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The effectiveness of violin textbooks at the primary level in the music study program

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ABSTRACT

The research conducted aims to determine the effectiveness of the main level violin textbook that has been made in terms of students' violin playing skills during pretest and posttest at the Music Study Program, Universitas Negeri Surabaya. The use of quantitative methods with the type of quasi experiment and one-group pretest-posttest design in this study. The use of inferential analysis in the form of a normality test with the Shapiro-wilk method with a sig value> 0.05 of 0.889 and 0.906 so that the data is normally distributed (symmetrical). Hypothesis testing using the paired sample t test found that the average test of violin playing skills during the pretest was 76.09 and the posttest was 78.82, an increase of 2.73. Other results are also shown by t count (t0) which is -2.725 and t table which is 2.228, because t count is negative then two tailed hypothesis testing is done with left side testing with the results that H0 is rejected and H1 is accepted. The mean difference figure of -2.727 shows the average difference in violin playing skills tests on pretest and posttest activities. The significance results of the pretest and posttest activities show that the correlation between the two conditions is unidirectional, strong, and significant. These results are shown in the significance value which is smaller than 0.05 (0.000 < 0.05). Therefore, the main level violin textbook made is said to be effective in terms of the three results obtained.

Keywords: textbook, violin, skills

Efektivitas buku teks biola di tingkat dasar pada program studi musik

Abstrak

Penelitian yang dilakukan bertujuan untuk mengetahui keefektifan buku ajar biola tingkat dasar yang telah dibuat ditinjau dari kemampuan bermain biola mahasiswa pada saat pretest dan posttest di Program Studi Seni Musik Universitas Negeri Surabaya. Penggunaan metode kuantitatif dengan jenis quasi experiment dan desain one-group pretest-posttest design dalam penelitian ini. Penggunaan analisis inferensial berupa uji normalitas dengan metode Shapiro-wilk dengan nilai sig > 0,05 sebesar 0,889 dan 0,906 sehingga data berdistribusi normal (simetris). Pengujian hipotesis menggunakan uji paired sample t test diperoleh hasil bahwa rata-rata tes keterampilan bermain biola saat pretest sebesar 76,09 dan posttest sebesar 78,82 atau mengalami peningkatan sebesar 2,73. Hasil lain juga ditunjukkan dengan t hitung (t0) yaitu -2,725 dan t tabel yaitu 2,228, karena t hitung bernilai negatif maka dilakukan uji hipotesis dua pihak (two tailed) dengan uji pihak kiri dengan hasil H0 ditolak dan H1 diterima. Angka mean difference sebesar -2,727 menunjukkan perbedaan rata-rata tes keterampilan bermain biola pada kegiatan pretest dan posttest. Hasil signifikansi dari kegiatan pretest dan posttest menunjukkan bahwa korelasi antara kedua kondisi tersebut searah, kuat, dan signifikan. Hasil tersebut ditunjukkan pada nilai signifikansi yang lebih kecil dari 0.05 (0.000 < 0.05). Oleh karena itu, buku ajar biola tingkat dasar yang dibuat dikatakan efektif ditinjau dari ketiga hasil yang diperoleh.

Kata kunci: buku teks, biola, keterampilan

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INTRODUCTION

Music is an important part of human survival. This is reinforced by Plato's opinion in (Djohan Salim, 2005)) which reveals that “In education, music occupies the highest position because there is no single discipline that can penetrate the soul and accompany it with tiered abilities beyond rhythm and

harmony". In ancient Greek, Plato and Aristot- le articulated the importance of music and gymnasium within their music educati- on philosophy (Sinn et al., 2022). Art education has a role in developing students' potential. Through art, students can improve their ability to imagine, express, and process feelings (Walidaini et al., 2022). Music education is expected to provide freedom and opportunities for students to develop their personality (Prabawa et.al., 2021). Music is one of the sciences that focuses on processing sensitivity through musical activities. Musical activity can be in the form of human ability to feel harmony, rhythm, melody, tempo, and so on. Musical activities can be seen at various levels of education, including higher education.

Musical activities at the university level can be seen in the Music Study Program at Surabaya State University, which offers a variety of musical expertise in its curriculum structure. Educational pathways can be categorized into three, namely formal, non-formal, and informal education (Satiawan et al., n.d.). The music study program is a formal education under the auspices of the Faculty of Language and Arts, Surabaya State University which was established in 2015 with 10 lecturers.

This study program has graduated many students until now. Students of this study program also won many awards and championship achievements at the local, national and international levels. The interest of applicants for this study program also increases every year. This study program focuses on basic classical music although there are also courses that are regional and industrial music. The curriculum currently used by this study program is the independent learning curriculum. The curriculum has been implemented since 2019 which includes a variety of practical courses as well as theoretical courses.

Some of the practical courses in this study program are ethnic archipelago music, marching band, choir/ ensemble/orchestra, and principal instrument. In the principal instrument practice course, there are instrument specializations in the form of string, wind, vocal, piano, guitar, and percussion instruments. The classification of string instrument specializations is also very diverse, consisting of soprano violin (violin), alto violin (viola), cello, and contra bass.

There are various levels of string instrument specialization in the independent study curriculum structure. The levels of courses in string instruments are introductory basic instrument practice, sensory level basic instruments, young level basic instruments, intermediate level basic instruments, and main level basic instruments. The practical courses are held once a week face-to-face with a load of between 3-4 credits and a time duration of 150-200 minutes.

The main level string instrument (violin) course is held in semester 5 which is the last level of students in taking string instrument practice courses. Based on preliminary studies that have been carried out through observation or observation, the abilities possessed between one student and another are very different in the process of implementing this main level course. The difference can be seen from the students' ability to play scales, etude, and repertoire. In other words, students play scales, etude, and repertoire with different levels. The inequality is shown in the students' performance in the recital held as the final performance or final exam in this course. Therefore, each student who performed in the recital showed different abilities in performing the repertoire.

In the preliminary study through observation, it was found that the scales, etude, and song repertoire given by the lecturer to students were not effective enough to improve their abilities with rapid progress. In addition, the booming conditions of the covid-19 pandemic in 2020 to 2022 have an impact on the improvement of student abilities which are not significantly visible at this time because the situation is already endemic. This is due to the nature of this practical course which is more effective when conducted face-to-face, but during a pandemic it is carried out online. Meanwhile, the idea of the Ministry of Education, Culture, Research and Technology that requires universities to implement an independent learning curriculum has an impact on students who are required to learn quickly and effectively.

The obstacles and problems that exist in the process of learning the main string instrument (violin) at the main level cause a great influence on the development of student abilities. As is known, that learning achievement is reviewed in cognitive, affective, and psychomotor aspects. This is reinforced by the opinion (Bloom, 1957), that learning outcomes and learning achievements are grouped into three domains, namely cognitive, affective, and psychomotor. Furthermore, (Cangelosi, 1995), that behavioral constructs are conventionally classified into 3 domains, namely affective, cognitive, and psychomotor.

In the research conducted, the author focused on student learning achievement in the psychomotor domain. The psychomotor domain was specified, namely violin playing skills. Violin playing skills relate to violin playing using patterns or techniques. This is reinforced by the opinion of Allard and Starkes in (Mornell, 2012), that movement skill techniques, "patterns of movement" are a skill. Furthermore, (Rahyubi, 2014) also reveals that motor skills are a person's ability to perform a movement task to the maximum according to their abilities.

The ability to play violin is one of the psychomotor aspects achieved in music learning. This expression is reinforced by the opinion of Peters and Miller in (Durrant & Welch, 1995), that the goals of music learning include psychomotor aspects. Furthermore, Peters and Miller (Durrant & Welch, 1995) suggest that the psychomotor aspects in question are in the form of increased coordination and skills in the selection of musical instruments, increased ability to play music, and increased awareness to respond, coordinate, and participate in an ensemble (group) game. Music playing skills have an influence with factors in musical activities. This expression is reinforced by the opinion (Mornell, 2012), that to achieve a high level of musicianship, one needs many hours of practicing and honing their skills.

Thus, a way is needed so that students' abilities can be equal or there is no imbalance. The violin learning method is one of the important elements in achieving a person's ability to master playing the violin properly and correctly. By mastering good and correct violin playing techniques, a player will be able to freely and easily carry out his duties in bringing musical compositions to life through his artistic spirit (Fu'adi et.al., 2023). From the background that has been stated, the author makes an alternative in the form of a main level violin textbook. This study aims to determine the effectiveness of the main level teaching book in the form of high-level violin material that has been made by the author in terms of students' violin playing skills at pretest (before treatment) and students' violin playing skills at posttest (after treatment).

METHOD

The use of quantitative methods with the type of quasi experiment used in this study. Experiment (Nahartyo, 2013) is a research design to investigate a phenomenon by engineering circumstances or conditions through certain procedures and then observing the results of the engineering and interpreting them. Research design (Iqbal, 2002) is the overall process required in planning and conducting research, so that the questions can be answered. The experimental design used was a one-group pretest-posttest design.

The population in this study were all students who took the main level instrument course with violin specialization, totaling 11 students. The sampling technique used saturated sampling. The saturated sampling technique was used in this study through samples taken from all members of the population.

Data collection used test, observation, and documentation methods. Observation was carried out by directly observing the pretest and posttest activities. Documentation is used to support data from observation activities, treatment activities for applying the main level violin textbook that has been made, and pretest and posttest activities for violin playing skills. The pretest and posttest activities of violin playing skills are carried out by looking at the score or value of violin playing skills before and after applying this main level teaching book. The instrument used in data collection, namely the violin playing skills test.

Data analysis using paired sample t test. The requirements before the paired sample t test is used include interval or ratio data and data must be normally distributed. Inferential analysis uses a prerequisite test in the form of a normality test with the Shapiro-wilk method. Furthermore, hypothesis testing is carried out through a paired sample t test.

FINDINGS AND DISCUSSION

Findings

Inferential analysis is used to test the research hypothesis, namely violin playing skills. The description of the stages of inferential analysis is as follows:

Prerequisite Test Analysis

The analysis prerequisite test is used to determine whether the data is normally distributed. The analysis prerequisite test is a prerequisite test used before proceeding to the hypothesis testing stage,

namely the paired sample t test. The prerequisite test before the paired sample t test is used is the normality test.

The use of the normality test is intended to determine whether the data has a normally distributed distribution. The use of the normality test is intended in pretest and posttest activities that the population is normally distributed or not. This is in accordance with the opinion (Arikunto, 2010), what is meant by the data normality test is a test of the normality of the distribution of data to be analyzed.

The normality test used in this study is the Shapiro-wilk method. The decision criteria (Santoso, 2015) if the sig value> 0.05, then the data is normally distributed (symmetrical) and vice versa if the sig value <0.05, then the data is normally distributed (symmetrical). This test is assisted by SPSS software.

The results of the normality test during the pretest and posttest are shown in Figure 1.

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Sebelum Buku Ajar Tingkat Utama diimplementasikan	.133	11	.200*	.970	11	.889
Sesudah Buku Ajar Tingkat Utama diimplementasikan	.183	11	.200*	.972	11	.906

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Figure 1. Normality Test Results

Based on Figure 1, the sig values are 0.889 and 0.906. Based on the results of the pretest and posttest activities, it is shown that the sig value> 0.05. Therefore, the data or population has been normally distributed (symmetrical) during the pretest and posttest.

Paired Sample t Test

The normality test obtained shows that the data distribution is normal. Furthermore, hypothesis testing is carried out, namely the t test or difference test. The use of the t-test is intended to find out significant differences in terms of the average results of the pretest and posttest activities. This t test calculation uses a paired sample t test and is calculated using the help of the SPSS software program. The decision criteria in the paired sample t test consist of 3 aspects (Sarwono, 2015) is an increase in the average (mean) at the time of the pretest and posttest, the calculated t value> t table value, and has a strong and significant correlation (<0.05). The results of the paired sample t test covering these three aspects are described as follows.

Interpretation of the output of the average difference in violin playing skill tests on pretest and posttest activities

The analysis stage of the first output interpretation is to find out how the results of the average difference in violin playing skills tests before (pretest) and after (posttest) from the application of the main level textbook treatment made. The results of the average difference in violin playing skills tests during the pretest and posttest are in Figure 2.

T-Test

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Sebelum Buku Ajar Tingkat Utama diimplementasikan	76.09	11	9.782	2.949
	Sesudah Buku Ajar Tingkat Utama diimplementasikan	78.82	11	10.028	3.024

Figure 2. Average Difference Results of Violin Playing Skills Tests on Pretest and Posttest

Based on Figure 2, it is known that the average result of the violin playing skills test before the application of the main level textbook treatment made was 76.09. The average result of the violin playing skills test after the application of the main level textbook treatment made was 78.82. Based on the results obtained, the average violin playing skills test before (pretest) and after (posttest) from the application of the main level textbook treatment made increased by 2.73.

Interpretation of the output of the significance results of the average difference in violin playing skill tests on pretest and posttest activities

The analysis stage of the second output interpretation is to find out whether the average difference in violin playing skills tests before (pretest) and after (posttest) from the application of the main level textbook treatment made is significant. Before entering the analysis stage, there is a hypothesis formulation. The H0 (null hypothesis) is the average violin playing skills test before (pretest) and after (posttest) from the application of the main level textbook treatment made the same, while H1 (alternative hypothesis) is the average violin playing skills test before (pretest) and after (posttest) from the application of the main level textbook treatment made not the same. These results are shown in Figure 3.

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	Sebelum Buku Ajar Tingkat Utama diimplementasikan - Sesudah Buku Ajar Tingkat Utama diimplementasikan	-2.727	3.319	1.001	-4.957	-.497	-2.725	10	.021

Gambar 3. Hasil Signifikansi dari Perbedaan Rata-Rata Tes Keterampilan Bermain Biola Pada Pretest dan Posttest

Based on Figure 3, it is known that the results are indicated by t count (t0) which is -2.725 and t table which is 2.228, because t count is negative, two tailed hypothesis testing is carried out with left-hand testing. Because t count (t0) falls in the rejection area, H0 is rejected and H1 is accepted. In other words, the means of the violin playing skills test in the pretest and posttest activities are different. The mean difference figure of -2.727 shows the difference in the average violin playing skills test in the pretest activity of 76.09 and the posttest of 78.82. In other words, the difference in the average violin playing skills test on pretest and posttest activities is considered significant.

Output interpretation of the significance results of the correlation between pretest and posttest activities

The analysis stage of the third output interpretation is to determine whether the conditions before (pretest) and after (posttest) of the application of the main level textbook treatment made have a significant correlation. The results are shown in Figure 4.

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Sebelum Buku Ajar Tingkat Utama diimplementasikan & Sesudah Buku Ajar Tingkat Utama diimplementasikan	11	.944	.000

Figure 4. Significance results of the correlation between pretest and posttest activities

Based on Figure 4, it can be seen that the conditions before (pretest) and after (posttest) from the application of the main level textbook treatment made are correlated at 0.944. This means that the correlation between the two conditions is unidirectional (the value obtained is positive), strong, and significant. These results are shown in the significance value which is smaller than 0.05 (0.000 < 0.05).

Based on the results of the three output interpretations, it is known that the main level textbook treatment created has an effect on the average violin playing skill test. In other words, the pretest results and posttest results are different or not the same. Judging from the results of the data analysis that has been obtained, that there is a significant difference in violin playing skills tests in students during the pretest (before the main level textbook treatment is applied) and during the posttest (after the main level textbook treatment is applied) in the Music Study Program, Universitas Negeri Surabaya. Thus, the use of the main level violin textbook made by the author on students who take the main level violin specialization can be said to be effective.

Discussion

As has been described, the research conducted aims to determine the effectiveness of the main level textbook that has been made by the author in terms of students' violin playing skills during the pretest (before the main level textbook treatment is applied) and students' violin playing skills during the posttest (after the main level textbook treatment is applied).

Based on the results of data analysis, it is known that students' violin playing skills during the pretest (before the main level coursebook treatment is applied) and students' violin playing skills during the posttest (after the main level coursebook treatment is applied) increased. This is shown in the average results of the violin playing skills test before the application of the main level textbook treatment made by 76.09, while the average results of the violin playing skills test after the application of the main level textbook treatment made by 78.82. These results indicate that the average average violin playing skills test before (pretest) and after (posttest) from the application of the main level textbook treatment made increased by 2.73.

As for the significance results of the average difference in violin playing skills tests on pretest and posttest activities, it is known that these results are indicated by t count (t0) which is -2.725 and t table which is 2.228, because t count is negative, two-sided hypothesis testing is carried out (two tailed) with left-sided testing. Because t count (t0) falls in the rejection area, H0 is rejected and H1 is accepted. In other words, the means of the violin playing skills test in the pretest and posttest activities are different. The mean difference figure of -2.727 shows the difference in the average violin playing skills test in the pretest activity of 76.09 and the posttest of 78.82. In other words, the difference in the average violin playing skills test on pretest and posttest activities is considered significant.

Meanwhile, the before (pretest) and after (posttest) conditions of the application of the main level textbook treatment created correlated by 0.944. This means that the correlation between the two conditions is unidirectional (the value obtained is positive), strong, and significant. These results are shown in the significance value which is smaller than 0.05 (0.000 < 0.05).

Based on these three results, it shows that violin playing skills are a psychomotor domain that affects the effectiveness of the primary level violin textbook. As stated by (David, 1982), that the psychomotor domain is very important in several fields of education including music and art, which require motor skills, where motor skills are a necessary part of the learning process.

CONCLUSION

Before entering the paired sample t test, there is a pre-requisite analysis test carried out, namely the normality test using Shapiro-wilk. The use of inferential analysis in the form of a normality test with the Shapiro-wilk method with a sig value> 0.05 of 0.889 and 0.906, so that the data is normally distributed (symmetrical).

The results of the research obtained using the paired sample t test, it is known that the average average violin playing skills test before (pretest) amounted to 76.09 and after (posttest) amounted to 78.82 from the application of the main level textbook treatment made increased by 2.73. The difference in the average violin playing skills test in pretest and posttest activities is considered significant. These results are indicated by t count (t0) which is -2.725 and t table which is 2.228, because t count is negative, two tailed hypothesis testing is done with left side testing. Because t count (t0) falls in the rejection area, H0 is rejected and H1 is accepted. In other words, the means of the violin playing skills test in the pretest and posttest activities are different. The mean difference figure of -2.727 shows the difference in the average violin playing skills test in the pretest activity of 76.09 and the posttest of 78.82.

The significance results of the correlation between pretest and posttest activities show that the correlation between the two conditions is unidirectional (the value obtained is positive), strong, and significant. These results are shown in the significance value which is smaller than 0.05 (0.000 < 0.05). Therefore, the main level violin textbook made by the author is said to be effective in terms of the three results obtained.

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