



## The Effectiveness of Digital Drawing Video Tutorials as Instructional Media

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### Abstract

Students have difficulty understanding the complex techniques of digital drawing without a clear and interactive visual guide. Video tutorials as media are an alternative solution that can provide the visualization in step-by-step and learning flexibility in accordance with students' individual learning pace. This study aims to analyze the effectiveness of video tutorials for using Adobe Illustrator as instructional media. The study used a quasi-experimental design. The subjects of the study were 11th-grade students majoring in Fashion Design at SMK Islam Sudirman 1 Ambarawa, consisting of two classes: XI Tabus 1 with 30 students and X Tabus 2 with 30 students. The techniques for collecting data were a validation sheet from media and material experts, a digital drawing skill test (posttest), and student and teacher questionnaires. Data were analyzed using descriptive statistics and an independent sample t-test to measure the effectiveness of the media. The results of the effectiveness test showed a significant difference in student skills between the experimental and control groups, as reflected in the mean posttest score. The statistical test showed a significance value  $[0.000] < 0.05$ , indicating that digital drawing video tutorials as media are effective for students' learning process. Digital drawing video tutorial as a media is feasible, effective, and received positive response from both students and teachers.

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## INTRODUCTION

Education is an important sector in the social and economic growth of a country. According to Fajar and Mulyanti (2019), education has a strategic role to contribute to educating the nation as a national ideal. This is in line with Ohy et al. (2021), who stated that an intelligent nation is highly required in national development, either in economic, social, and cultural aspects. Through education, the development of science and technology can be effectively assimilated, enabling a nation to develop in line with other countries.

Considering the importance of education for national development, clear regulations are required to achieve the educational goals. One of the regulations is the government policy that encourages each educational institution, especially SMK (Vocational High School), to include life skills education in its curriculum. These skills include personal, social, academic, and vocational skills. Musfah (2017) explains that life skills education can be implemented as an effort of Vocational High Schools in improving their quality to create skilled and professional graduates.

In realizing this aspect, teachers play an important role in the educational process. One of the competencies that teachers must possess is the ability to use instructional media. The quality of learning is not only influenced by materials but also by the method and media being used, including organizing, delivering, and managing the learning process. Along with the development of information technology, digital-based learning is increasingly required as it is able to facilitate a learning process that is more interactive, flexible, and in accordance with the characteristics of current students.

Digital technology is one of the current effective innovations to support the learning process. A study by Saniyyah & Maniarti (2023) showed that the use of digital media in the learning process can improve students' learning motivation, especially when delivered through video tutorials. Video tutorial is well-suited for a practice-based subject, including digital fashion design. Digital fashion design is a fashion design developed with design principles using electronic

devices, such as a computer or tablet (Yusuf et al., 2021).

Based on the results of observation and previous studies conducted in January-February 2025 in SMK Islam Sudirman I Ambarawa, several issues in the Digital Fashion Design subject were found. The learning condition at this school still relies on conventional methods using printed modules and limited manual demonstrations. The available learning media are text-based modules with static images, which are less interactive, so that students have difficulties in understanding the practical steps of using digital software, particularly Adobe Illustrator.

Evaluation of the previous instructional media showed that the use of conventional modules does not optimally facilitate the learning process. Although students have used printed modules as media accompanied by a teacher's explanation, several students still find it difficult to understand the use of digital drawing software, particularly Adobe Illustrator, due to limited repeatable visualizations and demonstrations. Static modules are unable to demonstrate step-by-step instructions for using software dynamically, making it difficult for students to follow the complex workflow in digital design.

The fundamental problem found is that students find it difficult to understand the complex features of Adobe Illustrator, as the learning process only uses conventional modules. The main constraints of students include an inability to operate design tools optimally and difficulty in creating an accurate proportion of fashion design. Moreover, students are also unable to learn independently and efficiently when using the current instructional media. As a result, in the previous year, 13 of 38 students, or 34.21% of students, had less optimal learning outcomes.

Although studies related to the use of Adobe Illustrator in design learning have been widely conducted, most studies focus on general graphic design, logo design, or basic illustration. Rahman & Sari (2022) studied the use of Adobe Illustrator for visual communication design learning, while Wibowo et al. (2023) studied its implementation in product packaging design. However, a study that specifically develops Adobe Illustrator video tutorials as media for

digital fashion design drawing at the vocational high school level is still limited.

A gap in the study is the need for instructional media that specifically combines digital drawing techniques and the principles of fashion design. The novelty of the study is the development of a video tutorial that not only teaches the use of Adobe Illustrator tools in general but also integrates knowledge of proportion and anatomy of figure, color composition and aesthetics, and techniques of professional digital fashion design. This study also adapts learning for the characteristics of students in Vocational High School majoring in Fashion Design who require practical skills that can be directly applied in the industrial sector.

The development of Adobe Illustrator video tutorials as media is expected to be an innovative solution to address existing learning issues. This media is designed to provide learning experiences that are interactive, flexible, and accessible anytime, so that students can improve their digital fashion design drawing skills significantly. Through this study, it is expected that the media not only improve students' academic achievement but also prepare them with digital fashion design skills that are relevant to the demand of the modern fashion industry.

## METHODS

This study used a quasi-experimental method. The design of the study serves as a framework or guideline used by the researcher in conducting a study (Creswell, 2017). The design provides systematic guidelines related to research procedures, including the formulation of research questions and data analysis (Flick, 2018). A quasi-experiment involves all participants in a study group receiving treatment, not only subjects selected randomly (Siyoto & Sandu, 2015). This study applied the Posttest Control Group Design, where there was a control group. The experimental group received treatment using a video tutorial as media, while the control group used conventional media and learning methods. A posttest instrument in the form of a performance test was given to both groups after the learning process.

Data validity techniques included content validity using Aiken's V formula for all instruments (observation sheet of media and material feasibility, posttest, students, and teachers' response questionnaires), construct validity using the product-moment correlation formula for student response questionnaires, and ICC reliability for observation sheet of media and material feasibility, and Cronbach's alpha reliability for student response questionnaires.

The data analysis technique in this study was descriptive for the results of student and teacher response questionnaires. Moreover, an independent samples t-test was used to find out the differences in learning outcomes from the use of a video tutorial as media during the learning process, which has previously undergone prerequisite testing, including a normality test and a homogeneity test.

## RESULTS AND DISCUSSION

### Results of the Effectiveness of the Cognitive Aspect

#### a) Normality Test

The normality test is used to find out whether the data obtained is normally distributed. The assumption of data normality is highly important in parametric statistics because data that are not normally distributed can cause the results of analysis to be biased or invalid (Kim, 2015). The following is the index obtained from the Shapiro-Wilk normality test conducted using SPSS 26 in this study.

**Table 1.** The Results of the Normality Test

	df	Sig.	df	Sig.
Control Posttest	31	.200*	31	.489
Experimental Posttest	32	.059	32	.068

Based on the results of the normality test of the posttest data above, the experimental class obtained a significance value of 0.068, and the control class obtained a significance value of 0.489. If  $p > 0.05$ , the data are normally distributed. Thus, it can be concluded that posttests in the experimental class and the control class in this study were normally distributed.

#### b) Homogeneity Test

The Homogeneity Test is used to determine whether the data variance from several groups or populations is the same (Sheskin, 2020). The assumption of variance homogeneity is important in variance analysis (ANOVA) and several other statistical tests. The following is the index obtained from Levene's test of homogeneity in this study.

**Table 2.** The Results of the Homogeneity Test

Levene Statistic		df1	df2	Sig.
Learning	Based on Mean	1	61	.187
Outcome	Based on Median	1	61	.235

Based on the results of the hypothesis test in the posttest data above, it can be seen that the significance value of the data is 0.187. Levene's test indicated homogeneity of variances ( $p = 0.187 > 0.05$ ). Thus, it can be concluded that the posttest data of the experimental class and the control class in the study were homogeneous.

#### c) Independent Sample t Test

An independent sample t-test in this study aims to test the significance of the difference between two learning outcomes, which are the posttest results of the experimental group and the control group. According to Ghozali (2018), the independent sample t-test is a parametric statistical test to compare the means of two independent data groups. This test aims to determine whether there is a significant difference between the means of two independent sample groups. The interpretation of the independent sample t-test was conducted by comparing the significance value (p-value) with the predetermined significance level ( $\alpha$ ), commonly  $\alpha = 0.05$  (5%). If the p-value is less than  $\alpha$ , the null hypothesis is rejected, indicating a statistically significant difference between the groups. The following are the results of an independent sample t-test in the posttest of the experimental and control groups:

**Table 3.** The Results of the Independent Sample t Test

Independent Samples Test	F	Sig.	t	df	Sig. (2-tailed)
Equal variances assumed	.659	.420	-8.349	57	.000
Equal variances not assumed			-8.378	55.382	.000

Based on the results of the independent sample t-test analysis above, the t value under the equal variances assumption is -8.349 with a sig (2-tailed) value of 0.000. The significance value of  $0.000 < 0.05$  indicates that  $H_0$  is rejected. This indicates that there is a difference between the students' learning outcomes before using video tutorials and after using video tutorials as media in the digital fashion drawing subject. Thus, it can be concluded that there is a difference between the student learning outcomes in this study.

## Discussion

The effectiveness of digital drawing video tutorials as media is measured by comparing the ability of students who used video tutorial media and students who used the conventional learning method. Video tutorials as instructional media are considered effective as they provide a clear visualization, enable repeated learning, and accommodate various students' learning styles. The statistical results demonstrate a significant difference between the ability of students who used video tutorials as media and students who used conventional learning methods. The video tutorial integrates direct visual demonstration in using Adobe Illustrator with clear narration so that students are able to understand, not only "what" they have to do, but also "how" to do it appropriately.

The effectiveness of the video tutorials as instructional media is in accordance with the study conducted by other researchers. Musthofa and Murdani (2018) found that the use of video tutorials as media is effective in improving 3D drawing competency with significant improvement. The latest meta-analysis study regarding multimedia design for learning demonstrates that the combination of visual and audio in the learning process is able to improve learning outcomes consistently (Noetel et al., 2022). The study regarding the influence of a video tutorial on the students' ability, conducted by Desvianasari and Prasetyaningtyas (2022), also showed a positive result in improving digital fashion drawing skills.

Factors supporting the effectiveness of video tutorial as an instructional media are: (1) visualization in step-by-step that facilitates students to understand the digital drawing process

systematically, (2) students' ability to repeat materials in accordance with self-paced learning, (3) audio-visual integration that supports various learning styles (visual, auditory, and kinesthetic), and (4) flexibility of time and place for learning that supports ubiquitous learning concept (Pratama & Nurhayati, 2020).

Aspect-based analysis of skills demonstrated improvements in: (1) alignment with the design theme, (2) figure proportion and anatomy, (3) digital technique, (4) creativity and innovation, and (5) color composition and aesthetics. The results are in line with Musthofa & Murdani (2018), who found that the use of a video tutorial is effective in improving drawing skills. Thus, video tutorials as media not only improve digital drawing technical skills but also assist students in developing creativity and a deeper understanding of fashion design.

Student and teacher responses towards digital drawing video tutorials as media were positive overall. According to the results of the questionnaire, students showed positive responses to various instructional media indicators being developed. From the aspect of usability, students and teachers stated that a video tutorial is easy to use and understand. Students appreciated features, such as pause and replay, that make it easier for them to follow the tutorial according to self-paced learning. This is in line with the principles of self-paced learning, which is one of the advantages of digital instructional media (Wulandari & Anggraini, 2020).

In the aspect of learning benefit, students agreed that video tutorial media greatly helps them in understanding digital fashion drawing techniques. Students feel more confident in using Adobe Illustrator digital drawing software and are able to apply techniques learned in their drawing project. The improvement of self-confidence is important as it impacts students' motivation to learn and their courage to experiment with software features.

Positive responses from students and teachers support the previous findings regarding the effectiveness of a video tutorial as media. Oktiani (2017) stated that creativity in instructional media can increase students' learning motivation. Interactive and engaging video tutorials as instructional media are able to

improve students' enthusiasm for digital fashion drawing learning. The latest study regarding multimedia tools in teaching and learning processes also shows that digital generation students are more responsive to instructional media integrating technology (PMS, 2020).

Teachers gave a positive response to the media flexibility, allowing the implementation in various learning conditions, including face-to-face, hybrid, and online learning. Most students reported that they found it easier to understand the material, were more confident using digital design software, and were more motivated to participate in the learning process. Teachers also stated that this media assists the learning process as it can be used as an additional or independent teaching material.

This finding is in line with Faujiah et al. (2022), who found that audio-visual media are able to improve students' involvement significantly compared to the lecture method. Overall, this positive response emphasizes that digital drawing video tutorials as media are feasible to be implemented in digital fashion drawing learning in Vocational High Schools.

The use of video tutorials as instructional media in digital drawing is not only limited to the improvement of technical skills but also contributes to the improvement of students' critical thinking skills. According to the study by Rahmawati and Setiawan (2021), a video tutorial involving active interaction between students and content is able to improve students' analytical and synthesis skills. In the context of digital drawing, students not only follow the steps passively but are also asked to innovate and explore their creative ideas. This is in line with the constructivist learning principle, which emphasizes the importance of active student involvement in the learning process.

Moreover, the positive impact of video tutorial media can be seen in the improvement of collaboration among students. A study by Anggraeni and Prabowo (2020) demonstrates that the use of video tutorials in creative learning is able to encourage students to discuss and share ideas with each other. In the context of digital drawing, students are able to give feedback on other works, not only enriching the learning experience but also establishing a positive

learning community. The discussion can be carried out both directly and online, which utilizes the existing technology.

Thus, the adaptation of video tutorials as media in digital drawing curriculum should be continuously evaluated and improved. According to the study by Lestari and Susanti (2022), it is important for teachers to collect feedback from students and teachers regarding the use of media regularly. Thus, adjustments can be made to meet evolving students' learning needs. This study shows that the development of responsive and dynamic instructional media is able to improve students' learning experiences comprehensively.

## CONCLUSION

Adobe Illustrator video tutorial as an instructional media in digital fashion drawing learning is an effective and relevant instructional media. This media not only improves psychomotor skills but also develops students' creativity, visual literacy, motivation, and self-confidence. This should be supported by a strong theoretical foundation, appropriate technological characteristics, and appropriate implementation strategies. Students and teachers' responses towards digital drawing video tutorials as media for digital fashion drawing are positive overall. According to the results of students' and teachers' response questionnaires, the average percentage was obtained, which is included in the "agree" category.

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