

Improving the Quality of Teaching in Using the “E-Mole B” Learning Application in the MGMP PJOK Teacher Community of Kuningan Regency

Boby Agustan ^{a)}, Ramdhani Rahman ^{b)}, and Ipan Ripai ^{c)}

Universitas Muhammadiyah Kuningan, Kuningan, Indonesia

^{a)}Corresponding author: bobyagustan@upmk.ac.id

^{b)}ramdhani@upmk.ac.id

^{c)}ipan@upmk.ac.id

ABSTRACT

The ability of teachers to provide teaching materials is very important. The application of technology is believed to help teachers and students better understand the given movement tasks. Based on the problems faced, the Community Service Team at Muhammadiyah University of Kuningan carried out activities to address the issues encountered by its partners. Community service activities aim to improve the ability of teachers to provide teaching materials by implementing E-Mole B technology. E-Mole B is an Android-based application. In the application, there are systematic Badminton learning movement tasks. The movement tasks are in the application that makes it easy for students to learn them through their respective gadgets. This activity was carried out on all members of the MGMP PJOK SMP Kuningan Regency, totaling 15 participants. The method used was the Coaching Clinic, which consisted of 4 sessions. The material provided consisted of socialization, training, peer technology and mentoring, and evaluation. The results of activities in the community showed an increase in the ability of teachers in implementing the use of E-Mole B technology in learning the game of Badminton.

ARTICLE INFO

Article History:

Submitted/Received: 22-10-2025

First Revised: 10-07-2025

Accepted: 20-09-2025

First Available online: 31 October 2025

Publication Date: 31 October 2025

Keyword :

Coaching Clinic

E-Mole B

Quality of Teaching

MGMP PJOK

INTRODUCTION

An important role is held by teachers in the learning and teaching process. Learning and teaching are one of the processes of transferring knowledge in formal education, but the facts in the field show the ineffectiveness of the learning process carried out directly, which is due to inadequate facilities and infrastructure in schools (Agustan et al., 2020). Not many schools have complete facilities and infrastructure to support the learning process, especially in Physical Education (PE) subjects (Muchlisin, 2019). With a busy schedule, physical education learning time is often limited. Teachers may find it difficult to cover all important aspects during learning, with limited time (Zhu & Wang, 2020). In addition, Physical Education Learning is not only about physical activity, but also includes theoretical aspects such as understanding and knowledge of sports branches (Mahendra et al., 2014). In this case, teachers may face difficulties in conveying theoretical material in a way that is interesting and understandable to students (Iskandar & Agustan, 2018). Thus, it is important for teachers to utilize media and technology during the teaching and learning process, which can make it easier for teachers to deliver material.

The rapid development of technology, along with human needs, has provided many benefits in progress in various aspects. The use of technology to make a job easier is a priority in the development of the technology itself (Araújo et al., 2021; Isgren Karlsson et al., 2023; Wyant & Baek, 2019). Digital learning has become a phenomenon due to the practicality it offers. With the advancement of computer and network technology, it has encouraged experts to develop new strategies or tools for various educational purposes, including teaching support, assessment, and learning support (Burson et al., 2021; Kern & Graber, 2017) especially in physical education learning, especially badminton activities.

Badminton is a sport that uses a racket as a hitting tool and a shuttlecock as a hitting object and is played by two players (for singles) or two pairs of players (for doubles) in opposing positions on a badminton court separated by a net in the middle of the court (Seth, 2016). At the level of education, badminton is a small ball game that is taught in the subjects of Physical Education, Sports, and Health (Gazali & Cendra, 2019). Badminton games are given at all levels of education, from elementary school to high school. The initial stage to master badminton techniques is to start with an introduction (Amung Ma'mun dan Toto Subroto., 2011; Gazali & Cendra, 2019; Hussain, I., Ahmed, S., Mohammad, A., & Khan, 2011; Mangun et al., 2017; Ramasamy et al., 2021; Utara, 2017). Therefore, it is important for teachers to be able to make breakthroughs in providing integrated teaching materials in an application system on a smartphone, starting with Badminton. Teachers who are members of an MGMP PJOK SMP community will later become partners in training for the use of the e-Mole B application (Agustan & Rahman, 2023) All PJOK subject teachers who are members. This is based on the development of an education curriculum that refers to the Merdeka Belajar curriculum, so that teachers and students can carry out the learning process anywhere and anytime (Agustan & Rahman, 2023a).

METHODS

The methods used to provide training on the use of the E-Mole B application include: demonstration of the E-Mole B application, discussion, Q&A, individual guidance (supervision), and practice of using E-Mole B. It begins with preparing the E-Mole B application by the proposing team, which is interspersed with discussions and Q&A, then mentoring in creating accounts and filling in student databases, and practicing the E-Mole B application directly. The following is a picture and description of the E Mole B application:

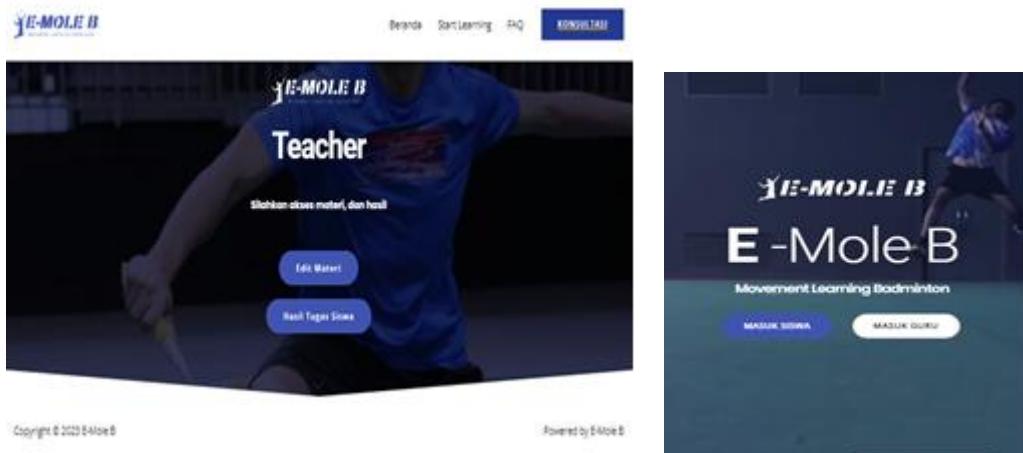


FIGURE 1. E-Mole B Application

The science and technology that will be applied in this training activity is in the form of an application or software in the form of the E-Mole B application. Furthermore, the E-Mole B application is an application that has been validated by experts and can be used for the PJOK learning process for Badminton teaching materials. This application contains material about badminton activities, consisting of stages of implementation to assessment, that can be accessed by teachers and students in an integrated manner through the application on the smartphone. In this application, teachers can access applications that have added student data for each class. The progress of the movement task stages in the application can be monitored by teachers wherever they are.

After the teacher understands the E Mole B application, the MGPM PJOK SMP teacher then conducts a trial practice in the classroom before the simulation for students. The overall flow of training activities is shown in Figure 2.



FIGURE 2. Implementation Method

The coordination of the activity was carried out by the community service team from the Muhammadiyah University of Kuningan, with the Head of the MGPM PJOK SMP Kuningan Regency, Mr. Idi Julianto, M.Pd., AIFO, to discuss the technicalities and materials that will be presented at the Coaching Clinic.

RESULT

The next stage, after participants entered the coaching Clinic room, the PKM activity continued with an opening ceremony attended by the community service team, the MGPM chairman, and MGPM members. The activity can be seen in Figures 3 and 4 below.



FIGURE 3. Coaching Clinic Materials and Group Photos

Figure 3 is the initial training activity. It begins with filling in the participant attendance list, then the activity is opened by the PKM Team Leader, attended by the PKM technical team, the student team in PKM, and the head and members of the SMP PJOK MGMP. Continued with the coaching Clinic participants listening to the material presented by the resource person and the service team regarding the importance of the E Mole B application in teaching.

The next stage, the resource person team and the service team carry out direct field practice activities for the players with the aim of finding out the extent of the athletes' understanding of the material that has been presented at the coaching Clinic. day. Details of the activities are shown in Figure 3 below:



FIGURE 4. Delivery of Training Materials by the Service Team

DISCUSSION

In the discussion, there are several stages carried out in community service, as shown in Table 1.

TABLE 1. Coaching Clinic E Mole B

| Activity | Description |
|--------------------------------------|--|
| Section 1: Socialization | <ol style="list-style-type: none"> 1. Making an invitation letter to the MGMP PJOK group 2. Preparing a manual book that will later be distributed to training participants 3. Making evaluation instruments. The evaluations that will be carried out include: a). Stages of training process evaluation, b. participant attendance, and 4) participant competency related to understanding the use of the E-Mole B application, which will be carried out using the pretest-posttest method 4. Preparing a student database to be used as a sample |
| Section 2: Coaching Clinic | <ol style="list-style-type: none"> 1. Providing insight into the importance of using technology in education 2. Introducing the E-Mole B application by demonstrating it directly to participants 3. Conducting discussions and questions, and answers on the results of the demonstration that has been carried out |
| Section 3: Application of Technology | <ol style="list-style-type: none"> 1. Participants read the instructions from the prepared module 2. Direct guidance to participants to create an account, until they can log in 3. Participants are directed to practice directly using the E-Mole B application |
| Section 4: Mentoring and Evaluation | <ol style="list-style-type: none"> 1. Process evaluation is carried out during the activity. Participants' responses to the activity are measured using a questionnaire given at the end of the training, scoring is done using a Likert scale, and analyzed descriptively. 2. Evaluation of participant attendance is carried out using presentations at each session 3. Evaluation of participant competency is carried out using the pretest-posttest method. Participants are asked to answer questions |

The use of media is currently growing rapidly. By using mobile technology, we can maintain physical activity levels, learning routines, seek advice and information, and also build community networks (Araújo et al., 2021). With the development of media needed during learning, in the context of teachers teaching, this is a positive step in improving student learning outcomes and fitness (Kern & Gruber, 2017). So, the impact of the purpose of using this application is that students can follow this physical learning comprehensively (Burson et al., 2021).

However, the most important thing in this activity is the follow-up. The follow-up includes: a) After the evaluation stage is completed, participants can use the E-Mole B application in their respective schools and apply it directly to students during the PJOK subject; b) Seeing the gap by distributing questionnaires or direct interviews with participants regarding deficiencies or things that need to be fixed in the E Mole B application.

CONCLUSIONS

Overall, this activity can run smoothly and well. All participants are enthusiastic about participating in the training activities from beginning to end. This PKM activity was attended by 15 members and elders of MGPM PJOK SMP Kuningan Regency. The results obtained from this PKM activity are an increase in the understanding and skills of teachers about the importance of technology in teaching and understanding how technology can support learning. In the next stage, it is hoped that players can start applying it to each training. Suggestions for the next activity, namely the Coaching Clinic activity, can be carried out in a programmed manner. So that teachers are increasingly accustomed to using technological assistance in the learning and teaching process.

ACKNOWLEDGMENTS

We would like to express our deepest gratitude to DRTPM for funding community service activities in 2024. We would also like to thank all members of the MGPP PJOK SMP Kuningan Regency so that this community service activity can run smoothly.

REFERENCES

Agustan, B., Kusmaedi, N., & Hendrayana, Y. (2020). Modifikasi pembelajaran : hybrid sport education-invasion games competence model terhadap performa permainan bola basket'. 6(1), 157–172.

Agustan, B., & Rahman, R. (2023a). Analisis Efektivitas Pembelajaran Daring Terhadap Hasil Belajar PJOK Selama Pandemi Covid-19. Physical Activity Journal, 4(2), 173. <https://doi.org/10.20884/1.paju.2023.4.2.6806>

Agustan, B., & Rahman, R. (2023b). Development of Learning Applications e Mole B in Badminton Games. Physical Activity Journal, 5(1), 13. <https://doi.org/10.20884/1.paju.2023.5.1.9664>

Amung Ma'mun dan Toto Subroto. (2011). Perkembangan Gerak dan Belajar Gerak. Depdiknas.

Araújo, A. C. De, Knijnik, J., & Ovens, A. P. (2021). How does physical education and health respond to the growing influence in media and digital technologies? An analysis of curriculum in Brazil, Australia and New Zealand. Journal of Curriculum Studies, 53(4), 563–577. <https://doi.org/10.1080/00220272.2020.1734664>

Burson, S. L., Mulhearn, S. C., Castelli, D. M., & van der Mars, H. (2021). Essential Components of Physical Education: Policy and Environment. Research Quarterly for Exercise and Sport, 92(2), 209–221. <https://doi.org/10.1080/02701367.2021.1884178>

Gazali, N., & Cendra, R. (2019). Short Badminton Service Construction Test in Universitas Islam Riau Penjaskesrek Students. Journal of Physical Education , Health and Sport, 6(1), 1–5.

Hussain, I., Ahmed, S., Mohammad, A., & Khan, A. (2011). Videographical Analysis of Short Service in Badminton. Journal of Education and Practice, 2(2), 25–29.

Isuren Karlsson, A., Alatalo, T., Nyberg, G., & Backman, E. (2023). Exploring physical education teachers' perceptions and attitudes towards digital technology in outdoor education. Journal of Adventure Education and Outdoor Learning, 23(4), 510–524. <https://doi.org/10.1080/14729679.2022.2054835>

Iskandar, Y., & Agustan, B. (2018). Pengaruh Pendekatan Taktis Terhadap Keterampilan Passing Bola Pada Sekolah Sepakbola Turangga Sakti. *JUARA : Jurnal Olahraga*, 3(1), 8. <https://doi.org/doi:10.33222/juara.v3i1.211>.

Kern, B. D., & Graber, K. C. (2017). Physical Education Teacher Change: Initial Validation of the Teacher Change Questionnaire-Physical Education. *Measurement in Physical Education and Exercise Science*, 21(3), 161–173. <https://doi.org/10.1080/1091367X.2017.1319371>

Mahendra, I. R., Sugiyarto, S., & Kiyatno, K. (2014). Faktor Kondisi Fisik Dominan Penentu Prestasi Bermain Tenis Meja (Analisis Faktor Fleksibilitas Pergelangan Tangan, Fleksibilitas Pinggul, Waktu Reaksi, Koordinasi Mata Tangan, Kelincahan , dan Power Otot Lengan Pada Mahasiswa Pembinaan Prestasi Tenis Mej. *Indonesian Journal of Sports Science*, 1–13.

Mangun, F. A., Budiningsih, M., & Sugianto, A. (2017). MODEL LATIHAN SMASH PADA CABANG OLAHRAGA BULUTANGKIS UNTUK ATLET GANDA. *GLADI JURNAL ILMU KEOLAHRAGAAN*, 8(2), 78–89. <https://doi.org/10.21009/gjik.082.01>

Muchlisin, A. dan H. M. (2019). Peran Senam Irama terhadap Kebugaran Jasmani untuk Siswa Sekolah Dasar. *Jurnal SPORTIF*, 5 (1), 89–97.

Ramasamy, Y., Usman, J., Sundar, V., Towler, H., & King, M. (2021). Kinetic and kinematic determinants of shuttlecock speed in the forehand jump smash performed by elite male Malaysian badminton players. *Sports Biomechanics*, 1–16. <https://doi.org/10.1080/14763141.2021.1877336>

Seth, B. (2016). Determination Factors of Badminton Game Performance. *International Journal of Physical Education*, 3(1), 20–22.

Utara, U. (2017). The Effectiveness Of Drill And Training Methods In Science Subject. November.

Wyant, J., & Baek, J. H. (2019). Re-thinking technology adoption in physical education. *Curriculum Studies in Health and Physical Education*, 10(1), 3–17. <https://doi.org/10.1080/25742981.2018.1514983>

Zhu, Q., & Wang, M. (2020). Team-based mobile learning supported by an intelligent system: case study of STEM students. *Interactive Learning Environments*, 28(5), 543–559. <https://doi.org/10.1080/10494820.2019.1696838>.