QUASI-EXPERIMENTAL VAK LEARNING MODEL IN GRAPHIC DESIGN SUBJECTS IN CLASS X TKJ SMK NEGERI 1 TEGALBULEUD

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Abstract

This study aims to determine whether there are differences in learning outcomes between students who were treated with the VAK (Visual, Auditory, Kinesthetic) learning model and students who were treated with the demonstration learning model in graphic design subjects. This type of research uses a quasi-experimental. This research was conducted at SMK Negeri 1 Tegalbuleud. The sample in this study were all 32 students of class X TKJ and were divided into two groups, namely the experimental group (16 students) and the control group (16 students). The sampling technique used was purposive sampling. The research instrument uses a test instrument with the type of knowledge test and is presented in the form of multiple choice which has been tested for validity and reliability. Data collection techniques using pretest and posttest. Data analysis technique using t test. The results showed that there were differences in learning outcomes between the experimental group that applied the VAK learning model (Visual, Auditory, Kinesthetic) and the control group that applied the demonstration learning model. The average value of the pretest in the experimental class is 46.44 and the average posttest in the experimental class is 89.13. While the average value of the pretest in the control class is 46.44, and the average value of the posttest in the control class is 82.47. The results of the Independent-Samples T Test show that the value of Sig. 2-tailed = 0.023 < 0.05. This shows that Ho is rejected and Ha is accepted.

Keywords: Basic Graphic Design, Quasi-Experimental, VAK models, Visual Auditory Kinesthetic.

INTRODUCTION

The basis of graphic design is a subject found in class 10th Vocational High School (SMK) especially in multimedia skill competencies, but in general these subjects are also found in cognate skill competencies, such as: Engineering such as RPL (Software Engineering) and TKJ (Software Engineering). Computer and Network Engineering). Basic Graphic Design is a subject that contains knowledge about the basics of an image or graphic design, such as: Lines, Illustrations, Typography, Colors, Dark Lights, Textures, and Space. In the learning process, the basis of graphic design presents many elements of images and graphics. The purpose of the basic graphic design subjects is to increase students' knowledge of the basics of an image or graphic design, as well as increase students' skills in creating and editing image or graphic designs. The achievement of learning objectives certainly cannot be separated from the role of the teacher who acts as a transmitter of information, as well as the use of media as a source of learning (Riyanda & Suana, 2019). Because in essence the success of a student is the success of a teacher as well, and vice versa. But behind it all, teachers have their own scourge when acting as a transmitter of information, one of which is the selection of the right learning model.

The learning model is one of the components that influence the realization of learning objectives (Priadi & Riyanda, 2021). Student learning outcomes will depend on the learning model used by the teacher. However, there are still many teachers in Indonesia who sometimes do not choose the right learning model. This is of course caused by several factors such as school facilities and infrastructure that do not support it, or even from the teachers themselves who do not know much about various kinds of learning models.

Based on the results of interviews that researchers conducted with teachers of basic graphic design subjects at SMK Negeri 1 Tegalbuleud, he stated that the teaching and learning process carried out in basic graphic design subjects used a structured task model, namely the delivery of material in the form of pdf-based learning modules and followed by questions at the end of the lesson. The subject teacher also said that there were still students whose scores were below the KKM (Minimum Completeness Criteria). This is evidenced by the daily value data of students in basic graphic design subjects. Based on these data, the researcher knew that in class 10th TKJ, which amounted to 32 people, there were 6 students who experienced remedial, and 6 students who completed but conditionally. Students who experience remedial are students whose scores are below the KKM. While students who complete but conditional are students who do not do the task. From there, the researcher asked whether the subject teachers knew and had applied the VAK (visual auditory

kinesthetic) learning model? And he said that, "Don't know, and never".

According to Salsabila (2018), the VAK learning model is a learning model that optimizes the three learning styles, namely visual, auditory, and kinesthetic which makes students feel comfortable. Teachers can combine the three learning styles so that learning will be more effective and optimal because it utilizes the potential of students by training and developing it. Previous research that the researcher used as a reference in this study included: Research conducted by Kurniati (2018) with the title, "Implementation of the Visual Auditory Kinesthetic Learning Model in Science Learning to Improve Student Learning Outcomes." student learning outcomes in science subjects.

Meanwhile, the research conducted by Ferawati (2021) with the title, "Use of Visualization Auditory Kinesthetic (VAK) Learning Model to Improve Student Learning Outcomes in Thematic Learning", obtained the results that: Based on student learning outcomes using the Visualization Auditory Kinaesthetic model at MIN 25 Aceh Besar in the first cycle shows that the average completeness is 28% which can be categorized as failure. In the second cycle the percentage of completeness is 64%. In the third cycle the percentage of completeness is 84%. The final test shows that classical completeness is included in the complete category with a percentage of 84%.

Research conducted by Winda Rukmanal, et al (2018) in the journal International Journal of Elementary Education with the title, "Increasing activity and learning outcomes with the VAK learning model assisted by the stick figure media", the results show that the application of the VAK model with the character stick media can improve student activity and learning outcomes.

Based on the findings of the problems that have been described above, the researchers are interested in conducting quasi-experiments in class X TKJ by applying the VAK (Visual, Auditory, Kinesthetic) Learning Model in basic graphic design subjects. The class will be divided into two groups, namely the experimental group (16 students) who will get the application of the VAK learning model (Visual, Auditory, Kinesthetic) and the control group (16 students) as a comparison group from the experimental group and will apply a demonstration learning model. This was done to find out whether there were differences in learning outcomes between students who were treated with the VAK learning model and students who were given the demonstration learning model treatment. So the hypothesis in this study is: Ho = There is no difference in learning outcomes between students who are treated with the VAK (Visual, Auditory, Kinesthetic) learning model and students who are treated with the demonstration learning model. And Ha = There is a

Difference in Learning Outcomes Between Students Who Are Treated With The VAK Learning Model (Visual, Auditory, Kinesthetic) With Students Who Are Treated With The Demonstration Learning Model.

METHOD

The type of research used is Quasi-Experimental Research. The research design used is the Untreated Control Group Design model with Dependent Pretest and Posttest Samples. This model uses a pretest and posttest system. Pretest was given to the experimental group and the control group before the application of the treatment. While the posttest was given to the experimental group and the control group after the application of the treatment. So the procedures in this study are 1) Pretest, 2) Treatment, and 3) Posttest. Posttest results show the scores obtained by the two groups and how far the difference is. This research was conducted at SMK Negeri 1 Tegalbuleud. The sample in this study were all 32 students of class X TKJ and were divided into two groups, namely the experimental group (16 students) and the control group (16 students). The sampling technique used was purposive sampling. The research instrument used a test instrument with the type of knowledge test. The form of the test used is multiple choice with a total of 15 items that have passed the validity and reliability test. Data collection techniques using pretest and posttest. The data analysis technique used the Independent-Samples T Test. Data analysis was performed using SPSS 25 software.

RESULTS AND DISCUSSION

RESULT

Based on the results of research that has been carried out at SMK Negeri 1 Tegalbuleud, where the research is aimed at knowing "Is there a difference in learning outcomes between students who are treated with the VAK (Visual, Auditory, Kinesthetic) learning model and students who are given the demonstration learning model treatment?", the data obtained from the pretest and posttest results are as follows:
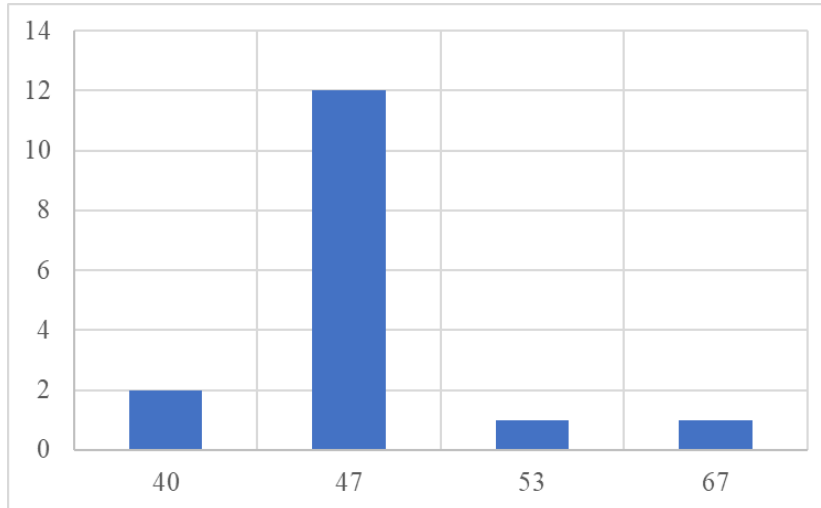
1. **Pretest Results**

The results of the pretest are the values obtained by the two groups before the implementation of the treatment, both the VAK learning model for the experimental group and the demonstration learning model for the control group. The following are the results of the pretest of the two groups:

Table 1. Experimental Group Pretest Results

Result	Description	Score
Pretest	Maximum	67

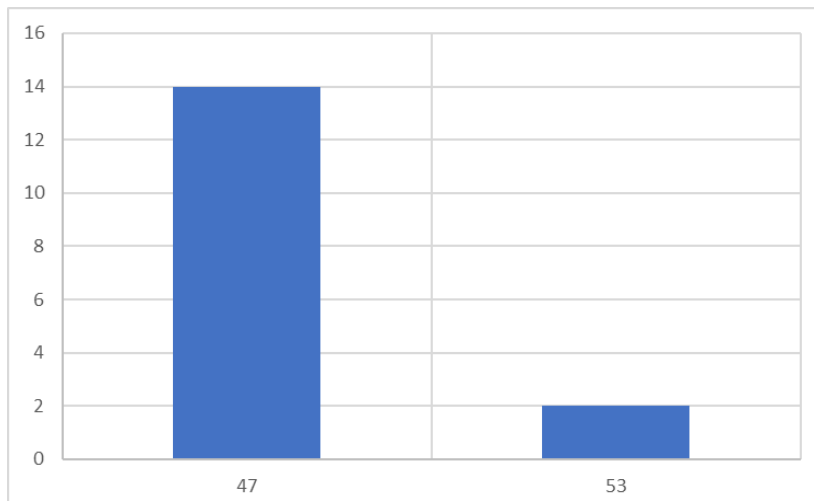|		
Minimum	40	
Mean	47.44	
Median	46.60	
Modus	47	
Std. Deviation	5.891	

Bar Chart 1. Experimental Group Pretest Results

Table 2. Control Group Pretest Results

Result	Description	Score
	Maximum	53
	Minimum	47
	Mean	47.44
Pretest	Median	46.60
	Modus	47
	Std. Deviation	2.288

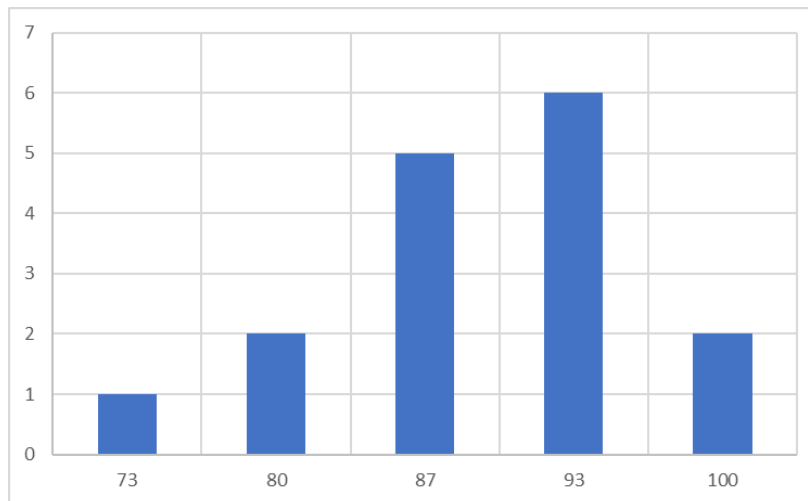**Bar Chart 2. Control Group Pretest Results**

2. Posttest Results

The posttest results are the values obtained by the two groups after the treatment is applied, namely the VAK learning model for the experimental group and the demonstration learning model for the control group. Here are the posttest results from the two groups:

Table 3. Experimental Group Posttest Results

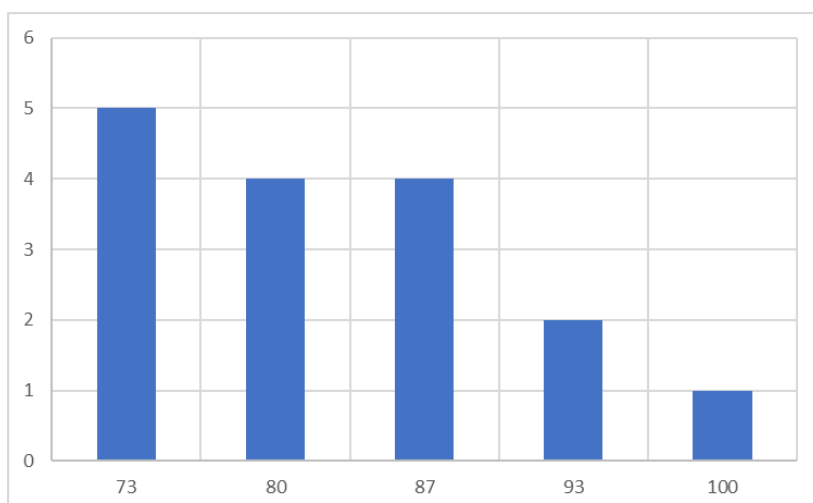| Result	Description	Nilai
Posttest	Maximum	100
	Minimum	73
	Mean	89.13
	Median	89.95
	Modus	93
	Std. Deviation	7.257

Bar Chart 3. Experimental Group Posttest Results

Table 4. Control Group Posttest Results

Result	Description	Nilai
Posttest	Maximum	100
	Minimum	73
	Mean	82.47
	Median	80.00
	Modus	73
	Std. Deviation	8.386

Bar Chart 4. Control Group Posttest Results

After obtaining posttest data from the experimental and control groups, hypothesis testing was then carried out on the data. The hypothesis test consists of 3 stages, namely normality, homogeneity, and hypothesis testing. The following are the results of the previously mentioned hypothesis testing stages:

1. **Normality Test**

Table 5. Normality Test

Result	Category	Shapiro-Wilk		
		Statistic	df	Sig.
Posttest	Experiment	0.892	16	0.060
	Control	0.916	16	0.148

Based on the SPSS output table, it is known that the significance value of Sig. The control class posttest is 0.060 and the value of Sig. Experimental Class Posttest is 0.148. The sum of both is greater than 0.05. So according to the basic principles of decision making in the Shapiro-Wilk normality test above, it can be concluded that the data are normally distributed. Thus, the normality test can be met.

2. **Homogeneity Test**

Table 6. Homogeneity Test

Result	Category	df1	df2	Sig.
Posttest	Based on Mean	1	30	0.453
	Based on Median	1	30	0.637
	Based on Median with adjusted df	1	27.944	0.637
	Based on	1	30	0.484

trimmed mean

Based on the output above, it is known that the significance value (Sig) Based on Mean is 0.453 > 0.05, so it can be concluded that the variance of the experimental class post-test group and the control class post-test group is the same or homogeneous. Thus, the homogeneity test can be fulfilled.

3. **Hypothesis Test**

Table 7. Hypothesis Test

Result	Category	t-test for Equality of Means							Confidence	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	Std. Error Diff.	Lower	Upper
Posttest	Equal variances assumed	0.557	0.453	-2.403	30	0.023	-6.662	2.773	-12.325	-1.000
	Equal variances not assumed			-2.403	29.394	0.023	-6.662	2.773	-12.330	-0.995

Based on the "Independent Samples Test" output table above, it is known that the value of Sig. (2-tailed) is 0.023 < 0.05, then Ho is rejected and Ha is accepted. So it can be concluded that there are differences in learning outcomes between students who are treated with the VAK learning model (visual, auditory, kinesthetic) and students who are treated with the demonstration learning model..

DISCUSSION

Based on the hypothesis test that has been done previously, it is found that Ho is rejected. That is, Ha which states that there are differences in learning outcomes between students who are treated with the VAK (Visual, Auditory, Kinesthetic) learning model and students who are treated with the demonstration learning model can be accepted with a significant level of 5%. These results will be used as the basis for answering the problem formulation that has been formulated previously, namely: "Are there differences in learning outcomes between students who are treated with the VAK (Visual, Auditory, Kinesthetic) learning model and students who are given the demonstration learning model treatment?"

Answering the problem formulation above, the results of the study show that the learning outcomes of the experimental group are higher than the control group. This is evidenced by the description of the pretest and posttest data that shows the results of the acquisition in the class. The

average value of the experimental class pretest is 46.44. While the average value of the posttest is 89.13. While the control class which became the comparison class obtained an average pretest score of 46.44. While the average value of the posttest is 82.47.

Referring to the research design that the researcher used in this study, namely the Untreated Control Group Design with Dependent Pretest and Posttest Samples. Then the average value of the control class will be the comparison of the experimental class. The data analysis was carried out by independent-samples t-test using SPSS 25 software, indicating that the value of Sig. 2-tailed = 0.023 < 0.05 then Ho is rejected and Ha is accepted. So it can be concluded that there are differences in learning outcomes between students who are treated with the VAK learning model (Visual, Auditory, Kinesthetic) and students who are treated with the demonstration learning model. This result is in line with the opinion of Handayani (2020) which says that there are differences in learning outcomes between students who are treated with the VAK (Visual, Auditory, Kinesthetic) learning model.

CONCLUSION

Based on all the data and research results that have been described in detail, the researchers can conclude that:

1. There are differences in learning outcomes between students who are treated with the VAK learning model (visual, auditory, kinesthetic) and students who are treated with the demonstration learning model. This is evidenced by the average posttest score for the control class which only reached 82.47. This value certainly shows that the learning outcomes of the control class are still below the experimental class.

2. Data analysis was carried out by independent-samples t-test using SPSS 25 software, showing that the value of Sig. 2-tailed = 0.023 < 0.05 then H0 is rejected and Ha is accepted. So it can be concluded that there are differences in learning outcomes between students who are treated with the VAK learning model (Visual, Auditory, Kinesthetic) and students who are treated with the demonstration learning model.

ACNOWLEDGMENT

REFERENCE

Ferawati, F. (2021). PENGGUNAAN MODEL PEMBELAJARAN VISUALIZATION AUDITORY KINESTETIC (VAK) UNTUK MENINGKATKAN HASIL BELAJAR SISWA PADA PEMBELAJARAN TEMATIK DI KELAS VA UPT. SD NEGERI 01 LIMO KAUM. *Ensiklopedia Education Review*, *3*(1), 77-86.

Handayani, R. A. (2020). *Penggunaan Model Pembelajaran Visualization Auditory Kinestetic (VAK) untuk Meningkatkan Hasil Belajar Siswa pada Pembelajaran Tematik di Kelas V MIN 25 Aceh Besar.* Doctoral dissertation, IAIN Bengkulu: Tidak diterbitkan. Doctoral dissertation, UIN AR-RANIRY.

Kurniati, M. (2018). *PENERAPAN MODEL PEMBELAJARAN VISUAL AUDITORI KINESTETIK DALAM PEMBELAJARAN IPA UNTUK MENINGKATKAN HASIL BELAJAR SISWA KELAS V SDN 107 SELUMA* (Doctoral dissertation, IAIN Bengkulu).

Priadi, M. A., & Riyanda, A. R. (2021). Pengaruh Model Guided Discovery Learning Berbasis E-Learning Terhadap Kemampuan Berpikir Kritis. *IKRA-ITH HUMANIORA: Jurnal Sosial dan Humaniora*, *5*(2), 1-13.

Riyanda, A. R., & Suana, W. (2019). Pengembangan Modul Pembelajaran Pemrograman Dasar Berbasis Adobe Flash CS6 Bagi Siswa Kelas XI RPL. *Jurnal Pendidikan Teknologi Informasi dan Vokasional*, *1*(2).

Rukmana, W., Hardjono, M. dan Aryana, A. (2018). "Peningkatan Aktivitas dan Hasil Belajar dengan Model Pembelajaran VAK Berbantuan Media Tongkat Tokoh". *International Journal of Elementary Education.* 2, (3), 156-164.

Salsabila, S. (2018). *Pengaruh model pembelajaran vak terhadap kemampuan pemecahan masalah matematika kelas III SD IT At-Taufiq Al-Islamy Tasikmalaya.* Doctoral dissertation, IAIN Bengkulu: Tidak diterbitkan. Bachelor's thesis, Jakarta: Fakultas Ilmu Tarbiyah dan Keguruan UIN Syarif Hidayatullah.