Jurnal Ilmiah Profesi Pendidikan
Volume 11, Nomor 2, Mei 2026
ISSN (Print): 2502-7069; ISSN (*Online*): 2620-8326

Student Perceptions of Video Tutorials: Quality and Usefulness in Learning Educational Statistics

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Article History
Received : April 07th, 2026
Revised : April 27th, 2026
Accepted : May 05th, 2026

Abstract: The integration of digital technology in higher education has encouraged the use of innovative learning media, including video tutorials, to support students' understanding of complex subjects such as educational statistics. This study aims to analyze students' perceptions of the quality and usefulness of video tutorial–based learning in data processing using Microsoft Excel and SPSS. This research employed a descriptive quantitative approach with a survey design involving 90 students who had completed the Educational Statistics course. Data were collected using a 30-item questionnaire covering five indicators: material relevance, learning effectiveness, video media quality, accessibility, and learning motivation. The data were analyzed using descriptive statistics in the form of percentages. The results showed that students' perceptions were categorized as very good across all indicators, with accessibility obtaining the highest score (90.59%), followed by video media quality (90.48%), material relevance (90.07%), learning effectiveness (89.15%), and learning motivation (89.07%). The majority of students' scores ranged from 80% to 100%, with an average between 88% and 90%. In conclusion, video tutorial–based learning is perceived as highly useful and of high quality in supporting students' learning experiences in educational statistics, particularly in data processing using Excel and SPSS. Therefore, this method can be considered an effective alternative learning strategy, although it should be combined with interactive approaches to further enhance student motivation.

Keywords: Educational statistics, student perception, video tutorials

INTRODUCTION

The rapid development of information and communication technology has brought significant changes to the field of education, particularly in the learning process in higher education. The use of digital technology as a learning medium has become one of the solutions to enhance the quality of learning, making it more flexible, interactive, and student-centered (Rosiyanti et al., 2020). One form of instructional innovation that is increasingly utilized is the use of video tutorials as a learning medium, especially in practice-oriented courses such as Educational Statistics (Rachmawati et al., 2020).

Statistics learning, particularly in relation to data processing using software such as Microsoft Excel and SPSS, often poses challenges for students. This is due to the complexity of concepts as well as the technical skills that must be mastered simultaneously. Therefore, there is a need for instructional methods that are not only theoretical but also capable of providing concrete and practical learning experiences. The use of video tutorials in learning has been shown to help students understand procedural steps more clearly through the integration of visual and auditory elements (Ningrum & Wardhani, 2022).

According to multimedia learning theory, the presentation of information through a combination of text, images, and audio can enhance students' understanding and retention, as it engages multiple cognitive channels (Fatmawati et al., 2021). ideo tutorials enable students to revisit learning materials, study at their own pace, and develop greater learning autonomy (Ningsih & Fitriasari, 2021). This is supported by research findings indicating that the use of video-based learning can improve conceptual understanding, practical skills, and student engagement in the learning process.

Furthermore, from the perspective of technology acceptance, the use of video-based learning media is influenced by users' perceptions, particularly in terms of perceived ease of use and perceived usefulness (Reza et al., 2021). Students' perceptions of learning media

play a crucial role in determining the success of instructional implementation. Students who hold positive perceptions tend to be more motivated, more active, and more engaged in the learning process (Haryoko, 2009).

Several previous studies have examined the use of video-based learning in various educational contexts and have demonstrated positive effects on learning outcomes and student motivation (Andriyani et al., 2019). However, most of these studies focus primarily on learning outcomes, while research specifically exploring students' perceptions of video tutorial–based learning in statistics, particularly in the context of data processing using Excel and SPSS, remains limited.

Based on the aforementioned discussion, there is a research gap that warrants further investigation, namely the limited number of studies that specifically analyze students' perceptions of the effectiveness of video tutorial–based learning methods in statistical data processing. Therefore, this study aims to analyze students' perceptions of the implementation of video tutorial–based learning methods in data processing using Microsoft Excel and SPSS in the Educational Statistics course. The findings of this study are expected to contribute to the development of more effective learning methods, particularly in technology-based statistics education, and to serve as a reference for lecturers in designing instructional media that align with students' needs in the digital era.

METHODS

This study was conducted in the odd semester of the 2025/2026 academic year at the Biology Education Department, Faculty of Teacher Training and Education, Universitas Maritim Raja Ali Haji, Tanjungpinang, Indonesia. The population of this study consisted of all students who had taken the Educational Statistics course. The sampling technique used was total sampling, in which all members of the population were included as research participants. Therefore, the sample comprised 90 students who had experienced learning using video tutorials for data processing with Microsoft Excel and SPSS (Sugiyono, 2018).

The research procedure began with the implementation of video tutorial–based learning in the Educational Statistics course, particularly in data processing using Excel and SPSS. After the learning process was completed, students were asked to fill out a perception questionnaire distributed online via Google Forms. Prior to its use, the instrument was tested for validity and reliability to ensure its appropriateness in measuring students' perceptions. The questionnaire consisted of 30 items covering five indicators: material relevance, learning effectiveness, video media quality, accessibility, and learning motivation. Each item was measured using a five-point Likert scale ranging from strongly disagree to strongly agree (Davis, 1989; Sugiyono, 2018).

The data analysis technique used in this study was descriptive statistical analysis. The data obtained from the questionnaire were calculated in the form of percentages to describe the level of students' perceptions for each indicator. The percentage results were then interpreted based on predetermined criteria, ranging from very low to very high categories. Data processing and analysis were conducted using SPSS software to obtain mean scores, percentages, and standard deviations (Sugiyono, 2018).

Table 1. Blueprint of Students' Perception Based on Each Indicator

No.	Indicators	Number of Items
1.	Material Relevance	6
2.	Learning Effectiveness	6
3.	Video Media Quality	6
4.	Accessibility	6
5.	Learning Motivation	6
	Total	30

Each item in the questionnaire was measured using a five-point Likert scale, namely strongly disagree, disagree, neutral, agree, and strongly agree. The Likert scale is one of the most commonly used measurement techniques in educational and social science research to assess respondents' perceptions, attitudes, and levels of acceptance toward a particular research object (Sugiyono, 2018).

Table 2. Criteria for Interpreting Students' Perception Scores (%)

No.	**Percentage Interval (%)**	**Category**
1.	84,21 – 100	Very High (VH)
2.	68.21 – 84.20	High (H)
3.	52.21 – 68.20	Moderate (M)
4.	36.21 – 52.20	Low (L)
5.	20.00 – 36.20	Very Low (VL)

Before its use in the study, the questionnaire instrument was subjected to validity and reliability testing. Validity testing was conducted to determine the extent to which the instrument accurately measures the research variables, while reliability testing was performed to assess the consistency of the instrument. A well-developed instrument must demonstrate adequate validity and reliability to ensure that the data obtained are trustworthy and accurately reflect the actual conditions.

Data were collected by distributing the questionnaire to students after the completion of the learning process using video tutorials. The questionnaire was administered online via Google Forms, allowing respondents to easily provide responses to each statement. The collected data were then analyzed using descriptive statistical techniques, including the calculation of mean scores, percentages, and standard deviations for each indicator of students' perceptions. Descriptive analysis was employed to describe the overall trends in students' perceptions of the use of video tutorials in statistics learning. Data processing and analysis were conducted using SPSS software (Nurhaswinda et al., 2025).

FINDINGS AND DISCUSSION

Findings

The results of the data analysis were obtained from the student perception questionnaire regarding the implementation of video tutorial–based learning methods in statistical data processing using Microsoft Excel and SPSS. The collected data were processed and analyzed using descriptive statistical techniques to determine the level of students' perceptions for each predetermined indicator. The results were presented in percentages to facilitate interpretation. Furthermore, the findings were classified into several categories based on predetermined score interpretation criteria. The data were systematically presented in tables to provide a clear overview of the trends in students' perceptions of the applied learning method.

In addition to the analysis based on each indicator, the distribution of individual student scores was also examined. The results showed that the highest score achieved was 100%, while the lowest score was 60%, resulting in a range of 40 points. The majority of students obtained scores within the range of 80% to 100%, indicating a high level of positive perception toward the implementation of video tutorial–based learning. The average perception score ranged from 88% to 90%, which falls into the "very good" category.

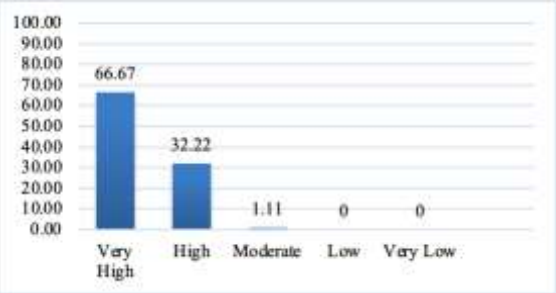

Figure 1. Bar Chart of Individual Students' Percentage Scores

These findings confirm that most students have positive perceptions of the use of video tutorials in learning statistical data processing using Microsoft Excel and SPSS. The following presents the results of the data analysis showing the level of students' perceptions for each indicator in video tutorial–based learning.

Table 3. Percentage of Students' Perceptions Based on Each Indicator

No.	Indicator	Percentage (%)	Category
1.	Material Relevance	90.07	VH
2.	Learning Effectiveness	89.15	VH
3.	Video Media Quality	90.48	VH
4.	Accessibility	90.59	VH
5.	Learning Motivation	89.07	H

The results indicate that students' perceptions of video tutorial–based learning methods in statistical data processing using Microsoft Excel and SPSS fall into the "very good" category across all measured indicators. This is evidenced by the percentage values of each indicator, all of which exceed 85%. In detail, the accessibility indicator obtained the highest score (90.59%), followed by video media quality (90.48%) and material relevance (90.07%). Meanwhile, learning effectiveness scored 89.15%, and learning motivation scored 89.07%.

The high score in the accessibility indicator indicates that students perceive the video tutorials as easily accessible anytime and anywhere, thereby supporting flexibility in learning. Furthermore, the high quality of video media suggests that the visual and audio aspects of the videos meet students' learning needs. The high

level of material relevance also indicates that the video content aligns well with the requirements of statistics learning. Although all indicators fall within the "very good" category, the indicators of learning effectiveness and learning motivation show relatively lower scores compared to the others, although the differences are not significant. This suggests that there is still room for improvement, particularly in enhancing student engagement and motivation in video tutorial–based learning.

Discussion

The results of this study indicate that video tutorial–based learning methods generate highly positive perceptions among students across all measured aspects. The high score on the accessibility indicator is consistent with the characteristics of digital learning, which provide flexibility in terms of time and place for students to access learning materials (Sadiman et al., 2018). Video-based learning enables students to control their own learning pace, including revisiting materials that are not yet fully understood, thereby enhancing a more personalized and self-directed learning experience (Fiorella & Mayer, 2018).

Furthermore, the high perception of video media quality suggests that well-designed instructional videos—characterized by clear audio, step-by-step visualizations, and systematic presentation—significantly influence students' understanding. This finding aligns with multimedia learning theory, which posits that the integration of visual and verbal elements can enhance cognitive processing in learning (Brame, 2016). Well-structured video tutorials can assist students in understanding data analysis procedures more concretely, particularly when using software such as Microsoft Excel and SPSS (Musdalifah et al., 2022).

Regarding material relevance, the findings indicate that students perceive the content presented in the videos as aligned with their learning needs (Weng et al., 2018). This is crucial, as content relevance is a key factor in improving learning effectiveness. Video tutorials that include practical examples relevant to the learning context are more easily understood by students.

However, the indicators of learning effectiveness and learning motivation show slightly lower scores compared to the other indicators. This suggests that although video tutorials are effective as a medium for delivering content, enhancing student motivation and engagement still requires additional strategies, such as integrating active learning methods, discussions, or project-based assignments. Previous studies have shown that students' learning motivation is influenced not only by instructional media but also by interaction, feedback, and active engagement in the learning process (Weng et al., 2018).

In addition, students' positive perceptions of video tutorials indicate that this medium can serve as an effective alternative in teaching statistics, a subject often perceived as difficult. This finding is consistent with previous research suggesting that the use of video in learning can improve conceptual understanding, practical skills, and student satisfaction (Arsyad, 2017). Overall, the findings of this study demonstrate that video tutorial–based learning has strong potential for implementation in educational statistics. However, to optimize learning effectiveness and student motivation, it is essential to combine video tutorials with more interactive instructional strategies.

CONCLUSION

This study concludes that students' perceptions of video tutorial–based learning in statistical data processing using Microsoft Excel and SPSS are consistently very positive across all indicators. Accessibility emerged as the strongest aspect, while learning motivation, although slightly lower, remained within the "very good" category. Most students reported high perception levels, with scores predominantly ranging from 80% to 100% and an average of 88%–90%. These findings highlight the effectiveness of video tutorials in supporting students' understanding and practical skills in statistics learning. However, to maximize learning outcomes, video-based instruction should be complemented with interactive strategies, such as discussions, hands-on activities, and project-based learning. Future research is recommended to examine the impact of such integrated approaches on student engagement and learning performance.

REFERENCES

Andriyani, D., Harahap, E., Badruzzaman, F. H., Fajar, M. Y., & Darmawan, D. (2019). Aplikasi Microsoft Excel Dalam

Penyelesaian Masalah Rata-rata Data Berkelompok. *Matematika: Jurnal Teori Dan Terapan Matematika*, *18*(1).

Arif Setia Sandi A., Soedijono, B., & Nasiri, A. (2020). Pengaruh Perceived Usefulness dan Perceived Ease of Use Terhadap Attitude Toward Using Dengan Metode TAM Pada Sistem Informasi Magang Kerja. *IT Journal Research and Development*, *5*(2 SE-Articles), 109–118. https://doi.org/10.25299/itjrd.2021.vol5(2).5287

Arsyad, A. (2017). *Media Pembelajaran*. Raja Grafindo Persada.

Brame, C. J. (2016). Effective Educational Videos: Principles and Guidelines for Maximizing Student Learning from Video Content. *CBE—Life Sciences Education*, *15*(4), es6. https://doi.org/10.1187/cbe.16-03-0125

Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, *13*(3), 319–340. https://doi.org/10.2307/249008

Fatmawati, T. I., Sukartiningsih, W., & Indarti, T. (2021). Media pembelajaran audio visual: Literature review. *J. Pendidik*, *10*(1), 1–10.

Fiorella, L., & Mayer, R. E. (2018). What works and doesn't work with instructional video. *Computers in Human Behavior*, *89*, 465–470. https://doi.org/https://doi.org/10.1016/j.chb.2018.07.015

Haryoko, S. (2009). Efektivitas pemanfaatan media audio-visual sebagai alternatif optimalisasi model pembelajaran. *Jurnal Edukasi@ Elektro*, *5*(1), 1–10.

Musdalifah, M., Satriani, S., Najib, A., & Abadi, A. U. (2022). Efektivitas penggunaan aplikasi microsoft excel terhadap pengolahan data penelitian mahasiswa UIN alauddin makassar. *Educational Leadership: Jurnal Manajemen Pendidikan*, *1*(2), 191–199.

Ningrum, R. S., & Wardhani, J. D. (2022). Persepsi Guru terhadap Pemanfaatan Media Pembelajaran Berbasis Video pada Anak Usia Dini. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, *6*(6), 5702–5713.

Ningsih, Y. L., & Fitriasari, P. (2021). Persepsi Mahasiswa Tentang Penggunaan Video Pembelajaran Pada Materi Persamaan Diferensial. *Indiktika: Jurnal Inovasi Pendidikan Matematika*, *3*(2), 126–137.

Nurhaswinda, N., Zulkifli, A., Gusniati, J., Zulefni, M. S., Afendi, R. A., Asni, W., & Fitriani, Y. (2025). Tutorial uji normalitas dan uji homogenitas dengan menggunakan aplikasi SPSS. *Jurnal Cahaya Nusantara*, *1*(2), 55–68.

Rachmawati, L., Indrarini, R., Fuad, R. A., Catur, M., & Wulandari, J. D. M. (2020). Media Pembelajaran Berbasis Video Untuk Meningkatkan Motivasi Mahasiswa Belajar Statistik Ekonomi. *Jurnal Ilmiah Pendidikan Ekonomi*, *5*(1).

Reza, M., Hamama, R., Maulida, S., Nurdin, N., Mayasri, A., & Rizkia, N. (2021). Persepsi Mahasiswa terhadap Pembelajaran Daring Berbasis Video dengan Bantuan Pen Tablet Selama Pandemi Covid-19. *Orbital: Jurnal Pendidikan Kimia*, *5*(2), 124–136.

Rosiyanti, H., Adriansyah, A. F., Widiyasari, R., & Dewi, N. S. (2020). Analisis persepsi peserta didik terhadap video pembelajaran matematika kelas VIII pada masa pandemi. *Prosiding Seminar Nasional Penelitian LPPM UMJ*.

Sadiman, A. S., Rahardjo, A., & Haryono. (2018). *Media Pendidikan: Pengertian, Pengembangan, dan Pemanfaatannya*. Rajawali Press.

Sugiyono. (2018). *Metode Penelitian Pendidikan*. Alfabeta.

Weng, F., Yang, R.-J., Ho, H.-J., & Su, H.-M. (2018). A TAM-Based Study of the Attitude towards Use Intention of Multimedia among School Teachers. In *Applied System Innovation* (Vol. 1, Issue 3, p. 36). https://doi.org/10.3390/asi1030036