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Project Based Learning on Learning Model Vocal Technique Study: Digitalization-Based Learning Outcome Analysis

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Abstract:

The Project Based Learning (PjBL) model emphasizes on making projects from learning, teachers facilitate students to create innovative projects in the classroom. Therefore, the PjBL model is very important to apply to vocal technique courses in order to achieve learning outcomes, as well as outcomes. Since the pandemic, the challenges of practice-based learning have been very high due to limited platforms and other things for online learning. However, innovation is needed in the learning process so that learning outcomes remain optimal, as well as student motivation remains high. This study aims to increase creativity and skills in the vocal field, as well as add to the learning experience through digitalization. The research was conducted on fourth semester students of the Isi Yogyakarta Performing Arts Education Department using a one group pretest postest design. The results showed that the PjBL learning model is effective in improving the quality of skills and creativity in the field of digitalization-based vocals.

Keywords: PjBL model, vocal technique, digitization, learning outcomes

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INTRODUCTION

The demands of 21st century skills, namely collaborative, creative, critical thingking, and communicative, must also be possessed by children in facing the 21st era. This is related to the principle of project-based learning in supporting early childhood development. In the project model, children will convey the results of their activities, which is one of the skills needed in the 21st century. The Project Based Learning (PjBL) model emphasizes on creating projects from learning, teachers facilitate students to create innovative projects in the classroom. The paradigm of PjBL is student-centered and self-directed learning, directed to solve complex problems by

investigating and understanding them, focused on learners (focused on authentic skills), carried out in a work team (collaborative), and facilitated by educators (with facilitators) (Kusnawan, 2021). PjBL gives freedom to learners to plan learning activities and ultimately produce the presented product.

The project-based learning model assists students in learning, namely (1) solid and meaningful knowledge and skills (meaningfull-use) built through authentic tasks and work; (2) expand knowledge through the authenticity of curricular activities that are covered by the process of learning activities doing openended planning (designing) or investigations, with results or answers that are not predetermined by a particular perspective; and (3) building knowledge through real-world experiences and interpersonal cognitive negotiations that take place within an atmosphere of collaborative work(Yulianto, Fatchan and Astina, 2017). The project-based learning model has the advantage of its characteristics, namely helping students design a process to determine an outcome, training students to be responsible in managing information carried out on a project and finally students who produce a real product of student results themselves which is then presented in classThe project-based learning model has the advantage of its characteristics, namely helping students design a process to determine an outcome, training students to be responsible in managing information carried out on a project and finally students who produce a real product of student results themselves which is then presented in class (Lestari, Permanasari and Fujiawati, 2017).

Therefore PjBL is a student-centered learning model to build and apply concepts from the resulting projects by exploring and solving problems in the real world independently. The learning of vocal techniques contains the objective of achieving singing skills individually and in groups. In the learning process, students are expected to be able to make arrangements in the form of choirs (SATB), and produce a work that is published in the form of a video. The fact that in competition activities at this time related to vocal techniques requires competence in the process of digital sound production, for example choir competitions, group vocals, or solo singing produced digitally, through the process of recording, editing, and mastering. Therefore, the concept of a project-based learning model provides an opportunity for students to gain this experience as a project.

However, the concept of the project is also inseparable from the quality of learning vocal techniques. Some vocal techniques are learned with Dalcroze's Eurhythmic approach to emphasize musical sensitivities namely phrasering, pitch, and dynamics. Singing whole sentences is called phrasering, learning to pronounce letters and then connecting syllables or sentences (Andriani and Winarko, 2021). From this opinion, it can be concluded that phrasering is a good and correct beheading of sentences when singing songs. Dynamics is a sign that expresses the level of volume of the sound, changes in the loudness or softness of the sound (Andriani and Winarko, 2021). The terms of the sign of dynamics are as follows, among which are fortissimo (very hard), forte (hard), mezzoforte (rather hard), piano (soft), pianistsimo (soft as hell), crescendo (getting harder), decrescendo (getting softer). Research in 2017 by Aris Yulianto et al with the title "Application of Project Based Learning Model Based Lesson Study to Increase Student Learning Activity" explained that the increase in student activity occurs because in learning by applying the Project Based Learning model based on Lesson Study students are active to work on LKS, compile and complete project tasks with their groups. This shows that the Project Based Learning learning model can increase learning activity (Yulianto, Fatchan and Astina, 2017).

Second, research by Dwi Junianti Lestari et al in 2017 with the title "Application of Project Based Learning Models to Increase Student Creativity in Dance Composition Courses". This research shows an increase in student creativity in dance composition courses, which can be seen from the process and results displayed at the time of staging. In addition, the application of PjBL can stimulate the ability to convey ideas and ideas in the form of dance products (Lestari, Permanasari and Fujiawati, 2017). Third, research by Fuja Siti Fujiawati et al in 2020 with the title "Learning Cultural Arts with a Project Based Learning (Pjbl) Model through Lesson Study". This research shows that using the Project based learning (PJBL) learning model through lesson study can help teachers to develop a set of learning and can provide better learning. With a project-based learning model, it is proven to increase student appreciation and creativity in cultural arts subjects (Fujiawati, Permana and Mustika, 2020). The results of the three previous studies benefit the implementation of a project-based learning model for student literacy, student appreciation, and student creativity. In addition, the project-based learning model can also still be developed again with better management, according to the needs of students. However, research is needed to find out how effective the application of the project-based learning model with a special approach to music learning on the learning outcomes of vocal techniques. Given the large number of competitions in the vocal field, in addition to making achievements as achievements, they also experience in competing and producing works in the vocal field. Therefore, the results of this study can be used as a reference in carrying out vocal learning in order to achieve outputs and outcomes in learning.

METHODS

This study uses a quantitative approach with a true experiment design experiment method with pretest and posttest control group design. Experimental method can be interpreted as a research method used to look for the influence of certain treatments on others with controlled conditions (Sugiyono, 2018). In this design both groups were given a pretest with the same test. Then the experimental group was given special treatment, namely the project-based learning model, while the control group did not use the model. After being treated, both groups were tested with the same test as the final test (posttest). The results of both tests will be compared in each group.

The population in this study was all active students of the Isi Yogyakarta Performing Arts Education Department with a total of 171 students. The selection of samples used a purposive random sampling technique with the criteria of taking the Vocal Engineering course in the 2021/2022 academic year with a total of 42 students. After obtaining samples, divided into experimental groups and randomly selected control groups, and then given a pretest to find out the initial state, is there any difference between the experimental group and the control group. Hypothesis zero (H0) in this study is that there is no average difference between pretest and posttest results, which means that there is no influence on the use of project-based learning models. Meanwhile, the alternative hypothesis (Ha) is that there is an average difference between pretest and posttest results which means that there is an influence on the use of project-based learning models.

This research instrument is a skill test (performance test) used during pretest and posttest to measure singing ability consisting of aspects of phrasering, pitch, and dynamics. The assessment of this skill test uses a numerical scale.

The test results during the pretest and posttest of the two groups were analyzed through the Paired Sample T-test which was processed with the help of the SPSS 28 program to find out whether there was an average difference between the two groups in pairs. The prerequisite test used for this analysis is the normality test, to find out if the data is normally distributed. For samples <50, the normality test uses the Shapiro Wilk test with the help of the SPSS 28 program.

Normality test decision making is that if the Sig value of each group is >0.05 then the data is distributed normally.

Table 1. Normality test results

	Shapiro-Wilk		
	Statistic	df	Sig.
Control	0,952	30	0,193
Experiment	0,954	30	0,216

From the sig values in table 1 shows that the data from both groups are normally distributed. After the normal data, the Paired Sample T-test is continued with the analysis decision making guidelines using the Sig value (2-tailed), if the Sig value < 0.05 then Ha is accepted. In addition to the Sig value, decision making can use a comparison of the calculated t value with the table t, if t counts > t table then Ha is accepted.

RESULTS AND DISCUSSION

Results of Statistical Descriptive Analysis Descriptive analysis was used to see the presence or absence and how much improvement the rhythmic reading ability was in both the control group and experiments. The results of a descriptive statistical analysis of the pretest scores given to students in summary can be seen in table 2.

Table 2. Data Description

Deskripsi	Kelompok Eksperimen		Kelompok Kontrol	
	Pre	*Post*	*Pre*	*Post*
Rata-rata	41,62	96,35	40,29	73,28
Jumlah siswa	21	21	21	21

Source: primary data (processed)

Based on table 2, it is known that in both the experimental group and the test group, there was an increase. In the control group, the average score increased by 32.99%, while in the experimental group it was 54.73%. Therefore, it can be said that the average increase was achieved more by the experimental group than the control group. Although both groups experienced an increase, the experimental group using PjBl experienced a more significant increase. If the rhythmic reading ability score of musical notation is grouped in four categories, then in the control group a frequency and percentage distribution is obtained as in the following table 3.

Tabel 3. Kriteria Skor

Value	Criteria

76-100	Best
52-75	Better
26-50	Enough
0-25	Not enough

Source: Primary data (processed)

Based on table 3, it is known that the learning outcomes in the control group increased from sufficient to good. Whereas in the experimental group it increased from enough to excellent.

Hypothesis Test Analysis Results

As stated in the introductory chapter, the goal achieved in this study is to determine the effectiveness of using the PjBl model in learning vocal techniques on the achievement of digitalization-based learning outcomes. The Independent Sample T-test will show significant differences in learning outcomes between students taught using the PjBl model and learners taught without a project. The details of the results of the hypothesis analysis test are in table 4.

Table 4. Hypothesis Analysis Test Results

	t-test for Equality of Means					
Nilai tes	F	t	df	Sig. (2-tailed)	Mean Diff	Std. Error Difference
Equal variances assumed	.963	-1.926	32	.000	-31.4706	5.2228
		-1.926	31.811	.000	-31.4706	5.2228

Source: Primary data (processed)

Based on the results of data analysis using the Independent Sample T-test, where the PjBl model as an independent variable 1 (X1), and the PBL model as an independent variable 2 (X2), and learning outcomes as a dependent variable (Y). The results of the analysis showed a Sig (2-tailed) value of 0.000 and a calculated t value of 1.926, so there were differences in learning outcomes with the PBL model and the PjBl model, which means Ha (Alternative hypothesis) was accepted. In other words, the PjBl model is effectively applied in the learning of vocal techniques to improve digital-based learning outcomes.

Prior to conducting the study, samples have been given material on vocal techniques such as breathing, phrasering, articulation, and intonation. After the material is given, the sample is given a pretest to measure learning outcomes before being treated, with sufficient cognitive debriefing of the material. After the pretest, the sample was treated 8 (delapa) times with the PjBl model in the experimental class, while the control class used the PBL model. In the first treatment, the sample is explained about the concept of the project to be worked on, namely a digitally processed choir, both audio and video. This aims at learning outcomes, where there are a lot of virtual competitions, so students need to be equipped with experience in processing a

song into a performance video. As for the songs that are done freely, it is determined by each group. As well as the arrangement, students are required to make new arrangements, in the sense that they cannot use pre-existing arrangements.

At the second meeting, each group presented the results of the arrangement using the software used. In this case, students are freed to choose the software used. After making a presentation and getting a revision, students are required to complete according to the revision given by the lecturer. At the third to sixth meetings, each group began to practice per section of the SATB according to the arrangements that had been made. Students also prepare a timeline of targets that must be achieved in each week. At the sixth meeting, each group must obtain approval from the supervisor to proceed to the process of making digital-based projects.

In this case, of course, adequate facilities are needed. Therefore, this vocal engineering course collaborates with recording studios resulting from the isi yogyakarta entrepreneurial student program, as well as studios resulting from the 2022 student creativity program for entrepreneurship. So, after the meeting the six students were given 2 weeks to carry out the process of audio recording, audio editing, and audio finishing. After that, proceed with the creation of a simple video. The results of this project are uploaded on the youtube of each group. This learning certainly increases students' enthusiasm to take vocal engineering lectures, learn vocal techniques, learn how to process digital-based sounds, learn how to make video clips, and also increase student interest in participating in competitions in the vocal field. In addition to improving skills related to the vocal technique itself, the pjbl model provides an opportunity to improve other skills.

CONCLUSION

The Pjbl model provides an opportunity for learners to hone their creativity both in terms of choral format arrangement ability, improvisation in single singing. In addition, it provides an opportunity for students to be able to learn the technology used in audio recording. Pjbl with a eurtimika dalcroze approach can maintain the quality of vocal learning outcomes, especially in the elements of pitch, phrasering, and dynamics even though it is carried out in a student center. For subsequent researchers, they can apply the PjBL model with the euritmika dalcroze approach to other music learning, or it can be applied with other music learning approaches such as Carlf Orff, Kodaly, and so on.

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