



Developing Audio-Visual Learning Media in the Competency of Making Robe Patterns Based on the Design

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Abstract

The videos for making fashion patterns taken by teachers from YouTube only fulfilled some indicators in making pattern subjects. It was caused by time limitations in creating audiovisuals by the teacher. Furthermore, some teachers also did not master IT especially in making audio-visual media. The students faced difficulty in understanding making robe patterns based on the design without the teacher's guidance when the teacher used the lecture method, job sheet, and module. The purposes were (1) to examine the audio-visual learning media in the competency of making robe patterns based on the design. (2) to examine the effectiveness of learning media and (3) to examine the practicality of it in the competency of making robe patterns based on the design. The research model applied ADDIE. The result showed the audio-visual learning media was proved feasible by material and media experts where The CVR achieved more than 0,75. Audio-visual learning media was effective in the learning process since it showed an improvement in learning outcomes. The results of the t-test with a significance of 0 and the N-gain test results of 53.60%. This media was very practical in making robe patterns with a percentage gained 89.58% from students' users and 94.92% from teachers.

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INTRODUCTION

The technology development in education gave benefits to the teacher and students. Knowledge of education had to follow the technology development so that learning purpose could be achieved if the learning process was effective and efficient. One of the ways to achieve it was by applying learning media. Learning media can influence the environment, situation, and learning atmosphere carried out by the teacher. Media made translating the data and information became easy to read. The data presentation was more attractive and accurate, and it can increase students' learning motivation. Furthermore, the materials were easy enough to understand, so the learning outcome can be achieved (Dewi *et al.*, 2018:106; Tafonao, 2018:103). Learning media was divided into three categories: audio media, visual media, and audiovisual media. The use of audiovisual learning media became one of strategy for increasing learning quality and improving learning outcomes. This media-created visualization from abstract material to the real one. So, the atmosphere in the learning process was effective and pleasant. The students enjoyed the class and accepted the materials freely (Fitria, 2014:59; Martini, 2015:676; Pratama & Suyitno, 2018:20).

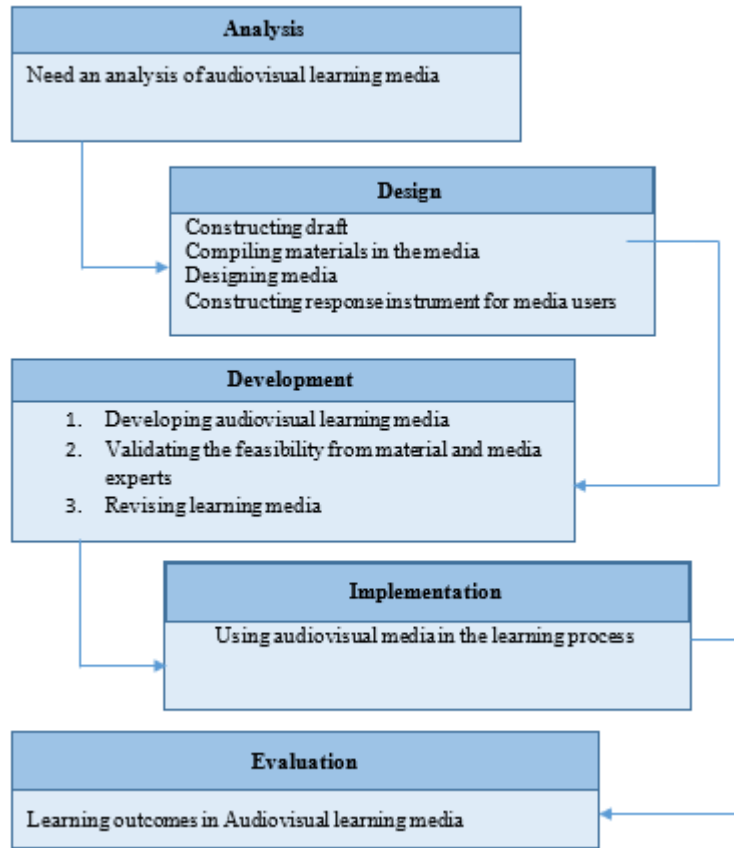
According to the interview result at state vocational high school (SMK) 1 Sayung got 89,89% of students of 10, 11, and 12 grades needed audiovisual media to support learning activities especially in making robe patterns. In making patterns subject, there was one competency to make a robe based on the design. This material

was given to 10-grade students of state vocational high school (SMK) 1 Sayung with several indicators. (1) Preparing tools and materials for making robes based on the design. (2) Utilizing the decided size in making robes based on the design. (3) Changing and dividing pattern in making robes based on the design. (4) Giving the mark and sign in the robe patterns. (5) Making a robe pattern based on the design.

The teacher used the blackboard as media to explain the steps in making robe patterns. The teachers used a Job sheet, lecture model, module, and video from youtube to explain the material. Unfortunately, the students still met difficulty to make robe patterns based on the design without teacher guidance. Furthermore, the youtube video did not fulfill all indicators in making robe patterns. Audiovisual media can facilitate teachers to deliver the material so that the student was easier to understand. Based on this situation, the researcher saw developing audiovisual learning media that can be used continuously and repeatedly to solve the problems needed in making robe patterns based on the design.

RESEARCH METHOD

The present study included a research and development (R&D) approach to developing audiovisual learning media to improve students learning outcomes in making robe patterns based on the design. The current research also used the ADDIE model, ADDIE means Analysis, Design, Development, Implementation, dan Evaluation. The steps of the ADDIE model can be seen in the following figure.



Picture 1. The development steps of the ADDIE model

RESULT AND DISCUSSION

The implementation of developing audiovisual learning media

In the developing stage, constructing audiovisual learning media was done by preparing visual learning media. This visual media added the audio and suitable back sound to the content. The steps can be seen as follow:

1. Making an initial display as an opening of the learning media



Picture 2. Initial display

2. Making the main menu of learning media



Picture 3. Main menu

3. Making users guidance



Picture 4. Display of intruction for use

4. Making based competency menu



Picture 5. Page of basic competency menu

7. Creating a developer profile



Picture 8. Developer profile display

5. Making material page



Picture 6. Page of material menu

6. Making quiz and exercises page



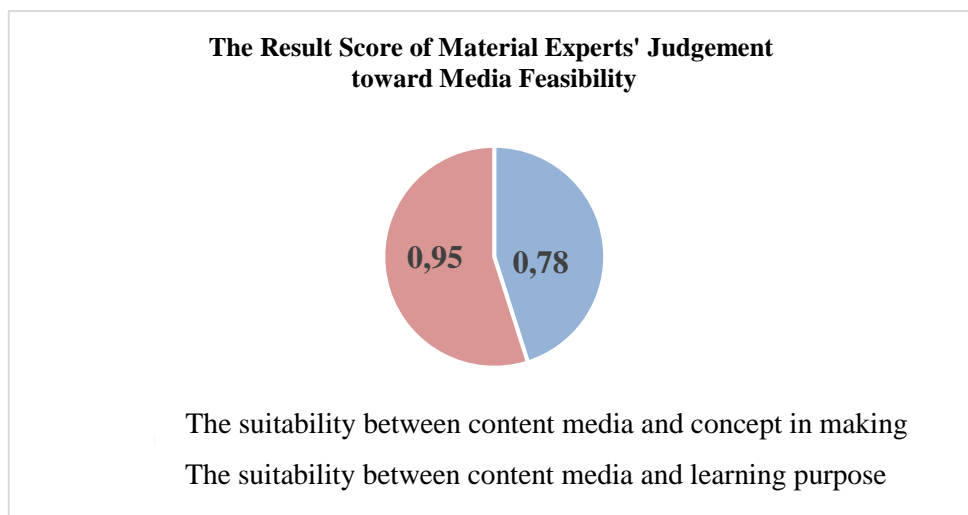
Picture 7. Quiz and exercises display

The main menu of developed media consisted of users' guidance, competencies, materials, exercises, and profiles. The media was completed with several buttons, such as the start button, home button, material button, and next and previous buttons.

Feasibility, Effectivity, Practicality of Audiovisual Learning Media

1. The feasibility of audiovisual learning media

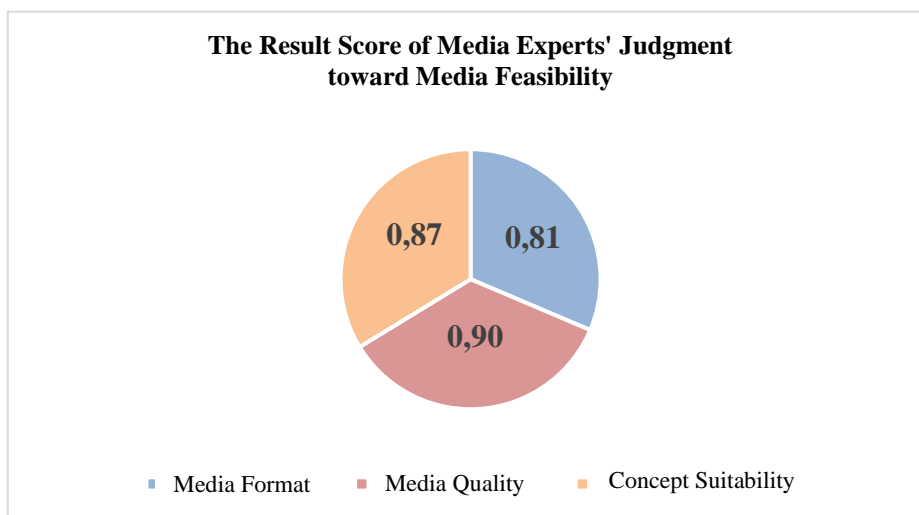
To produce feasible learning media, we need to make sure of the feasibility of the material and media (Amrulloh, 2013:134). The media validation was gained from validating audiovisual learning media in the competency of making robe patterns based on the design. Eight material experts and eight media experts assessed the audiovisual learning media purposed by the researcher. The diagram result of experts' judgment can be seen as follows.



Picture 9. The result score of material experts toward media feasibility

Based on the diagram above it can be explained that the indicator conformity of content media in making robe patterns gained an average CVR score of 0,78. On the other hand, the indicator of the suitability of media content with learning objectives obtained an average

CVR result of 0.90. content media conformity achieved a 0,90 average CVR score, or it can be stated that audio-visual learning media was feasible because it obtained a CVR score of more than 0.75.



Picture 10. The result of Media Experts' Judgement toward Media Feasibility F

Based on the diagram result media format indicators gained 0,81 of the average CVR score. Media quality got 0,90 of the average CVR score, while concept suitability achieved 0,87 of the average score. In other words, it can be concluded that the media was feasible since it gained a CVR score of more than 0.75. Furthermore, the validation results of material experts and media experts on audio-visual learning media were feasible since all indicators had an average CVR of more than 0.75.

The result of reliability gained more than 80%, or it can be declared reliable. After validating media, the media practicality was tested on class XII of fashion design students, and the participants were 29 students. The practicality score gained 87,64% of the average percentage, and two teachers got 95.57%. The result showed that the media was practical in the learning process. Also, the learning media was feasible since it had gained 85.01%. Based on the result, the audiovisual learning media was very practical and feasible to be used as a learning topic. Khumaedi et., al (2021: 621) stated that audiovisual audio employed the sense of sight and the listener's sense to reinforce each other during learning. Asmara (2015:172) explained that the learning media became

unimplemented in class, and the feasibility would not be successful without validation from some components. Martini (2015:681) elaborated that audiovisual learning media was feasible to be adopted when it fulfilled score aspects and indicators of developed learning media. Amrulloh *et., al* (2013: 135) explained that if the media met all eligibility aspects, the media was suitable for use in the learning process. The audiovisual learning media had been called feasible and practical and was then applied to class XI students majoring in fashion at SMK Negeri 1 Sayung. The subject was 31 students who had received material on making robe patterns according to the design.

2. The Effectivity of Audiovisual Learning Media Effectivity

The learning media effectivity was taken from students' outcomes in making robe patterns based on the design that used work instruments. Audiovisual learning media can increase the learning quality that is one by the teacher (Mahnun, 2012; 33, Leow & Mai, 2014;109). The strength of learning media was easy to use, everywhere, and at every time. The students can learn independently, and it can be used repeatedly when the students want to learn

individually. Unfortunately, the weakness of learning media was can be used only in android. A learning media was made to cover all basic competencies and achievement indicators which were arranged coherently and can be used anytime and anywhere by students' mobile phones so that students can use it more effectively and efficiently. There were three quality requirements in instructional media development; valid, practical, and effective (Fitria *et al.*, 2017:21).

The teachers' duty in the audiovisual media was to streamline teaching-learning activities (Mathew & Ali, 2013:91). The media effectivity can be seen from pre-test and post-test scores of XI grade of fashion design students at State Vocational Highschool (SMK) 1 Sayung. The improvement of learning outcomes through students' worksheets of making robe patterns based on the design. A pre-test and a post-test were

implemented in the audiovisual learning media implementation. Normality and homogeneity tests were conducted, before the T-test and the N-Gain test were done. Based on the normality test used SPSS 16.0 according to Kolmogorov-Smirnov, it showed that the pre-test got a 0,145 significant score, while the post-test gained a 0,069 significant score. The pre-test and post-test data were normal since the significant score was more than 0,05. The next step was the homogeneity test. The result depicted that the data was homogenous since it got 0,893 as a significant score. Furthermore, the data was tested with T-test. The T-test result explained that the pre-test and post-test found a difference since they got 0 significant scores. While in the N-Gain test, it achieved 53.60% of the average score. The improvement score between pre-test and post-test based on decided indicators can be seen as follow:

Table 1. The improvement of Pre Test and Post Test score

Indicators	Pre test	Post test	N-gain Score	Category
Preparing tools and materials in making robe patterns based on the design	67.74	93.75	80.62 %	High
Utilizing the specified size in making the robe pattern based on the design	58.87	71.88	31.63 %	Medium
Changing and dividing patterns in making robe patterns based on the design	66.73	89.06	67.29 %	Medium
Giving shawls and markings according to the design of the robe patterns.	52.42	66.67	29.95 %	Low
Making the draft based on the design	41.13	72.92	54 %	Medium
The tidiness of the pattern and design of materials	73.39	79.17	21.72 %	Low
Disciple in submitting the task	70.97	82.29	41.33 %	Medium

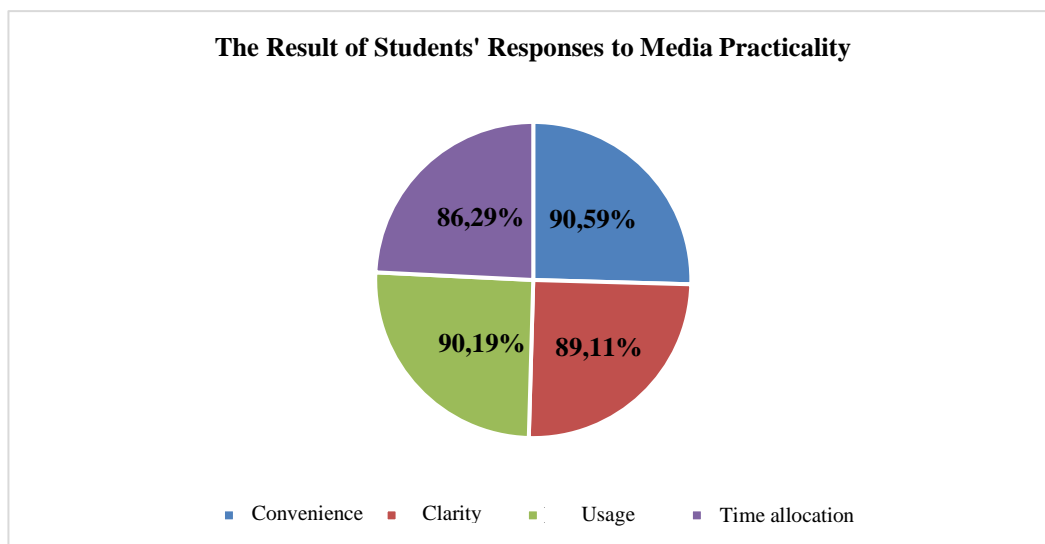
The effectivity result of audiovisual learning media was in line with Adittia's (2017:19). In his study, there was a difference in average scores between the pre-test and post-test, and learning outcomes improved after using audiovisual media. Khumaedi *et., al.*, (2021:613) elaborated that audiovisual learning media can be used to increase students' competency. Kurniawan & Danang (2189-2190) also explained that after implementing audiovisual learning media, students' outcomes tended to increase from 56,96 to 76,04 average score. Sofi (2017: 271) depicted that most teachers and students agreed the audiovisual learning media was more effective in the teaching and learning process. It was in line

with Gani (2017: 56) explained that audiovisual media contributed significantly to students' learning outcomes. Asmara (2015:176) elaborated that learning activities with audiovisual media were more successful than learning activities without audiovisual media. This statement was supported by the data of the classical minimum score of the experiment class gained 86, 364% that passed the proposition of class learning success limit (75%). Gabriela (2021:10) explained that all learning activities using audiovisual learning media could increase students' learning outcomes with an overall increase in the experimental class.

3. Media Practicality

Product practicality means the product can be easy to use for the users. These criteria are related to the product level that can be used and be liked in normal conditions by users (Nieveen in

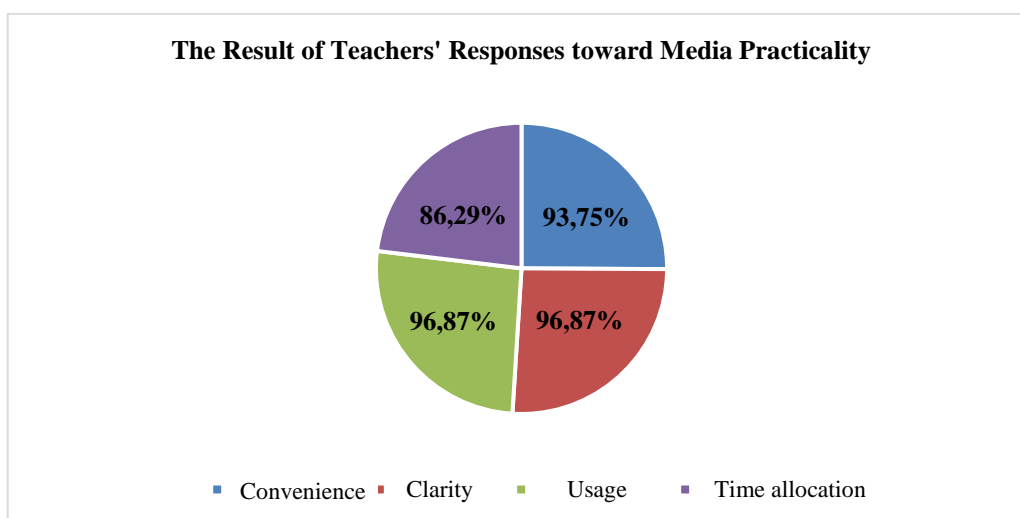
Rochmad, 2012: 70). The practicality of learning media is taken from a questionnaire of users' responses (teacher and students). The following result was the students' response toward media practicality.



Picture 11. The result of students' response to media practicality

The result of the practicality test in the convenience indicators achieved 90.59%, while

clarity got 89, 11%, the usage indicators gained 90,19%, and time allocation got 86,29%.



Picture 12. The result of teachers' responses in media practicality

The result of the practicality test in convenience indicators got 93,75%, clarity gained 96,875, usage indicators achieved 96,87%, and time allocation got 86,29%. Based on the overall results of the practicality questionnaire percentage, it was stated that audiovisual learning media was very practical to be used since it was easy to be implemented, easy to understand, easy to move,

clear and can be carried out everywhere. Annisa *et.al* (2020: 76) elaborated on the practicality aimed to know the convenience of users in using learning media. In line with Singh (2021: 895), audiovisual learning media supported students' motivation and helped a teacher in the teaching and learning process. Tawil & Ahmad (2019:2) stated that audiovisual learning media

implementation could influence students' responses.

The practicality result of audiovisual media was in line with Riyanto & Asmara (2018: 79). In the research showed that audiovisual learning media fulfilled a practicality value in its use. Karisma, *et.al* (2019:216) explained an audiovisual learning media was practical to use in the learning process. The usage of audiovisual learning media in the competency of making robe patterns based on the design gained feasibility category, effective and very practical. The current research enriched (1) the development of learning audiovisual media in making robes based on the design was made coherently according to the based competency (KD) and indicators. (2) The learning media was in the form of an application, so the students can use it anytime and anywhere. (3) The learning media was completed with animation and audio to clarify the materials.

CONCLUSION

Audiovisual learning media in the competency of making robe patterns based on the design was feasible since it contained basic competency, indicators, user guidance, and materials that fit the indicators and exercises. This media can improve students' achievement because after applying the media in the learning process, the result showed that there was an improvement in the pre-test and the post-test score. Furthermore, audiovisual media was practical to be used by the students and the teachers in the learning activities.

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REFERENCES

- Adittia, Arya. (2017). "Penggunaan Media Pembelajaran Audio Visual Untuk Meningkatkan Hasil Belajar Ips Pada Siswa Kelas IV SD." *Mimbar Sekolah Dasar* 4 (1) , 9-20.
- Amrulloh, R., Yuliani, & Isnawati. (2013). "Kelayakan Teoritis Media Pembelajaran Multimedia Interaktif Materi Mutasi Untuk SMA". *Berkala Ilmiah Pendidikan Biologi*, 2 (2): 134-136. ISSN 2302-9528.
- Annisa, A. R., Aminuddin P. P, Dharmono. (2020). "Kepraktisan Media Pembelajaran Daya Antibakteri Ekstrak Buah Sawo Berbasis Macromedia Flash." *Jurnal Inovasi Pendidikan Sains*, 11 (1): 72-80.
- Asmara, A. P. (2015). "Pengembangan Media Pembelajaran Berbasis Audio Visual Tentang Pembuatan Koloid". *Jurnal Ilmiah DIDAKTIKA*. 15 (2): 156-178.
- Dewi, N., R. Eka Murtinugraha., & Riyan A. (2018). "Media Pembelajaran Interaktif Pada Mata Kuliah Teori Dan Praktik Plambing Di Program Studi S1 PVKB UNJ". *Jurnal Pendidikan Teknik Sipil. Pengembangan Media*, 7 (2): 25-34.
- Fitria, A. (2014). "Penggunaan Media Audio Visual Dalam Pembelajaran Anak Usia Dini". *Jurnal Pendidikan Anak Usia Dini. Cakrawala Dini*. 5 (2): 57-62.
- Gabriela, N. D.P. (2021). "Pengaruh Media Pembelajaran Berbasis Audio Visual Terhadap Peningkatan Hasil Belajar Siswa Sekolah Dasar". *Jurnal Pendidikan Guru Sekolah Dasar*, 2 (1) : 104-113.
- Gani, I. N. F., Muh. R., & Jamaluddin. (2017). Penggunaan Media Audiovisual Untuk Meningkatkan Hasil Belajar Siswa Dalam Mata Pelajaran Membiakan Tanaman Dengan Biji Jurusan Agribisnis Pembibitan Dan Kultur Jaringan Kelas X Di SMK Negeri 4 Jeneponto. *Jurnal Pendidikan Teknologi Pertanian*, 3: 49-57.
- Khumaedi, M., Dwi W., Rizki S., & Andri S. (2021). "Evaluating The Impact Of Audio-Visual Media On Learning Outcomes Of Drawing Orthographic Projections". *International Journal of Education And Practice*, 9 (3), pp. 613-624, ISSN (e): 2310-3868, ISSN(p): 2311-6897.
- Kurniawan, E. & Danang J. T. (2020). "Korean Drama as Geography's Audio-Visual Learning Media of Disaster Mitigation". *Universal Journal of Educational Research*, 8(5): 2184-2190.
- Leow, F.T. & Mai N. (2014). "Interactive Multimedia Learning: Innovating Classroom Education In A Malaysian University". *TOJET: The Turkish Online Journal of Educational Technology*, 13 (2): 99-110.

- Mahnun, N. (2012) . “Media Pembelajaran (Kajian terhadap Langkah langkah Pemilihan Media dan Implementasinya dalam Pembelajaran)”. *Jurnal Pemikiran Islam*, 37 (1): 27-33.
- Martini. (2015). “Pengembangan Media Audio Visual Dalam Pembelajaran Seni Kriya Trimatra Bagi Mahasiswa Program Studi PGMI Umi Makassar”. *Jurnal Ilmiah Islamic Resources FAI UMI*, 12 (35): 676-687.
- Nugraheni, D. P., Basyirun, B., & Suprpto, E. (2022). Development of Job Instruction on Student Readiness in Carrying out Internship in the Automotive Engineering Skill Competency. *Journal of Vocational and Career Education*, 7(1).
- Pratama, Y. S. & Suyitno. (2018) “Meningkatkan Minat Dan Hasil Belajar Dengan Pengembangan Media Pembelajaran Audio Visual Sistem AC Di SMK Muhammadiyah Purwodadi”. *Jurnal Pendidikan Teknik Otomotif Universitas Muhammadiyah Purworejo*, 11 (01): 19-25. ISSN: 2303-3738.
- Riyanto, N. & Asmara, A.P. (2018). “Penilaian Kualitas Media Audio Visual Tentang Karakteristik Larutan Asam Basa untuk Siswa SMA/MA”. *Jurnal Pendidikan Sains*, 6(1): 73-85.
- Rochmad. (2012). “Desain Model Pengembangan Perangkat Pembelajaran Matematika”. *Jurnal Kreano*, 3 (1): 59-72. ISSN : 2086-2334.
- Singh, C. K. S., Harpreet K. S. S., Tarsame S. M. S. , Eng T., Ong , Melor M. Y , Henita R. , & Ilmi Z. I. “Review of Research on the Use of Audio-Visual Aids among Learners’ English Language”. *Turkish Journal of Computer and Mathematics Education*, 12 (3): 895-904.
- Sofi, M. A. (2017). “The Effectiveness Of Audio Visual Aids In Teaching Learning Process At University Level”. *International Journal of Academic Research and Development* . 2 (4): 271-272.
- Sudana, I. M., Apriyani, D., Suprpto, E., & Kamis, A. (2019). Business incubator training management model to increase graduate competency. *Benchmarking: An International Journal*, 26(3), 773-787.
- Suprpto, E., Arief, U. M., Ekarini, F., Nashiroh, P. K., Setiyawan, A., Subiyanto, S., ... & Muslimah, A. F. (2022). *Pelatihan Peningkatan Kompetensi Evaluasi Autentik Dalam Pembelajaran Merdeka Belajar Kurikulum Merdeka (Mbkm) Jenjang Pendidikan SMK. Jurnal Pengabdian Mandiri*, 1(11), 2265-2272.
- Suyitno & Syakirun. (2018). “Pengembangan Media Pembelajaran Audio Vidio Pada Motor Bakar 4 Langkah Untuk Meningkatkan Prestasi Belajar”. *Jurnal Pendidikan Surya Edukasi (JPSE)*, 4 (1): 19-34.
- Tafonao. (2018). “Peranan Media Pembelajaran Dalam Meningkatkan Minat Belajar Mahasiswa”. *Jurnal Komunikasi Pendidikan*. 2 (2): 103-114. P-ISSN 2549-1725, E-ISSN 2549-4163.
- Tawil, M. & Ahmad D. (2021). “Application of Interactive Audio Visual Media to Improve Students’ Creative Thinking Skill”. *Journal of Physics: Conference Series*: 1-6.