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Learning Through Vlogging: Understanding, Critiquing, and Providing Solutions

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Abstract.
Using information technology in the classroom is now seen as students' most effective teaching approach. They could acquire a particular knowledge more rapidly after playing a particular game. This way of learning is more readily accepted than the explanation provided by the instructor. This study aimed to investigate the applicability of project-based learning to the consumption of economics-related content on YouTube. Not only did this kind of instruction result in the production of video content for educational purposes, but it also benefited students in gaining a theoretical and practical grasp of economics by establishing it on actual events that occurred in the real world. With the quantitative method of t-analysis, when compared to other methods, the results of this study demonstrated that vlogging as a means of education had a substantial impact.

Keywords: project-based learning, YouTube, video blog, learning, education

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1. Introduction

Education and the advancement of technology are intrinsically linked. This is a condition we must recognize in order to train potential teachers with project-based learning skills and the capacity to develop instructional content. This expertise and knowledge can be viewed as a teaching asset that is more engaging and applicable both within and outside the classroom, bringing the instructor closer to the students. Students are more intensively following the development of information technology. They get information faster from games and educative content that they think is more comfortable to accept than the teacher's explanation. This phenomenon occurred caused of a more accessible delivery model with Bahasa that uses simple facts close to students' lives.

The Indonesian ISP Industry Association has released the results of a recent survey. (APJII, 2017) , regarding the penetration and behavior of Indonesian internet users revealed that 143.26 million Indonesians had internet access, and 88.24 percent of

them have S1, S2, or S3 degrees. In addition, 70.23 percent of users visit the internet to fulfill their lifestyles by watching movies and gaining access to educational resources, totaling 55.30 percent of all internet users. Students prefer to use movies for academic references. As stated by Mayoral, 2010, YouTube is one of the most popular learning resources, supporting the findings of (Susanto, 2014) that video-based learning aspects are more popular with students than other elements.

Youtube is a new social phenomenon in the form of video-sharing material that enables users to publish, view, and share video clips for free (Burnett, 2008; Hruska & Maresova, 2020); it is a video-sharing website. One of YouTube's missions is to deliver new, dynamic, and engaging instructional materials. When making the sensitive content using the standard YouTube distribution method (called filler Youtube content). The following are some of YouTube's many benefits as a teaching tool: Potential, as YouTube is the most visited website on the internet with the ability to edit educational content; Practical, as YouTube is easy to use and accessible to all audiences, including students and teachers; Informative, as it details developments in the fields of education, technology, culture, etc.; Interactive, as it allows us to discuss, conduct a Q&A, or review a learning video; Shareable, as it can be easily accessed by others. YouTube provides an HTML link facility, and its learning videos can be embedded in posts on social media sites like Facebook and Twitter, as well as on blogs and websites. f) YouTube is free for both organizations and individuals, making it cost-effective.

There has been some investigation by (Bou, 2012; Hruska & Maresova, 2020; Orus et al., 2016) Specifically, this article focuses on the media discussion or question-and-answer opportunity between content creators and users that is made possible by the YouTube comment feature. The usage of comment sections on vlog learning material has been implemented and hasn't yet reached its full potential. The phenomenon of learning from YouTube content demonstrates how engaging video-based education is. The development of learning media through video also demonstrates the educators' inventiveness in providing content to students. Effectively promoting material comprehension is the creative act of a person. The effectiveness of learning materials can improve user performance in learning (Bouilheres et al., 2020; Sung et al., 2017; Wardoyo et al., 2020). YouTube-based learning material is a viable option for usage in the classroom, given earlier observations regarding the content's ease of access and comprehension. This observational result lends credence to the claim that vlogs are a valuable educational tool (Darmawan, 2016; Yew & Goh, 2016).

Those previously researched are what drive us to determine the efficacy of online/offline content-based learning as a medium for delivering instruction. Not only in

S1 Economics Education study programs but also applied economics, should potential teachers receive practical economics instruction. With the intention of generating this content-based learning media, the 3N concept motivates students to study more. Ki Hajar Dewantara (*niteni*/ Observing, *nirokke*/ imitating, *nambahi*/ adding value). Several chapters will be presented in this paper. The second chapter contains theories that are connected. The third chapter describes the research methods employed. After that, chapter four presented results and explanations, while chapter five provided study conclusions.

2. Literature Review

2.1. Project-Based Learning

Project-based learning is a groundbreaking method of education that places emphasis on learning in context through intricate activities (Okudan & Rzasa, 2004; Saputra et al., 2014; Thompson & Salomon, 2011). Students in a project-based learning environment engage in activities such as research, problem-solving, and information synthesis to advance the project's focus on product development or performance. In addition, a student-centered learning model, such as a project-based approach, is used to foster greater student autonomy (Sumarmi, 2012). The term "project-based learning" refers to a mode of instruction in which students spend significant class time investigating and developing solutions to meaningful, high-stakes problems or difficulties. Students in a project-based learning course get the information and skills necessary to independently research and provide solutions to a meaningful and challenging question, problem, or challenge within a predetermined time frame.

Student autonomy in learning and the variety of ways in which students can present their findings make project-based instruction a powerful tool.(Project-Based Learning: Inspiring Middle School Students to Engage in Deep and Active Learning, 2009). Project-based education, as this definition suggests, is a teaching method that encourages students to find answers to their learning questions in whatever way works best for them, and then to demonstrate their progress in a number of different ways. When students work on projects together, they are more likely to grasp the underlying concepts and principles of a field. Through the use of this method, students are encouraged to actively participate in crucial tasks such as problem-solving. For instance, empowering students to take charge of their own education can lead to the development of high-quality and relevant final projects. The benefits and usefulness of studentsProject-based education,

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Project-based learning, as described by the aforementioned theoretical frameworks, puts students in charge of their education and encourages them to develop their own skills and knowledge. The students had to solve some very basic problems. Learning outcomes can be broken down into the following categories: investigation, analysis, interpretation, synthesis, and informing. The steps required to introduce project-based instruction

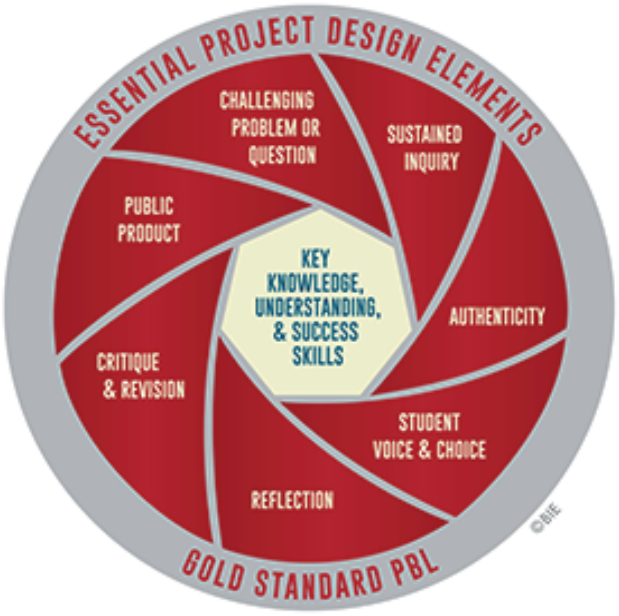

Figure 1: PjBL Gold Standard.

According to Arini et al(2020) .'s research, the most effective forms of project-based learning emphasize the following: (1) Key Knowledge, Understanding, and Success Skills: Standards-based material and skills like critical thinking/problem solving, cooperation, and self-management are the main focus of the project; (2) Collaborative Learning Environments Goals of the project are based on a real problem or inquiry that needs to be answered, and this problem or inquiry presents an appropriate challenge; (2) Challenging Problem or Question Students engage in a rigorous and extended process of asking questions, finding resources, and applying what they've learned; this is known as "sustained inquiry." (5) Authenticity: the project is based on or influenced by real-world context, activities, and tools; or it addresses students' unique concerns, interests, and challenges; Students have a say in important decisions like how the project is managed and what goes into the final product, which brings us to point number six: (7) Reflection: Both students and teachers take time to think about what they've learned, how well their inquiry and project activities went, how well their students performed on assignments, and what obstacles they faced and how they overcame them. Students develop as creators by critiquing one another's work and making necessary adjustments based on suggestions for improvement (Section 8) Described, shown, or presented to anyone outside of class, students' project work is considered a "public product" (9).

This standard requires students to demonstrate autonomy in decision making and framework construction. Students must be able to tackle unresolved issues, assuming they exist. Students are accountable for designing processes to accomplish desired outcomes, collecting and organizing obtained data, and conducting ongoing reviews. Regularly, students reflect on their work, and the classroom environment accepts mistakes and alterations, as well as the final result and evaluates its quality. To achieve the gold level, the institution must comprehend the processes necessary to adopt Project-Based Learning. The developed phases of project-based learning consist of:

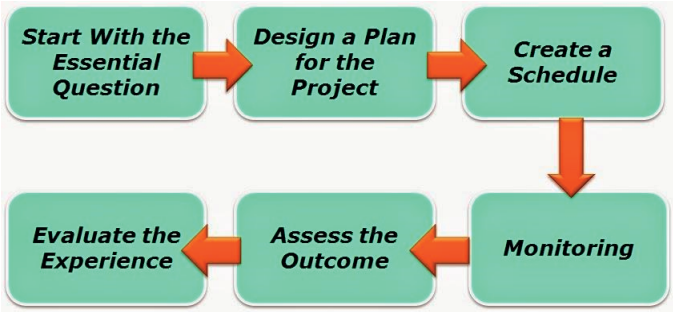

Figure 2: Steps of PjBL.

Based on Figure 2 we this research has six (6) steps.

1. I. The Crucial Question

   Questions of vital importance, that is, questions that might lead to assignments for students to complete, are the foundation of any learning process. The assignment is relevant to the students' lives. From there, conduct a thorough investigation.

2. Make a Strategy for the Project

   Lesson plans are developed by collaborative teams of teachers and students. Our hope is that the kids will feel ownership over their work and be proud to show it off. The planning may reveal the game's guidelines and the available options for play. Together, these steps can help address critical issues by bringing together a wide range of potential topics and understanding what resources are available to aid in project completion.

3. Make a Timetable

   Teachers and students collaborate on a plan outlining the steps to be taken to complete the task at hand. It is at this point that you can do things like: 1.) make a schedule (allocation of time) for finishing the project; 2.) set dates by which the project must be finished; 3.) invite students to plan new ways; 4.) guide students as they create ways unrelated to the project; and 5.) require students to provide an explanation or reason for choosing their method.

4. Monitor the Students and the Progress of the Project

   The instructor is responsible for supervising the students' activity while they complete the assignment. Clear monitoring is achieved by including students in each procedure. In other words, the instructor functions as a guide for the actions of the students. A rubric is developed to record all significant actions and so simplify the monitoring process.

5. Analyze the Results

   Assessments are meant to help teachers gauge how well their students are doing in relation to set benchmarks. The purpose of the test is to gauge each student's level of understanding and provide them with constructive criticism on how they can improve. This analysis can help teachers determine what steps to take next with their students' education.

6. Take Stock and Draw Conclusions

   At the end of each class, both teachers and students take time to consider their projects' processes and results. Reflection is an active process that requires personal investment.

Children's capacity for independent and creative thought benefits from the cooperative and flexible learning paradigm of project-based learning. Students are actively involved in the transition from concrete to abstract understanding through the use of project-based learning. This life's actual conditions will provide new and interesting ideas for analyzing and envisioning the world. The following components make up PjBL: (Jaiswal et al., 2021): One, the Groundwork Phase. This is the normal first stage of education, where foundational information is acquired and learning plans are developed. In an effort to get to know one another, students introduce themselves and talk about what they hope to accomplish with the project as a whole. Two, the PjBL Methods. These are the foundational stages of education, and they include a variety of tasks associated with the creation and completion of a project. This section includes the following subsections: (a) group formation and project selection, (b) data collection, and (c) project work, and (d) project evaluation. See how student evaluations are structured in this pattern. Feedback aids in students' understanding of their own level of competence in relation to their work. If you want a visual representation of how PjBL operates, see the image below.

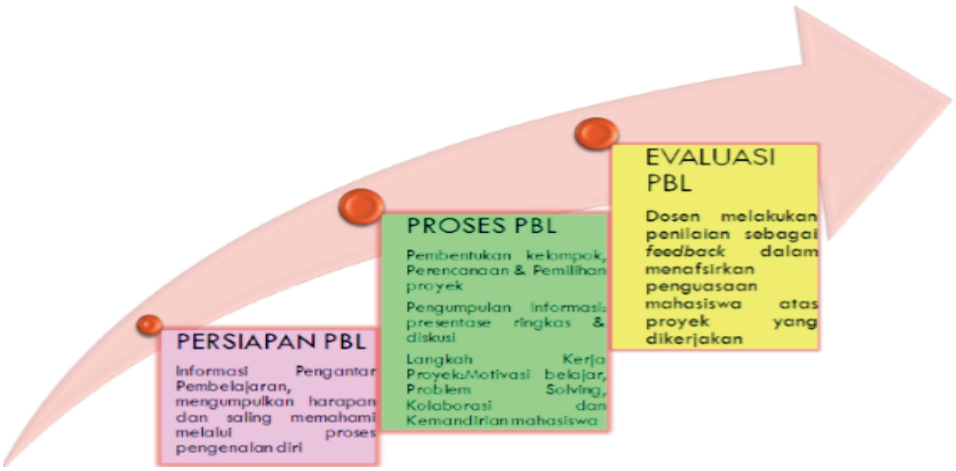

Figure 3: Work Model of PjBL.

2.2. Vlog Learning Media

Facilitating on-going education are learning media that aid in the completion of learning goals. The goal of educational media development is to facilitate both the delivery of content and the reception of that content by students and lecturers. Media that can propagate the underlying meaning of sources structurally are learning media. Make it easy for people to learn, so that those who are receiving the information can absorb

it quickly and use it effectively. According to (Arsyad, 2014), The term “learning media” refers to any medium used to convey or disseminate educational content. Teaching and learning can be aided by using learning media., as defined by (Kustandi & Sutjipto, 2013). In addition, it clarifies the message’s meaning so that it may attain learning objectives more effectively and precisely.” It is anticipated that learning media will assist instructors and students in accomplishing their educational objectives.

Attractive and communicative learning media must be evaluated for their efficacy and productivity. (Sanjaya, 2012) identifies the following five roles of learning media: Learning media are utilized to facilitate communication between the communicating parties of the message. 2) The function of motivation in a learning process that relies solely on the lecture technique will cause students to become more bored during class time. Through the use of media, the function of meaningfulness may make learning more meaningful. In particular, learning may enhance not only knowledge about the addition of information in the form of data and facts but also attitudes and abilities. 4) The role of perception equalization, despite the fact that learning is traditionally structured, happens independently in practice, 5) As a result of individuality’s functions, each student has a unique learning style. Thus, the utilization of learning media allows for the satisfaction of the interests and learning styles of every individual. According to (Sanaky, 2013), Learning media’s goals as a teaching tool include streamlining lectures, boosting students’ retention rates, maintaining coherence between lessons and course goals, and improving students’ ability to focus in class.

Video blogging is now being developed as one of the learning platforms. A form of audio-visual learning medium that is extremely popular among students since it presents videos that deliver and review content separately or in context. Edgecom in (Nur Fua’ad, 2013) stated, “A vlog is a website that primarily distributes its material via video as opposed to text or images.” Miles in Fariz[7] explained that a vlog is a blog that is shown or published in video form. In vlogging, or video blogging, the creator’s goal is to broadcast their personal video diaries to a large audience for free. (Darmawan, 2016). The following benefits of vlogging (video blogging): 1) Vlogging (video blogging) is presented aesthetically with visuals, audio, and text merged into a single entity. 2) By making a vlog (video blog), one may work independently. For instance, creating cosmetic lesson vlogs, trip diaries, vlogs for daily activities, etc. 3) Vlogging (video blogging) is a simple method to earn money from the internet.

The following are the potential downsides of Vlogging (video blogging): 1) Vlogging (video blogging) on YouTube is still designed solely for entertainment, and nothing has been used for educational purposes. 2) Limitations of supporting equipment such

as DSLR cameras and microphones that allow vlogging with good image and sound quality, 3) It takes a great deal of time to produce a vlog. From generating concepts through capturing images and sounds to the process of video editing. 4) Vlogging (video blogging) requires a secure Internet connection for uploading and accessing content. Vlogging (video blogging) is a collection of videos uploaded to a website by a vlogger or a fan's favorite videos (Siegchrist, 2017). Vlogs can serve as an alternate learning medium by providing various explanations spanning from comprehension to strengths and limitations. In addition, instructors might utilize it to present learning materials that students easily understand during learning activities.

2.3. Learning Outcome

The learning outcome as the most crucial evaluation factor for determining the quality of classroom instruction (Paolini, 2015). Commonly, learning outcomes defines as the quantitative skills, talents, knowledge, or values that students should possess upon completion of a program. According to (Scott, 2011), the objectives of pedagogic learning outcomes are very apparent. It tends to mean the instructor makes it very clear what it is that they want their students to learn and then help them get there. (Koehler & Mishra, 2006) Said that technology has a role in enhancing effective instruction. (Orus et al., 2016) support the notion that integrating content, pedagogy, technology, and ICT further improves student motivation and learning results. Schmid et al. at different research (Schmid et al., 2014) found that the most effective learning occurs when students are engaged in active and meaningful tasks using cognitively supportive technological tools.

(Yew & Goh, 2016) established that project-based learning improves student learning outcomes and has a beneficial impact. According to the findings (Ergül & Kargın, 2013), project-based learning improved students' learning outcomes compared to the conventional technique. Therefore, concluded that PBL is an excellent teaching and learning strategy, especially when examined for long-term retention and application of information (Du & Lundberg, 2021).

3. Method

Using a control group and an intervention group, this study assesses the efficacy of project-based learning through video blog using a quasi-experimental research design (Coolican, 2018). This study's participants are economics faculty students from

Universitas Negeri Malang. These students are now enrolled in business economy courses in four classes, two of which are experimental and two of which are controlled.

The treatment administered to the experimental group consisted of discussing business plan-related information utilizing project-based learning techniques. Students are required to create and execute collaborative video projects with entrepreneurs or micro, small, and medium-sized businesses in order to submit learning content on YouTube "Department of Economic Development FE UM." Lecture and discussion methods will be used to instruct the control group. A potential method of assessing the effectiveness of a study's methods is to compare the pre- and post-test scores of a control and experimental group, as depicted in the following diagram.

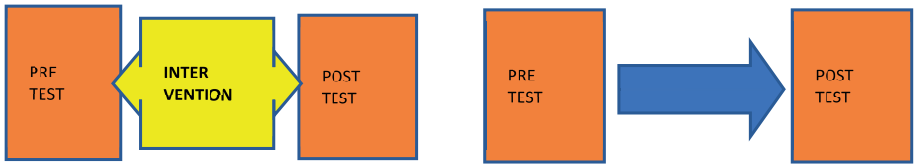

Figure 4: Quasi Experiment Method.

According to this study methodology, students are supposed to comprehend business principles conceptually, recall them well, and comprehend the company plan practically. Independent sample t-tests were used to compare each group's test results before and after treatment. In this study, we test the hypothesis that,

H0: Using Vlogging as a teaching tool in a classroom does not significantly affect students' performance on a regional scale.

H1: Vlogging as a teaching tool has a substantial impact on students' ability to learn.

4. Result and Discussion

4.1. Descriptive Analysis

This analysis provides a description of the study data, which includes the total quantity of data, the maximum values, the minimum values, the mean, and other statistics as shown in the table below:

According to the table that was presented, which detailed the number of students in both the control class and the experimental class, there were 44 people in each class for a total of 88 individuals. The experimental pre-test has a value that is at least 56 and no more than 77. The range of potential values is from 0 to 100. The experimental

Table 1: Descriptive Table.

	N
Pre-Test Experiment	44
Post-Test Experiment	44
Pre-Test Control	44
Post-Test Control	44
Valid N (listwise)	44

post-test score is between 71 and 87, with 87 being the highest possible result. However, the score for the pre-test control group must be at least 55, and the highest possible result is 84. The post-test value for the control group must be at least 67 points and cannot exceed 87 points. Based on these findings, we are also able to deduce that the experimental group had a rise in the mean value that was much greater than that of the control group. It explains that the use of vlogs as a learning aid is effective enough to have an effect on the learning outcomes of the students.

4.2. Normality Test

The main objective of the normality test is to find out if the data follow a normal distribution. The Kolmogorov-Smirnov normality test and the Shapiro-Wilk test were used to conduct the necessary calculations in SPSS for this study.

Table 2: Normality Test.

Class	**Kolmogorov- Smirnov**			**Shapiro-Wilk**		
	Statistic	Df	Sig.	Statistic	Df	sig
Pre-Test Experiment	0.13	44	0.070	0.94	44	0.018
Post-Test Experiment	0.14	44	0.028	0.95	44	0.074
Pre-Test Control	0.12	44	0.167	0.97	44	0.319
Post-Test Control	0.13	44	0.071	0.96	44	0.148

Both the Kolmogorov-Smirnov test and the Shapiro-Wilk test have a significance level (sig) greater than 0.05, as shown in the table above. The results of the study can be assumed to have a normal distribution. Therefore, we will proceed with our study and analyze the data using parametric statistics.

4.3. Paired sample t-test

The main objective of this study was to test whether or not incorporating vlogs into a project-based learning framework improves students' ability to retain information. It is

possible to use the paired test's findings to make sense of the t-test performed on the sample data, which produces a significance level (sig). a two-tailed p-value of less than 0.05 One can conclude that there is no distinction between the experimental class that took place before the test and the experimental class that took place after the test with regard to the average learning outcomes of the students in each group (Project-based learning). The sample t-test provides a significance value that can be interpreted in light of the results of the paired test. of 0.05 (two-tailed).

Table 3: paired sample Test.

		t	df	Sig.
Pair 1	Pre- Post-Test Exp	-13.49	43	.000
Pair 2	Pre- Post-Test Control	-8.3	43	.000

Comparing the pre- and post-test scores of the control group could lead one to the conclusion that students' typical academic performance varies. Because it's possible to infer that the control group isn't completely uniform.

4.4. Homogeneity Test

Researchers use this consistent sample to check if post-test scores from the experimental (project-based learning) and control groups have similar dispersion. The SPSS homogeneity test results are as follows:

Table 4: Homogenity Test.

	Test of Homogeneity of Variance				
		Levene Statistic	df1	df2	Sig.
Post Test Learning Outcomes	Based on Mean	1.331	1	86	0.252
	Based on Median	1.115	1	86	0.294
	Based on Median and with adjusted df	1.115	1	74.213	0.294
	Based on trimmed mean	1.380	1	86	0.243

Post-test data variance in both the experimental class and the control class are the same, as shown by the homogeneity test's results, which were previously reported; the significance value (sig.) Based on mean is equal to 0.252>0.05. (homogeneous). As a result, it is possible to run the independent t-test on the data collected.

4.5. Independent sample t-test

The purpose of this study was to compare the effectiveness of a vlog-based Project-based learning approach to teaching business economics with that of a traditional lecture-based approach, using the differences between the two as a measure of sample variability. It is described as follows in the SPS analysis results:

Table 5: Independent sample T Test.

		F	Sig.	t	df	Sig. (2-tailed)
Test Learning outcomes	Equal variances assumed	1.331	.252	4.892	86	0.000
	Equal variances not assumed			4.892	79.76	0.000

The above result can be used to determine the value of significance. proportional to 0 with a 0.05 standard deviation It is reasonable to assume that students' usual learning outcomes in experimental classes using vlog-based Project-based learning will differ from those of students using more conventional learning models. The results of descriptive statistical tests are provided in the following order, making it easy to see how vlog-based project-based learning differs from more conventional learning models:

Table 6: Group Statistic.

	Group Statistics				
	Kelas	N	Mean	Std. Deviation	Std. Error Mean
Post Test Learning Outcomes	Post-test experiment class	44	80.83	3.425	.516
	post-test Control class	44	76.63	4.565	.688

Based on the data presented, it is clear that the average value of the learning outcomes for students in the experimental class is 80.83, whereas the value for students in the control class is 76.63. As a result, the benefits of combining vlog-based project learning with experimental class outcomes outweigh those of more traditional learning methods.

This study uses the video media blogs that young people today are fighting for to investigate the effects of project-based learning. The consequences of project-based learning are investigated, and the impact of facilitating environments is uncovered. Students must learn to effectively utilize internet-related resources to supplement online learning due to restrictions imposed by distant learning standards (Gikas & Grant, 2013). Additionally, the different digital platforms and technologies serve a rather active role

in learning during this pandemic (Al-Emran et al., 2016; Arsyad, 2014; Pratiwinindya et al., 2021).

The problem is that it takes a long time for teachers to use class action to teach pupils how to complete a project. Most students will need to try out the concept of using Youtube vlogs as a learning medium on their own. These circumstances do not permit continuation of the research (Lehmann, 2021), which implies the significance of life job skills, learning and innovation skills, and information, media, and technology competence in enhancing the efficacy and efficiency of education in the twenty-first century (Sanjaya, 2012; Wardoyo et al., 2021).

In line with the goals of the researchers who took the view of the previous study that in general, a person plays to seek enjoyment and relieves stress, and also with the requirement for students to adapt 21st-century skills into learning. In other words, they have a greater incentive to continue their education. This may happen if people switched from learning online in ways that they found tedious (lectures and discussions) to learning online via YouTube vlogs, which introduce a fresh perspective on the subject matter. Also, it is intended that students would get fresh insights and experiences into the business world through the selection of business learning subjects that call for them to communicate directly with business practitioners. Incorporating a review component based on the amount of likes and views on a specific score range on YouTube is a great way to encourage students' innovation and healthy competition. This concept of competitive spirit is supported by earlier research, which provides an explanation for why college students are often ranked as teratas (Landers et al., 2017).

According to this research, using YouTube vlogs as part of project-based learning significantly improved learning outcomes for the typical student. This agrees with the preliminary research showing that project and game-based learning have beneficial effects on student knowledge retention (Arini et al., 2020; Ergül & Kargın, 2013; Roberts, 2013; Vaino et al., 2015; Woof et al., 2021; Yew & Goh, 2016) and encouraging more research into the positive benefits of testing on online education.

5. CONCLUSION

Increases in what can be learned are another positive side effect of technology's development. In today's increasingly complex world, it's crucial that teachers adapt to students' needs by using innovative strategies like problem-based learning (PBL). PjBL is viewed as a progressive and flexible approach to education that can be tailored to meet the needs of the modern world. Through its utilization of video blogging (vlog) and the

expansion of information and communications technology (ICT), PjBL offers substantial aid to the current instructional framework. The discrepancy in the test subjects' learning outcomes between the experimental and control groups allows for this inference to be made. The results of the post-test statistical analysis show that the experimental group outperformed the control group by a large margin. Therefore, it is reasonable to infer that the PjBL approach to vlogging does influence students' performance in the classroom.

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