacher's ability to develop a physics curriculum directed toward communication abilities.

Description: HD: Highly Developed; D: Developing; ND: Not Developing; GW: Getting Worse

Figure 9 Respond post-test results of improvement in teachers' ability to design physics learning-oriented communication

According to numerous description questions asking for feedback after the program, participant K03 stated that this training helped enhance teachers' communication skills with interactive media. Participant K14 remarked that this mentoring and training was encouraging for maximising digital-based learning tools. This is because teaching and learning activities can be carried out online and offline, with fewer face-to-face encounters (PTM). Participant K14 also stated that with the committee's leadership, participants could carry out the learning process effectively and accomplish the assigned tasks per the expected goals. Similarly, participant K18 stated that this guidance and training was excellent and useful, hoping that it might be expanded with more topics as needed for limited PTM settings. Furthermore, participant K21 stated that the mentoring and training were highly fascinating, with the aim of enhancing teachers' skills in creating interactive learning media so that students are more interested in classroom learning activities.

CONCLUSION

Based on the results and discussion of the mentoring and training activities, the use of digital technology with web-based interactive media through the Quizizz platform increased. Participants in this training and mentoring felt developed in designing and developing web-based interactive learning media (Quizizz) by incorporating aspects of communication skills into learning. Participants could also design activities and evaluations using indicators that can train communication skills. The Effect of Training on Teachers' Ability to Develop Quiziz Media to Train Learners' Communication Skills.

REFERENCES

Arslan, A. (2020). Determining the 21st century skills that should be instilled to students from the perspective of pre-service teacher before and after the pandemic. *Milli Egitim* 49(1), 553–71.

Azizah, D. N., Rustaman, N. Y., & Rusyati, L. (2021, March). Enhancing students' communication skill by creating infographics using Genially in learning climate change. *Journal of Physics: Conference Series*, 1806(1), 012129. IOP Publishing.

Bakos, J. D. (1997). Communication skills for the 21st century. *Journal of Professional Issues in Engineering Education and Practice* 123(1), 14–16.

BHMAECC-II. (2015). "Unit: 1 Communication - Introduction , Meaning & Definition." *Uttarakhand Open University* 1–171.

Buck, R., & VanLear, C. A. (2002). Verbal and nonverbal communication: Distinguishing symbolic, spontaneous, and pseudo-spontaneous nonverbal behavior. *Journal of communication*, *52*(3), 522-541.

Indarta, Y., Jalinus, N., Abdullah, R., & Samala, A. D. (2021). 21st Century skills: tvet dan tantangan abad 21. *Edukatif: Jurnal Ilmu Pendidikan*, *3*(6), 4340-4348.

Juita, M. J. M., Maranatha, J. R., Fitriani, A. N., Maspupah, N., & Alfaini, S. D. (2023). Pelatihan pemanfaatan aplikasi quizizz bagi guru-guru tk mentari purwakarta. *Sarwahita*, *20*(02), 118-130.

Khairiyah, U., Faizah, S. N., & Lestari, A. D. (2021). Pendampingan pembuatan kuis dengan aplikasi quizizz bagi guru sekolah dasar di desa Made Lamongan. *Wikrama Parahita: Jurnal Pengabdian Masyarakat*, *5*(2), 125-131.

Khusnah, W. D., & Aprianti, S. (2023). Pelatihan Pembuatan Evaluasi Online Menggunakan Quizizz. *Amaliah: Jurnal Pengabdian Kepada Masyarakat*, *7*(2), 272-277.

Kishore, N. (2020). Communication: basic concepts. *Patliputra University*, 189-199.

Mufida, S. N., Hegarna, R., Safitri, I., Merliana, L., Rizky, A. R., & Iryanti, M. (2022). Peningkatan keahlian guru membuat media pembelajaran fisika interaktif berorientasi keterampilan problem-solving melalui quizizz-web. *Jurnal Inovasi Hasil Pengabdian Masyarakat (JIPEMAS)*, *5*(3), 459-473.

Murray, M., Munger, M. H., Colwell, W. B., & Claussen, A. J. (2018). Building Capacity in Special Education: A Statewide Initiativ

MacNamara, D., & Murphy, L. (2017). Online versus offline perspectives on gamified learning.

OECD. (2021). PISA 2021 creative thinking framework (Third Draft). *Oecd* 53(9), 1689–99.

Pertiwi, A. L. A., & Nurpratiwiningsih, L. (2022). Mengaplikasikan game quizizz dalam evaluasi pembelajaran siswa SDN Tembelang 02. *Jurnal Pengabdian Kepada Masyarakat (JAPIMAS)*, *1*(2), 30-36.

Safarati, N., & Rahma, R. (2020). The effectiveness of online learning using quizizz education game media during the Covid-19 pandemic in applied physics courses. *Indonesian Review of Physics*, *3*(2), 52-56.

Syahputra, E. (2018). Pembelajaran abad 21 dan penerapannya di indonesia. *Sinastekmapan* 1(November 2018):1276–83.

Syukriady, D., Ashar, A., Musbaing, M., & Yuriatson, Y. (2023). Penguatan Literasi Digital Guru Melalui Pelatihan Quizizz. *Community Development Journal: Jurnal Pengabdian Masyarakat*, *4*(2), 3426-3439.

Al Aziz, M. H. *Efektivitas Laboratorium*

Virtual dalam Meningkatkan Sikap Ilmiah Siswa: Meta-Analisis (Bachelor's thesis, Jakarta: FITK UIN Syarif Hidayatullah Jakarta).

Zhao, F. (2019). Using Quizizz to integrate fun multiplayer activity in the accounting classroom. *International Journal of Higher Education*, 8(1), 37-43.