Utilization of Adobe Premiere Pro Using Project-Based Learning Strategies to Improve Learning Outcomes of Educational Technology Students in Broadcasting Technology Courses

Muhammad Sultan Ari Rivaldi[1], Susanti Sufyadi[2], Sulistyo Rini[3]
Universitas Lambung Mangkurat, Banjarmasin, Indonesia
E-mail: [1]muhammadsultanari21@gmail.com , [2]susanti.sufyadi@ulm.ac.id ,
[3]sulistyo.rini@ulm.ac.id

Abstract
This study aims to describe the implementation strategy of Project-Based Learning (PBL) using Adobe Premiere Pro software and determine the impact of using this software on the academic results of Educational Technology students in the Broadcasting Technology course. The method used in this research is quantitative, with a descriptive quantitative approach, and data collection was carried out through observation, interviews, questionnaires, tests, and documentation. The results of this research show that the application of the Project-Based Learning (PjBL) model integrated with the use of Adobe Premiere Pro in broadcasting education has a positive and significant impact on students' academic results. Observation shows that the entire PjBL syntax was implemented effectively. The results of the pre-test and post-test analysis, using the Man Whitney U statistical test, show a statistically significant difference between the experimental group and the control group (p = 0.049 < 0.05). The survey responses show that most students felt helped and more interested in learning using Adobe Premiere Pro, with a response rate of 207.5% and the category "Very positive." The results of the project evaluation show that the experimental class (Adobe Premiere Pro) obtained an average score of 84.24 (category "Good"), much higher than that of the control class (CapCut), with an average score of 60.58 (category "Fair").

Keywords: Achievement, Adobe Premiere Pro, Project-based learning, Learning outcomes

ABSTRAK
Penelitian ini bertujuan untuk menjelaskan strategi pemanfaatan *Project Based Learning* (PjBL) menggunakan *software adobe premiere pro* dan mengetahui dampak pemanfaatan *software Adobe Premiere Pro* terhadap hasil belajar mahasiswa teknologi pendidikan pada mata kuliah Teknologi Penyiaran (*Broadcasting*). Penelitian yang digunakan pada penelitian ini adalah kuantitatif dengan pendekatan yang menggunakan deskriptif kuantitatif, dengan pengumpulan data melalui observasi, wawancara, angket, tes, dan dokumentasi. Hasil dari penelitian ini menunjukkan bahwa penerapan model *Project Based Learning* (PjBL) yang diintegrasikan dengan penggunaan *Adobe Premiere Pro* dalam pembelajaran *broadcasting* memberikan dampak positif dan signifikan terhadap hasil belajar mahasiswa. Observasi membuktikan bahwa seluruh sintaks PjBL terlaksana secara efektif. Hasil analisis pre-test dan post-test dengan menggunakan uji statistik *Man Whitney U* menunjukkan perbedaan yang signifikan secara statistik antara kelompok eksperimen dan kontrol (p = 0,049 < 0,05). Respon angket menunjukkan mayoritas mahasiswa merasa terbantu dan lebih tertarik belajar dengan menggunakan *Adobe Premiere Pro*, dengan persentase respon mencapai 207,5% dan kategori "Sangat Positif". Hasil penilaian proyek menunjukkan bahwa kelas eksperimen (*Adobe Premiere Pro*) memperoleh rata-rata skor 84,24 (kategori Baik), jauh lebih tinggi dibandingkan kelas kontrol (*CapCut*) dengan rata-rata skor 60,58 (kategori Kurang).

INTRODUCTION

In order to prepare students for social, cultural, and workplace changes, as well as rapid technological advances, student competencies must be developed to be more in tune with the needs of the times (Ministry of Education and Culture, 2020). The Merdeka Belajar Kampus Merdeka (MBKM) program aims to provide autonomous and flexible learning processes in higher education institutions, fostering an innovative and independent learning culture tailored to students' needs (Vhalery et al., 2022). In accordance with (Permendikbudristek No. 53 of 2023, 2024) concerning Higher Education Quality Assurance, the existence of MBKM is reinforced by the right of students to study outside their study program for three semesters.

To improve the quality of education, it is necessary to face this ever-evolving situation, which requires learning transformation and reform in education (Salim & Wahidah, 2023). Indonesia is expected to be able to develop the skills and abilities of human resources through education so that they can become reliable analysts or operators in encouraging industry to achieve optimal competitiveness and productivity (Tuhuteru, 2023). Thus, education in Indonesia needs to keep up with the times to provide flexible learning to students.

The MBKM policy allows students to study outside their study programs through various activities, one of which is Certified Internships & Independent Studies (MSIB). (Arisandi et al., 2022) states that internships and independent studies greatly help students in improving their hard and soft skills, as well as supporting industry needs. The increasingly competitive world of work and the need for reliable human resources require us to become the employees that are needed (Nasution, 2023). Therefore, students are expected to develop and prepare themselves by gaining more experience and knowledge so that they are ready for the competitive world of work.

One of the partners in this program is the Hasnur Centre Foundation, which offers several positions, including Photographer, Videographer & Streamer (PVS) in the Digitaliz unit, which studies the creation of learning content and assists educators in the learning process as the latest innovation. One example is the use of software such as Adobe Premiere Pro, which is often used to assist in the creation of learning content.

Based on observations of Educational Technology students, few students are able to use Adobe Premiere Pro, as most Educational Technology students do not yet have adequate hard skills in using Adobe Premiere Pro. This is evident from the limited creativity and technical video processing in lecture assignments. According to research (Eka et al., 2021), most students are still unfamiliar with video editing software using Adobe Premiere.

One of the main challenges faced by students is the gap between the skills taught in college and those required by industry (Telaumbanua, 2024). If students are not equipped with technical skills relevant to their field of interest, they will find it difficult to compete in the job market after graduation. Therefore, the use of Adobe Premiere Pro in the learning process, especially in Broadcasting Technology courses, can be an effort to improve learning outcomes and prepare students for the professional world. Research by Razilu (2022) related to the use of Adobe Premiere Pro software has proven to improve learning outcomes. Through this report, the author aims to examine in greater depth the strategies for utilizing Adobe Premiere Pro and to understand the impact of its use on student learning outcomes in broadcasting technology courses.

METHODS

Research methods are scientific ways of obtaining data for specific purposes and uses (Sugiyono, 2023). The type of research used in this report is quantitative. Quantitative research is research conducted to answer questions using a structured design, in accordance with the scientific research system (Paramita et al, 2021). Therefore, this research report was conducted

by collecting information through initial observation of the problems that occur in the use of Adobe Premiere Pro. Meanwhile, the approach used in this research report is quantitative descriptive, which aims to systematically describe the facts or characteristics of a particular population in a factual and careful manner (Abdullah et al, 2021).

This research was conducted at the Educational Technology Study Program, Lambung Mangkurat University, located on Jl. Brigjend Hasan Basri, Pangeran Village, North Banjarmasin District, Banjarmasin City, South Kalimantan. This research on the Use of Adobe Premiere Pro Using Project-Based Learning Strategies to Improve the Learning Outcomes of Educational Technology Students in Broadcasting Technology Courses was conducted in the even semester of 2024/2025, namely semester 4, on students from the 2023 cohort, from April to June 2025.

The population in this study consisted of 49 students from the 2023 cohort of Educational Technology at Lambung Mangkurat University. However, this study did not use the entire population as a sample but rather 46 students, considering that there were 2 students in each class who did not take the broadcasting course due to academic leave and 1 student who was absent from class. Meanwhile, the sampling technique used in this study was purposive sampling, which is a technique for determining samples based on certain considerations (Sugiyono, 2023). Considering the effectiveness of time, resources, and the continuity of the experimental process, the researcher selected 46 students as the research sample. Based on (Arikunto, 2010), purposive sampling is a technique of taking samples deliberately in accordance with specific objectives determined by the researcher, especially when the population size is not too large and the researcher wants subjects that are relevant to the focus of the research. The data collection techniques used in this study are as follows:

1. This observation was conducted to see why Adobe Premiere Pro is effective in improving learning outcomes in students taking broadcasting courses, to observe the process of implementing the Project Based Learning (PjBL) model, and to assess changes or improvements in student learning activities and technical skills during the learning process and after the implementation of project-based learning.

2. Interviews in this study were conducted to seek more in-depth information about the strategy of utilizing Project Based Learning in the use of Adobe Premiere Pro and its impact on student learning outcomes in the broadcasting technology learning process.

3. The questionnaire in this study was used as a data collection technique to obtain information directly from students regarding their responses, perceptions, and experiences in using Adobe Premiere Pro as a project-based learning medium.

4. The test in this study was used to measure student learning outcomes before and after the application of the Project Based Learning (PjBL) strategy using Adobe Premiere Pro in the Broadcasting Technology course. The test technique used was an objective test in the form of a pretest and posttest, which aimed to determine the students' level of understanding of the learning model, broadcasting material, and technical skills in using Adobe Premiere Pro software.

5. Documentation served as a supplement to the interview, questionnaire, and test observation data, as well as physical evidence of student involvement and achievement during the learning process.

This study used the Mann-Whitney U test to determine significant differences between the pretest and posttest results in two different groups to measure students' understanding of broadcasting material, PjBL, and the basics of using Adobe Premiere Pro. This test was used because the data was not normally distributed. Before conducting the Mann-Whitney U test, a prerequisite analysis test was carried out, consisting of:

1. A normality test was conducted in this study to determine whether the data obtained was normally distributed or not. If the data was declared normally distributed, then a

parametric statistical test could be used. However, if the data was not normally distributed, then a nonparametric statistical test was used.

2. The homogeneity test is used to determine whether the data variance between two or more groups is similar or not. This test is conducted as a prerequisite before using parametric or nonparametric tests. In this study, the homogeneity test was conducted on student learning outcome data to ensure that the data groups had consistent variance. The homogeneity test was performed using Levene's statistics.

3. The Mann Whitney U test was used in this study to determine whether there were significant differences between two independent groups and to obtain the results of a posttest variable from two groups, namely the experimental and control classes. This test is a nonparametric test that was used because the significance results in the normality test were found to be non-normally distributed.

RESULT AND DISCUSSION
A. Results of the Project-Based Learning (PjBL) Strategy Using Adobe Premiere Pro Software in the Broadcasting Technology Course of the Educational Technology Study Program
1. Results of Project-Based Learning Implementation Observation

To obtain a clear picture of the implementation of the Project-Based Learning model, the researcher conducted observations by following the PjBL syntax stages applied during the learning process. The results of the observation of the implementation of the Project Based Learning model are as follows:

a) Determining fundamental questions

Lecturers provided material on broadcasting through e-learning in the form of videos or case studies. Students were able to overcome problems in the production stages, namely the pre-production, production, and post-production stages.

b) Designing project implementation

The lecturer provided facilities by dividing the 2023 broadcasting course students into groups. Students understood and implemented the project through the creation of ideas to the post-production stage.

c) Scheduling

Students planned the stages of shooting and editing during the pre-production and production stages. The lecturer gave students a deadline for completing the project.

d) Monitoring the project

Students collect project results after the post-production editing stage. Lecturers guide students on visual techniques, production techniques, and artistic design during the production stage.

e) Evaluating the experience

Lecturers conduct reflections on assessments and the final stages of learning.

2. Pre-test & Post-test results on PjBL understanding, broadcasting material, and basic understanding of Adobe Premiere Pro software

These results are used to determine the understanding of students taking the broadcasting course in terms of material comprehension, PjBL understanding, and basic Adobe Premiere Pro knowledge. The researcher provided 15 pre-test questions and 15 post-test questions to the 2023 cohort, with a sample size of 46 students.

To determine whether the data was normal or abnormal, the pretest and posttest data were tested using several data analysis techniques, as follows:

a) Normality Test

In this study, the data normality test used the Shapiro-Wilk test with a significance level of 0.05.

Tests of Normality

Kelas		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Hasil	Pretest A (Eksperimen)	.418	23	<.001	.440	23	<.001
	Postest A (Eksperimen)	.407	23	<.001	.506	23	<.001
	Pretest B (Kontrol	.401	23	<.001	.328	23	<.001
	Posttest B (Kontrol)	.539	23	<.001	.215	23	<.001

a. Lilliefors Significance Correction

Based on the image above, the Shapiro-Wilk normality test results obtained the same significance value of 0.001<0.05, which is less than 0.05. Therefore, it can be concluded that the data is not normally distributed, so a nonparametric test is used to determine the hypothesis test results.

b) Homogeneity Test

Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
Hasil Belajar	Based on Mean	5.458	1	44	.024
	Based on Median	1.920	1	44	.173
	Based on Median and with adjusted df	1.920	1	33.116	.175
	Based on trimmed mean	4.822	1	44	.033

The variant homogeneity test in this study used the Levene Test, which produced a significance (Sig.) of 0.173 based on the median approach. This value is greater than 0.05. Therefore, based on the median value of 0.173>0.05, it can be concluded that the pretest and posttest results are homogeneous.

c) *Man Whitney U*

Test Statistics[a]

	Hasil
Mann-Whitney U	208.500
Wilcoxon W	484.500
Z	-1.970
Asymp. Sig. (2-tailed)	.049

Based on the test statistics table above, the results of the Mann Whitney U test show a Mann Whitney U statistic value of 208.500. In the data in this study, the Asymp. Sig. (2-tailed) value is 0.049<0.05.

Therefore, it can be concluded that there is a statistically significant difference in learning outcomes between the experimental group and the control group. If the p-value is <0.05, then Ho is rejected. Meanwhile, if the p-value is >0.05, then Ha is accepted. Based on the results obtained, the value of 0.049<0.05 means that the Ho hypothesis is rejected. The alternative hypothesis (Ha) is accepted. It can be concluded that the learning method applied to the experimental group by assessing students' understanding of PjBL, broadcasting material, and the basics of Adobe Premiere Pro has a significant impact on student learning outcomes compared to the control group.

B. The Impact of Using Adobe Premiere Pro Software on the Learning Outcomes of Educational Technology Students in Broadcasting Technology Courses.

Based on the results of the recapitulation of student responses to the use of Adobe Premiere Pro in project-based learning strategies, a total score of 1,245 was obtained with an overall average of 83, and a percentage of 207.5% of the maximum overall score. This high average score percentage indicates that the majority of students felt that it was helpful and tended to find learning more interesting and relevant in broadcasting technology learning.

The total score for the control group is the group that did not receive training in the use of Adobe Premiere Pro. Based on the total score assessment results obtained by the students, the average score was 60.58, which is 1,393.31. Meanwhile, in the experimental class table, the group that received Adobe Premiere Pro treatment showed that the total score of the students was 1,937.5 with an average class score of 84.24.

The application of project-based learning (PjBL) strategies in broadcasting technology courses shows effective and positive results in supporting the improvement of students' technical skills, especially in the use of Adobe Premiere Pro. In line with research from (Wafiyah et al, 2025), Project Based Learning has a significant effect on improving students' creative thinking and creative performance. This PjBL learning model shows that project-based learning can provide space for students to collaborate and provide direct experiences relevant to industry needs. In line with research from (Ilahiyyah et al, 2021), which states that the PJBL method can increase the spirit of entrepreneurship, it has an important role in enhancing students' entrepreneurial mindset in honing the process of mastering knowledge and skills to become entrepreneurs who can think critically, creatively, and innovatively.

Based on student responses regarding the use of Adobe Premiere Pro to assist in video editing, it has a very positive impact on learning outcomes. In line with the research by (Razilu, 2022), which states that the use of Adobe Premiere Pro has a positive and significant effect on student learning outcomes. From all the respondent data, 18 out of 23 students (78%) gave responses in the Very Positive category, while 5 students (22%) gave responses in the Positive category.

Based on the results of the assessment recapitulation that the author designed to see the comparison between students in the use of Capcut software and Adobe Premiere Pro, the total score for the control class was 1,393.31, so the average score for the control class was 60.58. When adjusted to the assessment category, this average falls into the "poor" category. Meanwhile, the total score obtained in the experimental class was 1937.5, with a score of 84.24. It can be concluded that the use of Adobe Premiere Pro had a positive effect on student learning outcomes in broadcasting courses, with an increase of 39.06% compared to the average score of the control class. In line with the research by (Affandi & Ekohariadi, 2021), which states that the average learning score after using the interactive video-based discovery learning model is 83.8, interactive video media is suitable for use as a learning medium that can improve student learning outcomes.

CONCLUSION

Based on the results of the research conducted, the conclusions are in accordance with the objectives of this study:

1. This study shows that the application of the Project Based Learning (PjBL) model integrated with the use of Adobe Premiere Pro in broadcasting education has a positive and significant impact on student learning outcomes. Observations prove that all PjBL syntaxes are implemented effectively, from problem determination to project evaluation. The results of the pre-test and post-test analysis show an increase in students' understanding of PjBL material, broadcasting, and the basics of using Adobe Premiere Pro. This proves that project-based learning contributes significantly to improving student learning outcomes. Thus, it can be concluded that PjBL is effective in broadcasting technology learning,

especially in the context of industrial practice that requires collaborative, creative, and real project-based skills.

2. The questionnaire responses show that the majority of students feel helped and are more interested in learning with a project-based approach using Adobe Premiere Pro, with a response percentage of 207.5% and a rating of "Very Positive". The project assessment results show that the experimental class (Adobe Premiere Pro) obtained an average score of 84.24 (Good category), which is much higher than the control class (CapCut) with an average score of 60.58 (Poor category). Thus, it can be concluded that Adobe Premiere Pro is effective as a learning medium in the PjBL model, as it improves student learning outcomes and provides experiences relevant to the needs of the broadcasting industry.

REFERENCES

Abdullah et al. (2021). *Metodologi Penelitian Kuantitatif.* http://penerbitzaini.com

Affandi & Ekohariadi. (2021). *Pengaruh Media Pembelajaran Berbasis Video Interaktif Menggunakan Aplikasi Adobe Premiere Pro Untuk Meningkatkan Hasil Belajar Siswa Pada Mata Pelajaran Kewirausahaan Smk Negeri 2 Surabaya Di Era Pandemi* (Vol. 05).

Arikunto. (2010). Prosedur penelitian suatu pendekatan praktek. *(No Title).*

Arisandi, D., Widya Mutiara, M., & Christanti Mawardi, V. (2022). Dampak Kegiatan Merdeka Belajar Kampus Merdeka (Mbkm) Magang Dan Studi Independen Dalam Meningkatkan Kompetensi Mahasiswa. *Jurnal Muara Ilmu Sosial, Humaniora, Dan Seni*, 6(1), 174. https://doi.org/10.24912/jmishumsen.v6i1.16163.2022

Eka, C., Puji Lestari Santoso, N., Sindy Amelia, & Devana, V. T. (2021). Pelatihan Software Editing Bagi Mahasiswa Pada Universitas Raharja. *ADI Pengabdian Kepada Masyarakat*, 1(2), 60–65. https://doi.org/10.34306/adimas.v1i2.442

Ilahiyyah et al. (2021). Implementasi Project-based Learning untuk Meningkatkan Entrepreneurial Mindset dan Entrepreneurial Skills pada Siswa SMK Nurul Islam. *Jurnal Maksipreneur: Manajemen, Koperasi, Dan Entrepreneurship*, 11(2), 197. https://doi.org/10.30588/jmp.v11i2.885

Kemendikbud. (2020). *Buku Panduan Merdeka Belajar-Kampus Merdeka.*

Nasution. (2023). Implementasi Program Magang Merdeka Belajar-Kampus Merdeka Di Disperindag Sumut Untuk Meningkatkan Kompetensi Mahasiswa Memasuki Dunia Kerja. *JPM Jurnal Pengabdian Mandiri*, 2(7). http://bajangjournal.com/index.php/JPM

Paramita et al. (2021). *METODE PENELITIAN KUANTITATIF.*

Permendikbudristek No 53 Tahun 2023. (2024). *BUKU PANDUAN MERDEKA BELAJAR-KAMPUS MERDEKA 2024.*

Razilu, Z. (2022). PEMANFAATAN ADOBE PRIMIERE-PRO SEBAGAI MEDIA AJAR DALAM MENINGKATKAN HASIL BELAJAR SISWA. In *Jurnal Pendidikan dan Pengajaran (JPP* (Vol. 3, Issue 3).

Salim, A., & Wahidah, E. Y. (2023). The Urgency of Implementation and Challenges of Merdeka Belajar Kampus Merdeka: An Analysis Study at State Higher Education in Kalimantan. *QALAMUNA: Jurnal Pendidikan, Sosial, Dan Agama*, 15(2), 805–814. https://doi.org/10.37680/qalamuna.v15i2.2715

Sugiyono. (2023). *METODE PENELITIAN KUANTITATIF, KUALITATIF, DAN R&D.* www.cvalfabeta.com

Telaumbanua. (2024). *Pengaruh Soft Skill dan Hard Skill Mahasiswa Terhadap Kesiapan Kerja di Era Revolusi Industri 4.0.*

Tuhuteru. (2023). *Pendidikan Dan Tantangan Pembelajaran Berbasis Teknologi Digital Dan Informasi Di Indonesia Pada Era Disruptif* (Vol. 5).

Vhalery, R., Setyastanto, A. M., & Leksono, A. W. (2022). Kurikulum Merdeka Belajar Kampus Merdeka: Sebuah Kajian Literatur. *Research and Development Journal of Education*, *8*(1), 185. https://doi.org/10.30998/rdje.v8i1.11718

Wafiyah et al. (2025). Pengaruh Model Project-Based Learning (PjBL) terhadap Creative Thinking dan Creative Performance Siswa SMP dalam Pembelajaran IPA. *JURNAL PENDIDIKAN MIPA*, *15*(2), 425–437. https://doi.org/10.37630/jpm.v15i2.2619

Tohir, A., Muslim, S., & Situmorang, R. (2025). The Effectiveness of the Digital 5E Learning Model Integrated with Google Classroom on Science Learning Outcomes in Junior High School. *Journal of Neonatal Surgery*, 14(6), 259–263.

Tohir, A., Muslim, S., & Situmorang, R. (2025). Integration of Technology in Learning: Enhancing Higher Order Thinking Skills (HOTS) in Secondary School Students. *International Journal of Computational and Experimental Science and Engineering*, 11(3). https://doi.org/10.22399/ijcesen.3474

Utama, A. H., & Salim, A. (2021). Program Pelatihan Pengembangan Bahan Ajar Berbasis Video Pembelajaran. *Journal of Innovation Research and Knowledge*, *1*(2), 73–82.