
**ANALYSIS OF THE NEED FOR INTERACTIVE LEARNING MEDIA BASED ON
MOBILE LEARNING IN VOCATIONAL HIGH SCHOOLS**

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DOI: <http://dx.doi.org/10.37500/IJESSR.2021.4124>

ABSTRACT

The learning process is not just the delivery of teaching material or receiving teaching material, but there needs to be a clear concept so that the material presented can be received clearly. Technological advances have led to many changes, one of which is in the world of education which is currently giving birth to the concept of media learning. The existence of online learning media will be effective and efficient, because learning is not only during meetings or face-to-face between teachers and participants but can be done whenever and wherever students are. The rapid development of science and technology can be done using the Android operating system. The use of media in learning can assist teachers in delivering subject matter and within the limitations of class hours. Learning media can be designed in accordance with current technological developments. One of the learning media using ICT assistance is in the form of learning media that is operated or based on a smartphone device with the Android operating system. At this time the Android operating system is one of the most popular operating systems and is widely used by the public.

KEYWORDS: Learning Media, Mobile Learning, Vocational School, Education.

1. INTRODUCTION

Education is something that is important to every individual and the main aspect of the creation of quality human resources, therefore education must be carried out as well as possible to keep up with the times. The progress of the times is marked by the existence of Science and Technology (IPTEK) which continues to develop so as to encourage many changes, one of which is in the field of education. The very rapid development of science and technology today causes almost all human activities to be controlled by the application of Science and Technology, so an effort is needed that can make it easier to know these sciences (Wiyono et al., 2012) (Priwantoro et al., 2018).

The world of education will not be separated from the learning process which includes teachers, students and the learning environment that will affect one another. The use of instructional media is one of the supports in achieving the learning objectives carried out by a teacher (Astuti & Bhakti, 2018). Learning media are tools, methods and techniques that are used as an intermediary for communication between a teacher and a student in order to more effectively communicate and interact between teachers and students in the process of teaching education at school (Kuswanto & Radiansah, 2018).

Learning media that can currently be developed are Android-based learning media. Android-based learning media has the advantage that it can be accessed by anyone and can be done anywhere which is a driving factor for the development of learning media. By using android, the learning process between teachers and students can carry out the learning process effectively and efficiently because it does not reduce the effective hours of learning. The development of Android-based learning media can provide fresh air for the world of education in Indonesia. The learning media has a practical, flexible, and personal character so that it will increase the interest, motivation and creative data of students in carrying out the learning process.

2. METHODOLOGY

This study uses a qualitative descriptive approach, namely analyzing the results of interviews with teachers who teach archiving subjects. The research was conducted in the archives class at SMK Eks Karesidenan Surakarta. The subjects of this study were teachers of archiving subjects for the 2020/2021 school year. The procedure of this study is to conduct in-depth interviews with the teacher regarding the need for the availability of independent learning media that can be used to improve student learning outcomes in archiving subjects. The data analysis technique used is descriptive analysis of the results of interviews and questionnaires to teachers in order to reveal problems in the learning process, difficulties faced and the teaching materials used by the teacher in the learning process.

3. RESULT AND DISCUSSION

Based on the results of a questionnaire given to teachers of archiving subjects for the 2020/2021 school year, most teachers need interactive multimedia so that the learning process and understanding of material concepts for students can be well received. The questionnaire data are as follows:

Table 1. Respondent questionnaire data

No	Question	Score
1	Do you have any problems in managing archiving learning?	75% of teachers experience problems in managing learning
2	If you experience problems in managing archiving learning, can you find a solution?	87.5% of teachers can find solutions to problems in learning management
3	Do students often complain in archiving learning?	62.5% Students often complain in learning
4	Are the learning resources used only using books?	75% of students use book learning resources
5	According to you, does learning now need to be developed with internet-integrated learning resources or mobile learning based on archiving subjects?	100% of teachers want mobile learning based learning
6	Do you use learning media in teaching archiving subjects?	93.8% of teachers use learning media
7	Can you operate your smartphone and the internet properly?	81.3% of teachers operate smartphones and the internet well
8	Do you often use the internet / wifi facilities provided by the school?	87.5% of teachers use the school internet
9	Have you ever tried using multimedia learning media in archiving subjects?	41.3% of teachers try to use multimedia learning media
10	Do you agree that in this archiving subject, interactive multimedia mobile learning will be developed?	100% of teachers want to develop interactive multimedia mobile learning

Based on the data above, most teachers experience problems in managing archival learning and students often complain in archiving learning so that it is necessary to develop interactive multimedia mobile learning based on mobile learning so that students get independent, effective, efficient learning resources and become a solution to the problems in managing archival learning happened at this time.

Based on the results of in-depth interviews with several students, it shows that there are several obstacles in the learning process in archiving subjects, namely experiencing saturation and difficulty understanding the material so that teachers experience problems in managing archiving learning. Saturation and difficulty understanding the material are influenced by the limitations of the media used by the teacher in the learning process using a blackboard and power point. The media used by the teacher did not use visualization of the archiving material being studied.

Students hope that problems regarding boredom and difficulties in understanding the material can be minimized by the teacher by providing interactive multimedia learning media based on mobile learning. The learning resources used by students still use books so that students are less interested in learning the material presented and are easily bored in understanding the material presented by the teacher in the learning process so there is a need for solutions using interactive multimedia presented on mobile learning. Mobile learning is a learning model that is carried out between places or environments using technology that is easy to carry when learning by carrying a cell phone (mobile) with various features and applications. (Munir, 2012) (Simalango et al., 2018) (Kumar & Goundar, 2019) (Hrabovskiy, 2019) (Surahman, 2019). In this case, technology-based learning, where students can access learning materials, directions and applications related to learning, anytime and anywhere so that it will facilitate the learning process and understanding of the material.

Interactive multimedia has many benefits for students and teachers in learning, students will feel more interested and challenged to operate multimedia. Students become more active in following each learning process and improve student learning outcomes because students feel happy, interested in the learning process. In general, the application of mobile-based interactive multimedia learning is more effectively used to improve learning process skills. Process skills that take place are very important for every student to master (Nugroho & Surjono, 2019) (Balacheff et al., 2009) (Nurhidayat et al., 2020).

4. CONCLUSION

Based on the results of research that has been conducted, students' archival learning requires interactive multimedia that is independent, effective, efficient so that it can help improve understanding of archiving material in the learning process. This research is the initial part of research in developing interactive multimedia based on mobile learning which is applied to archiving subjects and still requires a follow-up from the analysis of interactive multimedia needs based on mobile learning that is in accordance with the needs in the field.

By utilizing interactive multimedia interactive mobile learning on archiving subjects, it is expected that the learning process can be carried out more easily anytime and anywhere and attract students' interest in learning in archiving subjects.

5. REFERENCES

- [1] Astuti, I. A. D., & Bhakti, Y. B. (2018). Interactive Learning Multimedia Based Microsoft Excel On The Temperature And Heat. 6.
- [2] Balacheff, N., Ludvigsen, S., de Jong, T., Lazonder, A., & Barnes, S. (Eds.). (2009). Technology-Enhanced Learning. Springer Netherlands. <https://doi.org/10.1007/978-1-4020-9827-7>
- [3] Hrabovskyi, Y. (2019). Analysis of the use of multimedia components in modern mobile learning technologies. *ScienceRise*, 0(4), 46–50. <https://doi.org/10.15587/2313-8416.2019.164597>
- [4] Kumar, B. A., & Goundar, M. S. (2019). Usability heuristics for mobile learning applications. *Education and Information Technologies*, 24(2), 1819–1833. <https://doi.org/10.1007/s10639-019-09860-z>
- [5] Kuswanto, J., & Radiansah, F. (2018). Media Pembelajaran Berbasis Android Pada Mata Pelajaran Sistem Operasi Jaringan Kelas XI. 14(1), 6.
- [6] Nugroho, T. A. T., & Surjono, H. D. (2019). The effectiveness of mobile-based interactive learning multimedia in science process skills. *Journal of Physics: Conference Series*, 1157, 022024. <https://doi.org/10.1088/1742-6596/1157/2/022024>
- [7] Nurhidayat, B., Wedi, A., & Praherdhiono, H. (2020). Pengembangan Multimedia Mobile Learning Berbasis Smartphone Android Materi Huruf Madura untuk SD Negeri 1 Perante Kabupaten Situbondo. *JINOTEP (Jurnal Inovasi dan Teknologi Pembelajaran): Kajian dan Riset Dalam Teknologi Pembelajaran*, 6(2), 103–110. <https://doi.org/10.17977/um031v6i22020p103>
- [8] Priwantoro, S. W., Fahmi, S., & Astuti, D. (2018). Analisis Kebutuhan Pengembangan Multimedia Berbasis Kvisoft Dipadukan Dengan Geogebra Pada Mata Kuliah Program Linier. 10.
- [9] Simalango, U., Huda, A., & Dwiyani, N. (2018). Rancang Bangun Aplikasi Multimedia Interaktif Mobile Learning. 6(2), 7.
- [10] Surahman, E. (2019). Integrated Mobile Learning System (Imoles) Sebagai Upaya Mewujudkan Masyarakat Pebelajar Unggul Era Digital. *JINOTEP (Jurnal Inovasi dan Teknologi Pembelajaran) Kajian dan Riset dalam Teknologi Pembelajaran*, 5(2), 50–56. <https://doi.org/10.17977/um031v5i22019p050>
- [11] Wiyono, K., Setiawan, A., & Paulus, C. T. (2012). Model Multimedia Interaktif Berbasis Gaya Belajar Untuk Meningkatkan Penguasaan Konsep Pendahuluan Fisika Zat Padat. 9.

ACKNOWLEDGEMENT

Thank to Research institutions and community service of Universitas Sebelas Maret and Subject Teacher Discussion (MGMP) of Office Administration teacher.