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Development of Adobe Flash-Based Multimedia in Learning Recognition of Parts of Human Body

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ARTICLE INFO	ABSTRACT
	The learning process in the classroom is difficult for students to understand the material being taught, because learning does not apply learning material in using media in the classroom environment, so the learning process in class is not effective in understanding the material being taught. This study aims to identify a description of the need for developing multimedia learning of human limb recognition using Adobe Flash, designing multimedia for learning human limb recognition using Adobe Flash, measuring the level of validity and practicality of multimedia for learning human limb recognition using Adobe. This research is a type of R&D (Research and Development) used ADDIE model (analysis, design, development, implementation, evaluation). The results showed that Adobe Flash-based multimedia products were valid to be used based on the results of validation by content/material experts obtaining a percentage result of 100% being in very good qualifications, validation results by design experts obtaining a percentage of 86% being in good qualifications, validation results by media experts obtained a percentage result of 94% being in very good qualifications, then in practicality trials conducted on students who obtained results 98.17% were in very good qualifications, and the responses of subject teachers related to Adobe Flash-based multimedia obtained 100% results which were in very good qualification. Based on the results of the analysis, it can be concluded that Adobe Flash-based multimedia is valid and practical to use in the learning process of Education, Physical, Sports and Health subjects.

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1. INTRODUCTION

In terms of intellectual aspect, education serves to improve ability and establish national honor and custom, with the goal of developing students' potential to become whole human beings with faith, valuable character, health, skill, creativity, independence, and democratic and responsible citizenship. According to Indah et al. (2018), education is critical in enhancing the quality of human resources in Indonesia. Education is a conscious process carried out to students in order to grow and develop physically and spiritually optimally to reach the level of maturity (Ramdhani, 2014; Akhiruddin, et al. 2022). It is a conscious effort so that humans can develop their potential through the learning process (Sujarwo, et al., 2019; Samsuddin et al, 2021; Nurhikmah, et al.,2022).

A process of learning is carried out to master certain things (Yulianingsih et al, 2017: 160). The problem that often arises in the teaching process is how a teacher develops and creates, and controls situations that allow students to carry out the learning process (Samsuddin et al.,2021; & Sukmawati et al.,2022; Hijrawatil, et al. 2022). The success of a learning process, one of which is supported by the existence of adequate learning media. Learning media is very helpful for both students and teachers in the learning process in the classroom (Teräs et al, 2020; & Ugur et al, 2011).

In line with the development of information and communication technology at this time has brought great changes in various aspects of human life, these developments have also changed the view of humans in getting information easily. This requires a teacher to think ahead with better innovation than before. One form of this new thinking is an effective learning media that can be used by teachers so that students better understand what is being taught, namely Information and Communication Technology to display learning media (Sujarwo, et al., 2020; Nurhikmah, et al., 2021). Teachers in implementing the 2013 curriculum need mastery of technology to support the learning carried out, especially learning media based on Information and Communication Technology (ICT) (Nurhikmah et al., 2021; & Rapanta et al, 2020). One of the learning media sourced from computer technology is Adobe Flash. Adobe Flash is a product/software from adobe that is used for the process of creating and processing animations or images that use vectors on a small scale (He, & Zhang, 2011; Wressnegger, et al. 2016; Naidu, et al. 2021; Matta, et al. 2021). This application can be collaborated with the web, because it has advantages such as small in the output file size, many features in Adobe Flash that can increase creativity in the creation of media content that utilizes the capabilities of the application to the fullest. These new features help focus more attention on designs that are created quickly.

The problems that have be found in this school uses learning resources based on the 2013 curriculum learning process, namely student handbooks in the form of thematic books owned by each student and thematic companion books for teachers. In the learning process in the classroom, students find it difficult to understand the material being taught, because the learning process does not apply the subject matter by using existing media in the classroom environment, so the learning process in the classroom is not effective for understanding the material being taught. However, not all materials can be explained by utilizing existing media in the environment. It is very possible to use Adobe Flash-based learning media, because at SDN 95 Bonto Bulaeng they have not used multimedia learning in the learning process, especially in Education, Physical, Sports, and Health (PJOK) subjects in thematic learning. Because by applying multimedia learning is able to provide an understanding of the material appropriately, interestingly, effectively, and efficiently so that students can get feedback on what they are doing.

There are some results of studies that supported this study stated that the basis of multimedia learning theory, multimedia animation design should pay attention to integrate resources, display information with multimedia means, avoid cognitive load, enhance interaction and promote learners' active process (Wang et al, 2012). In line with the other study stated that the students' needs geography multimedia learning based on Adobe Flash, for effectiveness rate of multimedia and treatment, Fcount = 20,875> Ftable = 3.99, indicates that geography learning based on Adobe Flash is can escalate students' curiosity, based on experts judgments and the students' assessments, it could be concluded that the geography multimedia learning based on Adobe Flash is 91.4%, hence it is very suitable to be

implemented. Multimedia learning based on Adobe Flash geography has increased students' curiosity and feasible to implement (Rejeki et al, 2020). This study is supported by the other study stated that results obtained material expert validation of 79.68%, a media expert validation analysis results obtained for 81.67%, and the results of validation analysis of learning experts obtained by 76.56%. Based on these results, Adobe Flash CS6-based science learning multimedia categorized as feasible and practical used as learning multimedia (Sukariasih et al, 2019).

Furthermore, the researchers are interested in conducting study with learning multimedia in the learning process and aim to convey learning materials to students so that learning objectives can be achieved optimally. The aims of this research are 1) to identify the description of the need for multimedia development of human limb recognition learning using Adobe Flash for class I students at SDN 95 Bonto Bulaeng, 2) Designing multimedia learning to recognize human limbs using Adobe Flash for class I students at SDN 95 Bonto Bulaeng, 3) Describe the level of validity and practicality of multimedia learning to recognize human limbs using Adobe Flash for grade I students at SDN 95 Bonto Bulaeng.

2. METHODS

Research and development of Adobe Flash-based multimedia produces an Adobe Flash-based Multimedia product in Human Body Parts Recognition Learning for Class I Students at SDN 95 Bonto Bulaeng Di Bulukumba, which was developed using the ADDIE model (analysis, design, development, implementation, evaluation). The ADDIE model consists of 5 components which interrelated and structured systematically starting from the first stage until the fifth stage is not sorted randomly because the application must be systematic. These five stages or steps are very simple when compared to other models. Because of its simple nature and systematically structured, the model. This is easy for researchers to understand and apply (Widyastuti, 2019; Sugiyono, et al. 2022). Research Model and development is a model used to test the effectiveness of a research development. The reason researchers used the research and development model ADDIE because this model is a common model and can be used and applied in all research and development.

The source of data in this study, namely the primary data source is the result of the teacher's response to the Subjects of Education, Physical, Sports and then giving a questionnaire to content/material experts and learning design/media experts, giving questionnaires to 15 first grade students of SDN 95 Bonto Bulaeng who study the subjects of education, physical, sports and secondary data sources are in the form of lesson plans (RPP) in the subjects of education, physical, sports and health. This development research has two data analysis techniques, namely: qualitative descriptive data analysis techniques and quantitative descriptive data analysis.

This qualitative descriptive data analysis was used to manage data from the results of the reviews by content/material experts and the results of reviews by design experts/learning media, with the aim of knowing the level of Adobe Flash-based learning multimedia that was developed and also used as a reference in the first phase product revision, as for comments from teachers of Education, Physical, Sports and Health subjects and 15 first grade students at SDN 95 Bonto Bulaeng, during the trial period they were also taken into consideration in revising the product. This quantitative descriptive data analysis is used to process the questionnaire data obtained from the results of the validity test into a descriptive percentage. The formula used to calculate the percentage of the subject is as follows:

$$\text{Percentage} = \frac{(Jawaban \times Bobot\ Tiap\ Pilihan)}{N \times Bobot\ Tertinggi} \times 100\%$$

Description : ⊚ : number

N : Total number of questionnaire items

Meanwhile, this data analysis was used to process the questionnaire data obtained from the results of practicality trials in the form of descriptive percentages of 15 first grade students at SDN 95 Bonto

Bulaeng who were studying Education, Physical, Sports, and Health subjects which were contained in the form of scores. The formula used to calculate the percentage of subjects is as follows:

$$persentase = \frac{(persentase\ tiap\ item\ angket)}{jumlah\ responden}$$

Furthermore, to calculate the percentage of the overall subject,
the formula is used: Percentage = F : N
Description: F = Total Percentage of all subjects
N = Many Subjects to make a decision

Based on the results of the assessment obtained, the following provisions are used:

**Table 3.1.** Achievement Rate Conversion with 5 Scale

Achievement Level	Qualification	Description
90% - 100%	Very Good	No Revision Needed
75%- 89%	Good	No Revision Needed
65% - 74%	Enough	Revised
55% - 64%	Not Enough	Revised
0% - 54%	Very Less	Revised

Source: I Made Tegeh & I Made Kirna. (2013)

3. FINDINGS AND DISCUSSION

Results Analysis of the needs for learning conditions for Education, Physical, Sports and Health subjects through a questionnaire to 15 students of SDN 95 Bonto Bulaeng who are studying Education, Physical, Sports and Health subjects. Questionnaire Contains 5 questions, the data obtained (can be seen in figure 1)

Figure 1. Student Perceptions about the Learning Process of Educational Subjects, Physical, Sports and Health
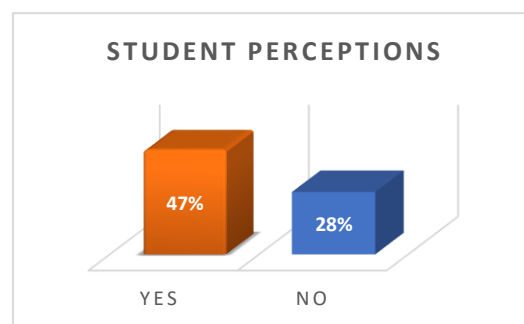

Based on the results of the student needs identification questionnaire in figure 1 given to 15 grade I students at SDN 95 Bonto Bulaeng to determine the learning conditions for Education, Physical, Sports and Health subjects, the results obtained an average percentage of 47% who stated Yes and 28% who

stated No. This indicates that the learning process for Education, Physical, Sports and Health subjects is still not optimal and the need for learning resources that are in accordance with the needs of students.

Data results Analysis of multimedia needs based on Adobe Flash in learning the introduction of human body parts through a questionnaire to 15 students of SDN 95 Bonto Bulaeng who are studying Education, Physical, Sports and Health subjects. Questionnaire Contains 5 questions, the data obtained can be seen in the table is 10% who are in the qualifications that are needed (can be seen in table 3.2)

Figure 2. Students' Perceptions of Adobe Flash-Based Multimedia in Learning Recognition of Human Body Parts needed
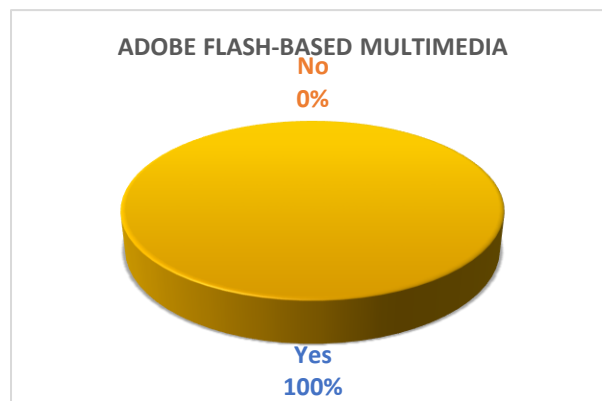
Based on figure 2 above regarding students' perceptions of Adobe Flash-based multimedia in learning the recognition of human body parts needed, the results obtained an average percentage of 100% which is in very good qualifications. From the results obtained indicate that students are interested in using Adobe Flash-based multimedia in learning the introduction of human limbs in the learning process for Education, Physical, Sports and Health subjects, especially in the introduction of human limbs which are classified as material in Educational, Physical Subjects. , Sport and Health, so that media that fit the needs and can facilitate students in the learning process Introduction of human body parts in Education, Physical, Sports and Health Subjects are needed.

After the developed product has been completed, the validity and practicality test of the product is carried out. The trial was carried out to obtain results in the form of an assessment of aspects of material/content, design, ease of use of the product so that it is known how the development of the product achieves the weight of validity and practicality. The scale used in testing the validity and practicality of the rating scale with a choice of 1-5.

Testing of content/content by content experts/multimedia content based on Adobe Flash, the initial product of Adobe Flash-based multimedia assessment media, was submitted to content experts on December 15, 2021 to obtain data on the level of validity from the point of view of content/content in the product developed. The content expert who is used as an assessor for product development is Mr. Drs. Lutfi B, M. Kes One of the lecturers of the Elementary School Teacher Education Study Program, Faculty of Education, Makassar State University. From the validation questionnaire, the data obtained can be (see table 4.4)

Table 4.4. Results of Validation by Experts on Adobe Flash-Based Multimedia Content in Learning the Recognition of Human Body Members.

No	Komponen yang dinilai	Skor
1.	The suitability of the material with the RPP.	5
2.	The material presented is in accordance with the basic competencies in the lesson plan.	5
3.	The material presented is in accordance with the indicators in the	

	lesson plans.	5
4.	The material presented is in accordance with the learning objectives in the lesson plan	5
5.	Material equipment.	5
6.	The suitability of the image with the material.	5
7.	The suitability of the video with the material.	5
8.	Appropriateness of the language used.	5
9.	Use of standard language.	5
10.	The suitability of the material with the characteristics of students.	5
	Total	50

Based on the results of the assessment by content experts in table 4.4 above, the percentage level of achievement. After being converted with the conversion table, the percentage result of 100% is in very good qualification. The conclusion of the assessment/questionnaire response by the content expert is worthy of a field trial without revision because it is in very good qualification.

Design and media testing by Adobe Flash-based multimedia design/media experts, Adobe Flash-based multimedia development drafts as initial products were given to design/learning media experts on December 22, 2021 to obtain data regarding the level of validity of the products developed. The design and media expert who was used as the assessor of the product development was Dr. Citra Rosalyn Anwar, S.Sos., M.Sc. One of the lecturers of the Education Technology Study Program, Faculty of Education, Makassar State University. From the validation questionnaire by the design and media experts, the following results were obtained:

Table 4.5. Results of Design Validation by Adobe Flash-Based Multimedia Design Experts in Learning the Recognition of Human Body Members

No	Rated components	Score
1	Writing the title on the initial display.	5
2	The font size on the media.	4
3	Word use.	4
4	Text clarity.	5
5	Color composition.	3
6	Interesting image shape.	4
7	Image size.	5
8	Match the text with the image.	4
9	Image variations.	4
10	The suitability of the background with the media.	5
	Total	43

Based on the results of the design testing assessment by design experts in table 4.5, the percentage level of achievement. After being converted to a conversion table, the percentage results from design testing by design experts are 86% in good qualification.

Table 4.6. Results of Media Validation by Adobe Flash-Based Multimedia Media Experts in Learning the Recognition of Human Body Members

No	Rated components	Score
1	Attractive multimedia display.	5
2	Clarity of the language used.	5
3	Clarity of the layout of the material order.	5
4	Button layout accuracy.	5
5	Image clarity.	5
6	Display/media quality.	4
7	Match the colors used.	5
8	The suitability of the font used.	4
9	Voice/audio clarity.	4
10	The clarity of the video shown.	5
	Total	47

After being converted to a conversion table, the percentage results from media testing by media experts are 94% in very good qualifications, but there needs to be improvements according to input, general suggestions by design and media experts regarding Adobe Flash-based multimedia so that the resulting development product better.

In addition to expert validation, to ensure that the development of Adobe Flash-based multimedia products is in accordance with the needs of the target users, practical trials of Adobe Flash-based multimedia products are carried out on first grade students of SDN 95 Bonto Bulaeng who are studying Education, Physical, Sports and Health subjects, and teacher Subjects Education, Physical, Sports and Health. The results show that the student's response is in very good qualification with a percentage of 98.17% so that Adobe Flash-based multimedia in learning the introduction of human limbs does not need to be revised. Furthermore, the teacher's response to Education, Physical, Sports and Health Subjects showed a 100% percentage of the developed Adobe Flash-based multimedia. The validity of the results of developing this Learning Multimedia media will be presented starting from the content expert test subjects, learning design expert tests, learning media expert tests, individual trials, trials small group and field trials.

Based on the results of the needs analysis obtained through a questionnaire filled out by class I students at SDN 95 Bonto Bulaeng, it was found that there were students who had difficulty learning the material for introducing human limbs, this was indicated by the average percentage of students' perceptions of Adobe Flash- based multimedia in learning. the introduction of human limbs obtains 100% results which are in very good qualification. By utilizing technology in interesting and fun learning, it will certainly increase the enthusiasm of students in the learning process, this is in line with the opinion of Sudjana & Rivai (2017) which suggests that one of the benefits of learning media is that learning will attract more students' attention so that it can foster learning motivation. Based on one of these benefits, the learning media was developed according to the characteristics of the first grade elementary school students. Then the next stage is the trial stage to determine the practicality of the developed Adobe Flash-based multimedia product.

This study is supported by the other result of study stated that rough estimate of the time and cost needed to develop these tools as well as multiple supplementary source and end result files are also made available. Educators could utilize multiple advanced delivery methods to incorporate custom digital 3D models of complex anatomical spaces understood from inside (Javan et al, 2020). In line with the other result of study showed that Multimedia resources are an important tool that can be used by teachers in the classroom as a learning aid for learners with disabilities or by parents and children at home and potential applications and resources for people with special needs must self-adapt to user capabilities and skills, reducing the use of external assistive technologies (Fuertes et al, 2010). On the

other hand it can see how plain text web pages have been replaced by ones in which multimedia information (images, video and audio) are an important part of them (Mosqueira et al, 2010).

This Adobe Flash-based multimedia product is then tested for practicality carried out offline by providing a questionnaire that is in accordance with the purpose of the practicality test, namely to determine the ease of users in using Adobe Flash-based multimedia to grade I elementary school students who are studying Educational, Physical, Sports and Health subjects. from the results obtained through the questionnaire, the qualifications are very good, judging from the aspect of this learning media it makes me more enthusiastic in learning, this learning media attracts my attention to study independently, the material presented in this learning media can add to my insight, material which is presented is easy to understand, the text in the learning media is easy to read, the language used is easy to understand, the videos in the learning media are easy to understand, the learning media are easy to use.

4.   CONCLUSION

The identification of Adobe Flash-based multimedia products is needed by SDN 95 Bonto Bulaeng. This is evidenced by the results of a questionnaire which is in very good qualification. So this is a benchmark for researchers in developing Adobe Flash-based multimedia products. This Adobe Flash-based multimedia design is developed by using ADDIE Model and based on the results of the needs analysis and refers to the Lesson Plan. Compared to media that have been developed previously, this multimedia is designed in such a way by taking into account the characteristics of students and applying full color design principles. In addition, in this multimedia there are also music video clips that can entertain students so they are not bored in learning. The results of the validation of this Adobe Flash-based multimedia product are valid, the results of the design validity by a design expert on this Adobe Flash-based multimedia product get a category in good qualification, and the results of the validity of the media by a media expert on this Adobe Flash-based multimedia product get a category in very good qualification.

Meanwhile, the results of material/content validity by material/content experts on this Adobe Flash-based multimedia product received a very good qualification category. The results of the practical test of this Adobe Flash-based multimedia product were tested by students and teachers who are powerful subjects, namely getting practical results. The results of the trial to students consisted of 15 students on this Adobe Flash-based multimedia product which were in very good qualifications and did not need to be revised. Furthermore, the results of the responses of the subject teachers to this Adobe Flash-based multimedia product are in very good qualifications and do not need to be revised.

REFERENCES

Akhiruddin, Wattimena, M., Nursida, A., Salehuddin, & Ridwan. (2022). The Role of The Sociology Teacher in Implementing Character Education. IJOLEH: INTERNATIONAL JOURNAL OF EDUCATION AND HUMANITIES, 1(1), 71–81. Retrieved from https://jurnal-eureka.com/index.php/ijoleh/article/view/38

Fuertes, J. L., González, Á. L., Mariscal, G., & Ruiz, C. (2010, July). A framework to support development of learning applications for disabled children. In International Conference on Computers for Handicapped Persons (pp. 503-510). Springer, Berlin, Heidelberg.

He, Y., & Zhang, M. (2011). Multi-user 3D based framework for e-commerce. In Transactions on Edutainment V (pp. 202-213). Springer, Berlin, Heidelberg.

Hijrawatil Aswat, Khaerun Nisa Tayibu, & Satriawati. (2022). Teacher Managerial Strategy in Building Character Education During The Covid-19 Pandemic. IJOLEH: INTERNATIONAL JOURNAL OF EDUCATION AND HUMANITIES, 1(1), 82–94. Retrieved from https://jurnal-eureka.com/index.php/ijoleh/article/view/42

Indah, F., Agoestanto, A., & Woro, A. (2018). The students' critical thinking ability through problem posing learning model viewed from the students' curiosity. Unnes Journal of Mathematics Education, 7(3), 147–155. https://doi.org/10.15294/ujme.v7i3.25025.

Javan, R., Rao, A., Jeun, B. S., Herur-Raman, A., Singh, N., & Heidari, P. (2020). From CT to 3D Printed Models, Serious Gaming, and Virtual Reality: Framework for Educational 3D Visualization of Complex Anatomical Spaces From Within—the Pterygopalatine Fossa. Journal of Digital Imaging, 33(3), 776-791.

Jones, B. A. (2014). ADDIE model (Instructional design). http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.572.4041

Matta, H., & Gupta, R. (2021). Augmented Reality: An Upcoming Digital Marketing Tool in India. In Advances in Interdisciplinary Research in Engineering and Business Management (pp. 31-38). Springer, Singapore.

Mosqueira-Rey, E., Río, B., Alonso-Ríos, D., Rodríguez-Poch, E., & Prado-Gesto, D. (2010, June). Multimedia elements in a hybrid multi-agent system for the analysis of web usability. In International Conference on Hybrid Artificial Intelligence Systems (pp. 217-224). Springer, Berlin, Heidelberg.

Naidu, V. R., Singh, B., Agarwal, A., Al Farei, K., & Al, K. (2021). A REVIEW OF IMPLEMENTATION OF HTML5 BASED PLATFORMS TO FACILITATE INTERACTIVE ONLINE LEARNING DURING COVID-19 PANDEMIC. Proceedings of SOCIOINT, 2021(8th).

Nurhikmah H, N. H., Hakim, A., Kuswadi, D., Sulfianti, S., & Sujarwo, S. (2021). Developing Online Teaching Materials for Science Subject During Covid-19 Era. Jurnal Pendidikan: Teori, Penelitian, dan Pengembangan, 6(8), 1198-1206.

Nurhikmah, H., Aris, M., Arismunandar, A., Sujarwo, S., & Sukmawati, S. (2022). Development of Local Content Teaching Material for the History of Wajo. Journal of Innovation in Educational and Cultural Research, 3(2), 264-270

Nurhikmah, H., Febriati, F., & Ervianti, E. (2021). The Impact of Computer Based Test and Students' Ability in Computer Self-Efficacy on Mathematics Learning Outcomes. Journal of Education Technology, 5(4).

Ramdhani, Ali M. 2014. Lingkungan Pendidikan dalam Implementasi Pendidikan Karakter. Jurnal Pendidikan Universitas Garut. Vol. 8 (1): 35. https://journal.uniga.ac.id/index.php/JP/article/view/69 (diakses pada tanggal 8 Juni 2021)

Rapanta, C., Botturi, L., Goodyear, P., Guàrdia, L., & Koole, M. (2020). Online university teaching during and after the Covid-19 crisis: Refocusing teacher presence and learning activity. Postdigital science and education, 2(3), 923-945.

Rejeki, W. Y., & Mukminan, M. (2020). Development of Multimedia Learning Geography Based on Adobe Flash to Increase Students' Curiosity. Geosfera Indonesia, 5(3), 318-334.

Samsuddin, G., Irman, R., & Khaedar, M. (2021). Peningkatan Hasil Belajar Bahasa Indonesia melalui Model Pembelajaran Bamboo Dancing Kelas VI SD Inpres Manggala Kecamatan Manggala Kota Makassar. EDULEC: EDUCATION, LANGUAGE AND CULTURE JOURNAL, 1(1), 9-19.

Sasabone, L., & Jubhari, Y. (2021). The Implementation of English for Specific Purposes (ESP) in Improving Students Speaking Skill of UKI Paulus Makassar. EDULEC: EDUCATION, LANGUAGE AND CULTURE JOURNAL, 1(1), 1-8.

Sugiyono, S., Aunurahman, A., & Astuti, I. (2022). Multimedia Development of Student Discipline Character Training at Police Schools Pontianak State. Sinkron: jurnal dan penelitian teknik informatika, 7(1), 204-213.

Sujarwo, S., Sukmawati, S., Akhiruddin, A., Ridwan, R., & Siradjuddin, S. S. S. (2020). An analysis of university students' perspective on online learning in the midst of covid-19 pandemic. Jurnal Pendidikan Dan Pengajaran, 53(2), 125-137.

Sujarwo, S., Akhiruddin, A., Salemuddin, M. R., Sabillah, B. M., & Sriwahyuni, S. (2019). The Application of Problem Solving Reasoning (PSR) in Improving Students' Metacognitive at the Twelfth Grade Students of SMAN 19 Makassar. International Journal for Educational and Vocational Studies, 1(2), 138-141.

Sukariasih, L., Erniwati, E., & Salim, A. (2019). Development of interactive multimedia on science learning based adobe flash CS6. International Journal for Educational and Vocational Studies, 1(4), 322-329.

Sukmawati, S., Sujarwo, S., Soepriadi, D. N., & Amaliah, N. (2022). Online English Language Teaching in the Midst of Covid-19 Pandemic: Non EFL Students' Feedback and Response. Al-Ta lim Journal, 29(1).

Teräs, M., Suoranta, J., Teräs, H., & Curcher, M. (2020). Post-Covid-19 education and education technology 'solutionism': A seller's market. Postdigital Science and Education, 2(3), 863-878.

Uğur, B., Akkoyunlu, B., & Kurbanoğlu, S. (2011). Students' opinions on blended learning and its implementation in terms of their learning styles. Education and Information Technologies, 16(1), 5-23.

Yulianingsih, Tresna L & Sbandi, A. 2017. Kinerja mengajar guru sebagai faktor determinan prestasi belajar siswa. Jurnal Pendidikan Manajemen Perkantoran. Vol. 2 (2): 160. https://ejournal.upi.edu/index.php/jp manper /article/view/8105 (diakses pada tanggal 14 Juni 2021)

Wang, S., & Wang, Z. (2012, September). Design and realization of multimedia animation based on flash. In International Conference on Information Computing and Applications (pp. 146-151). Springer, Berlin, Heidelberg.

Widyastuti, E. (2019, March). Using the ADDIE model to develop learning material for actuarial mathematics. In Journal of Physics: Conference Series (Vol. 1188, No. 1, p. 012052). IOP Publishing.

Wressnegger, C., Yamaguchi, F., Arp, D., & Rieck, K. (2016, July). Comprehensive analysis and detection of flash-based malware. In International Conference on Detection of Intrusions and Malware, and Vulnerability Assessment (pp. 101-121). Springer, Cham.

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human limb recognition using Adobe. This research is a typeof R&D (Research and...

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