



Socialization and Training on the Use of Augmented Reality Applications for Teachers in Paciran Village to Make English Learning Easier

Nailul Authar^{1,*}, Djuwari², Novi Rahmania Aquariza³, and Savira Zaniar⁴

Published online: 16 Juli 2024

ABSTRAK

This community service attempts to explore the use of augmented reality (AR) in how teachers in Paciran can be well known to introduce new vocabulary to students right there. This is a qualitative study with the data taken from both surely by distributing the questionnaires both to the students and the teachers. The questionnaires to the students concern the use of AR in their learning of English while the questionnaires to the teachers is related to the use of AR in their schools and the teachers' engagement in this AR for their classes. The data is also taken from the interview to the English teachers about the use of AR in learning English. Sifter all the data triangulated from the students and the teachers, they will be decoded and determined into the themes. Besides that, they are also presented in tables. Finally, the inferences can be done for making the conclusion. Based on the results of the training and application experiments to students, each teacher and student agreed that AR media had a positive impact on English learning.

Keywords: AR, Teaching English, Paciran

INTRODUCTION

Nowadays, English language learning has various kinds of complaints, especially from students at school because many teachers do not use the media in their teaching style. Even though we all know that many developing countries use English as their daily language. Many of our young generation today even make English an annoying thing for them to learn, so that English today has become very difficult to communicate in their daily interactions. Therefore, we must try as much as possible to prepare our young generation to be able to communicate in English.

This problem also occurs in various regions, especially areas far from large urban areas. Many of today's young people even underestimate learning English. Some said it was because that was the media used, others said it was because many teachers used the teacher centered method. That is a problem that we must overcome together. In this certainty, children who should have been introduced to new English terms from an early age sometimes don't teach them for various reasons. That's why we should start getting used to introducing English to our students as teachers, so that later they can get used to being able to speak English. This present community services focuses on the use of Augmented Reality (AR) in training on how to teach in introducing new english vocabulary to early childhood teachers using augmented reality applications in paciran village, Lamongan. In Paciran village, which is a village in the coastal area, many students are less interested in English because they think English learning is very boring. This must be addressed

¹⁻⁴ Univeritas Nahdlatul Ulama Surabaya

^{*}) *corresponding author*

Nailul Authar
Univeritas Nahdlatul Ulama Surabaya, Jl. Raya Jemursari,
No.57, Jemur Wonosari, Wonocolo, Surabaya, 60237,
Indonesia

Email: nailulauthar@unusa.ac.id

immediately for the sake of the future of children who will become the next generation.

Currently, in developed countries, English has become the spoken language and we as people living in Indonesia should understand and be aware of this. But what we know to this day is that English is one of the subjects that is a frightening

prospect for our students. In the end, many of our young people have difficulty competing with modern advances due to their lack of ability to communicate using English. In this reality, children who should have been introduced to new English terms from an early age sometimes do not teach them for various reasons. That's why we should start getting used to introducing English to our students as teachers, so that later they can get used to being able to speak English. This present community services focuses on the use of Augmented Reality (AR) in training on how to teach in introducing new english vocabulary to early childhood teachers using augmented reality applications in paciran village, Lamongan.

Because of those, this community service will introduce a way of teaching English that is fun and attractive to students so that they want to learn English. The community service that we will provide is to provide outreach and provide training in using augmented reality applications in English language learning to teachers in Paciran village, Lamongan. For a certain perspective, augmented reality (AR) is considered a technology that enhances the real-world environment by incorporating virtual computer-generated information into it. According to Cipresso et al., AR involves the addition of virtual objects to the real world in real-time during the user's experience. In addition, AR integrates computer-generated data, including graphics, audio, and video, with the physical world. It enhances reality by presenting information not typically perceived through imagination or cognitive processes in regular circumstances. Recently, augmented reality has gained popularity, especially for academic purposes, being considered a groundbreaking invention. It is attributed to its popularity to providing a mediated understanding of the real world by merging it with computer-generated content.

The applications of augmented reality span various fields such as psychological treatment, manufacturing, medicine, robotics, military, customer design, and maintenance and repair. AR technology holds potential in engineering, manufacturing, medicine, entertainment, and education. In the learning domain, it can be used for entertainment, edutainment, or learning, enhancing the user's interaction with and perception of the real world (Yuen, et al., 2013).

LITERATURE OR CONCEPTUAL REVIEW

2.1 Augmented Reality

In education, augmented reality is crucial as it allows the integration of the real world with virtual teaching materials, enabling learners to acquire information through discovery, positively impacting their learning experience. Wedyan eat al., (2022) as in Chen et al., (2023) they emphasize that augmented reality fosters a positive learning environment and enhances constructive learning principles.

Numerous studies highlight the value of augmented reality in education, particularly in promoting enhanced learning achievement. However, the drawback lies in technical challenges faced by users. The first widely recognized mainstream application of augmented reality for the general public was the introduction of Pokémon Go in 2016. In the educational conhiden, Juan et al. developed an augmented reality game to aid children in acquiring vocabulary items, fostering correct spelling by placing markers representing each alphabet in their designated positions. Similarly, mobile-based applications play a crucial role in creating an effective English environment for EFL students, contributing to their language acquisition. Additionally, a mobile-based AR application improves students' English skills.

Augmented Reality (AR) stands out as a promising tool to transform traditional English language instruction, offering immersive and interactive learning experiences (Karacan and Akoglu, 2021).. This research emphasizes the need for evaluating courseware or digital tools in a specific conhiden, considering teaching environment, learner characteristics, and learning goals. While not

focused on assessing Augmented Reality (AR) in a particular teaching setting, it serves as a review of AR in language learning and teaching, rather than an evaluation.

It's crucial to highlight that existing literature primarily concentrates on experimental AR research and a comprehensive review by Parmaxi and Demetriou (2020) in language learning. According to them, here is a noticeable gap in reviewing the instructional uses of AR technology and proposing applications for foreign language education. Therefore, they did a research trying to address use of AR technology in relation to learning theories, pedagogies, teachers, students, culture, infrastructure, sustainability, and the support of four distinct language skills.

2.2. Paciran Village

Paciran is one of the coastal villages in Paciran Subdistrict, Lamongan Regency, , East Java Province, Indonesia.. Its area in the north is directly adjacent to the Java Sea. Paciran Village is located 40 kilometers northwest of Surabaya City, 30 km east of Tuban District, and 30 km north of Lamongan District.

RESEARCH DESIGN

This community service focuses on the use of Augmented Reality (AR) in English learning at Paciran village. This community service attempts to explore the use of augmented reality (AR) in learning English right there. For the publication, this community service later will use qualitative study with the data taken from both surely by distributing the questionnaires both to the students and the teachers. The questionnaires to the students concern the use of AR in their learning of English while the questionnaires to the teachers is related to the use of AR in their schools and the teachers' engagement in this AR for their classes. The data is also taken from the interview to the English teachers about the use of AR in learning English. Sifter all the data triangulated from the students and the teachers, they will be decoded and determined into the themes. Besides that, they are also presented in tables. Finally, the inferences can be done for making the conclusion.

This community service done in 2 stage. In the first stage of our activities in this community service we will provide outreach to all English teachers and teachers who have access to English language learning in Paciran village to provide an understanding that the importance of learning English is carried out in an interesting way using learning media in the form of augmented applications. Reality. After the socialization, teachers will be given training on how to use the augmented reality application. After they understand how to use the application, we as resource persons will also provide good teaching procedures with this application.

In the second stage, we will try to ensure that apart from being able to teach using the application, the teachers will also be able to pass on the habit of using the augmented reality application to other teachers in neighboring villages. So that later the fun learning of English can be spread to several villages in Lamongan city.

RESULTS

This community service has done in 2 stages, the first stage was the training on using AR for Teacher, the second stage was the socialization on using AR to students.

4.1 The Training on Using AR Applications for Teacher

This stage includes several activities such as introducing AR applications, explaining the benefits of using AR applications in learning according to experts, training in making learning designs using AR applications, and micro teaching using AR application.

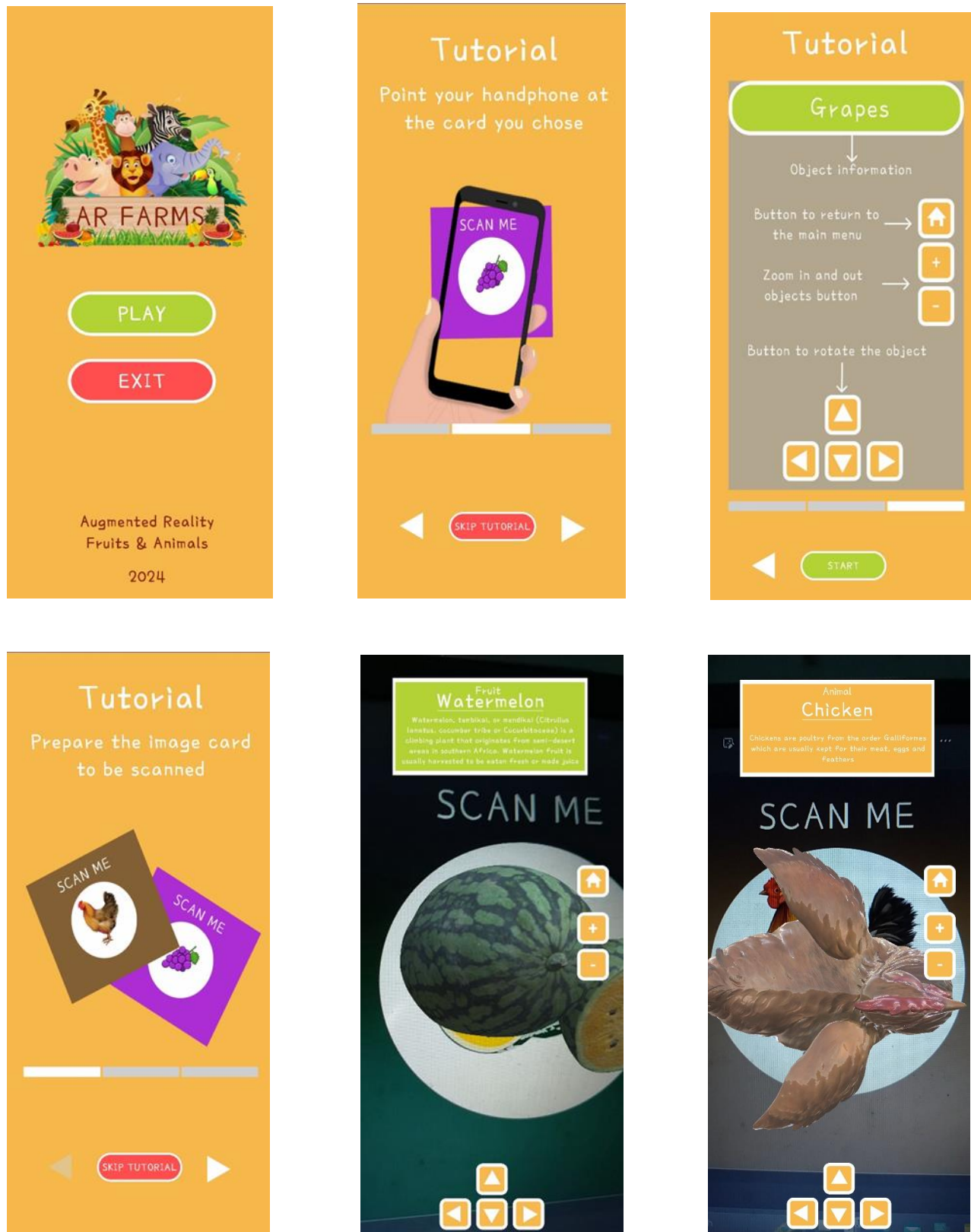


Figure 4.1 Overview of AR Application.

At this stage in addition to conducting training we also provide questionnaires about the use of AR in learning according to teacher perceptions. The results of the questionnaire are presented in table 4.1.

Table 4.1. Teachers' Response

Response	T1	T2	T3	T4	T5	Percentage
AR Media make learning preparation easier	Yes	Yes	Yes	Yes	No	90%
AR can improve students' vocabulary acquisition	Yes	Yes	Yes	Yes	Yes	100%
AR provide interactive Learning	Yes	Yes	Yes	Yes	Yes	100%
AR increase students motivation	Yes	Yes	Yes	Yes	Yes	100%

The table shows that most teachers agree that AR apps have a positive impact on learning and recommend it to be applied in English language learning.

4.2 The Socialization on Using AR to Students

In this phase 2 we taught students around the village of Paciran as many as 10 students. Activities in this stage include introducing the names of animals and plants in English greetings, introducing AR applications, and learning using AR media.

In addition to observing our activities we also gave questionnaires to the students. Data that includes the results of student questionnaires are presented in table 4.2.

Table 4.1. Teachers' Response

Response	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	Percentage
Students enjoy learning English using AR	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%
AR increased students' participation in learning english	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%
AR increase student motivation	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%
AR make English learning more interactive	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%

Based on the results of the table, the majority of students agree that the AR application makes them more excited about learning English using AR.

DISCUSSION

4.1 The Training on Using AR Applications for Teacher

At the time of introduction, many teachers thought that AR was the same as VR. They thought that this media would be very difficult to learn because it uses sophisticated technology and uses special tools to apply it. After we gave an introduction and practice in using AR applications they began to understand the difference between AR and VR. They were also interested to try using their smartphones.

In teaching English, teachers need creative ideas to create media so that students can receive learning well. So in this activity teachers will learn how to operate Augmented Reality media. This media is very suitable for use in the current era, because this media uses technology such as smartphones. So that it makes children interested. To convince the use of augmented reality, the following includes the results of the training of teachers in operating Augmented Reality.

When designing English learning to micro teaching using AR media. They are very smooth and creative in utilizing this media. This proves that they really understand how to apply AR media in learning.

The majority of teachers acknowledged the beneficial effects of augmented reality (AR) on their learning environment, according to the questionnaire answers. AR media only uses smartphones and flashcards that have been provided so that teachers do not need to print or make interesting media. Teachers are very enthusiastic about learning how to operate AR media. Because this media is very modern using the latest technology and easy to access. This can utilize the use of cellphones for children, so that children will not use cellphones for things that are not good. The majority of educators firmly believe that AR has a very beneficial impact on the English classroom. Given that they are aware of how AR might enhance a variety of language learning processes, such as vocabulary acquisition and pronunciation, the majority of teachers also concur that AR is beneficial in enhancing learning. Additionally, according to the teachers, AR greatly raises students' interest in the learning process. This supports Karacan and Akoglu's (2021) observation that augmented reality has the ability to enhance learning through dynamic and interactive elements.

4.2 The Socialization on Using AR to Students

To ensure that this AR application is appropriate for use in learning, especially English, we together with the teachers who participated in the training conducted. Trial use on students. At the time of socialization to selected students around Paciran village, they were very enthusiastic about following because AR technology was very new to them that they had never tried, they were also very enthusiastic because they would learn by using a smartphone. At the time of applying AR media for the first time they were a little confused when installing on their smartphones. Some students do not have their own smartphones so they use their parents' smartphones whose memory capacity is full so it is difficult to install AR applications, so the teacher and the community service team have to lend smartphones to them. After the application was installed they began to try scanning the flashcards that had been provided. They are very enthusiastic about learning using AR. However, when given a test, some students were unable to answer because they were too focused on the animation displayed after scanning the flashcards. However, after the next meeting they began to focus on learning English using AR and not just focusing on the animation.

Based on the observation results, students' acceptance of AR was very positive. This is also in line with the results of their questionnaires, with 9 students having a favorable perception of AR. This strong support was further evidenced by the fact that 8 students agreed that AR improved their learning in mastering English vocabulary. Student engagement with AR was also high, with 10 students agreeing that AR increased their engagement in class. This is because students' motivation increases when their learning uses media that carries the latest technology. All students also agreed

that AR can make language learning more interactive and interesting. This proves that students agree that AR has a positive impact after participating in learning using AR media.

CONCLUSIONS

This community service activity is very useful for the future of the students. Because English has become the spoken language and we as people living in Indonesia should understand and be aware of this. But what we know to this day is that English is one of the subjects that is a frightening prospect for our students. Because of those, this community service will introduce a way of teaching English that is fun and attractive to students so that they want to learn English. The community service that we will provide is to provide outreach and provide training in using augmented reality applications in English language learning to teachers in Paciran village, Lamongan. For a certain perspective, augmented reality (AR) is considered a technology that enhances the real-world environment by incorporating virtual computer-generated information into it. Based on the results of the training and application experiments to students, each teacher and student agreed that AR media had a positive impact on English learning. Teachers and students also agree that AR media can support English learning effectively. The teachers also strongly recommend this application to be used in learning English.

Acknowledgments

This community service is fully funded by the Institute of Research and Community Services (LPPM), Universitas Nahdlatul Ulama Surabaya. Thanks are also given to my partners for their suggestions in preparing the manuscript.

REFERENCES

- Cipresso, P., Giglioli, I. A. C., Raya, M. A., & Riva, G. (2018). The past, present, and future of virtual and augmented reality research: a network and cluster analysis of the literature. *Frontiers in psychology*, 2086.
- Chen, Y., Li, M., Huang, C., Cukurova, M., & Ma, Q. (2023). A Systematic Review of Research on Immersive Technology-Enhanced Writing Education: The Current State and a Research Agenda. *IEEE Transactions on Learning Technologies*.
- Karacan, C. G., & Akoglu, K. (2021). Educational augmented reality technology for language learning and teaching: A comprehensive review. *Shanlax International Journal of Education*, 9(2), 68-79.
- Nilson, L. B. (2016). *Teaching at its best: A research-based resource for college instructors*. John Wiley & Sons.
- Nuernberger, B., Ofek, E., Benko, H., & Wilson, A. D. (2016, May). Snapto reality: Aligning augmented reality to the real world. In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems* (pp. 1233-1244).
- Wedyan, M., Falah, J., Elshaweesh, O., Alfalah, S. F., & Alazab, M. (2022). Augmented reality-based English language learning: importance and state of the art. *Electronics*, 11(17), 2692.

Yuen, S. C. Y., Yaoyuneyong, G., & Johnson, E. (2013). Augmented reality and education: Applications and potentials. *Reshaping Learning: Frontiers of Learning Technology in a Global Conhidden*, 385-414