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Exploring The Effectiveness of Digital Learning Platforms for Improving Financial Skills: The Case of YouTube

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Abstract: Exploring The Effectiveness of Digital Learning Platforms for Improving Financial Skills: The Case of YouTube. Objective: YouTube is a digital platform that can be used for formal and informal education. Very little research still reveals the use of YouTube as a learning resource in schools for financial management material. Therefore, this research aims to explore using YouTube as a digital learning resource for improving financial ability. **Methods:** This research uses qualitative and quantitative methods with descriptive statistics. The subjects in this research were teachers and students. Data collection was carried out through questionnaires and interviews to gain a comprehensive understanding of user perceptions and learning outcomes. **Findings:** Research found that 84% of respondents agreed to use YouTube as a digital learning resource in learning Financial Management material, and 77% believe they can learn more by watching subject-related videos on YouTube than by reading books. In addition, students' responses strongly agreed with using YouTube as a digital learning resource for learning financial management. YouTube stores material in long-term memory, making it easier for students to review the material, so that student understanding increases. The visual and auditory elements of YouTube videos enhance engagement and retention. YouTube is also effective as a digital learning platform for improving financial skills. Teachers also acknowledged that YouTube helps make abstract financial concepts more concrete through visual explanations. **Conclusion:** So, YouTube has the potential to become an effective digital platform used for learning, particularly in improving students' financial skills. The accessibility, diversity of content, and user-friendly nature of YouTube make it a valuable supplement to traditional learning resources in the digital age. Future research is recommended to explore the long-term impacts of YouTube-based learning on students' financial behaviour.

Keywords: digital learning platform, financial ability, youtube.

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INTRODUCTION

The advantages of digital technology have made the learning process easier (Chugh et al., 2023; Huang et al., 2022; Kumar Sharma & Kumar Chandel, 2013). Digital learning concepts such as e-learning platforms and online learning (Moodle, Zoom, Google Meet, Google Classroom, and others) are emerging as an integration of technology and education and effective learning media (Masa'Deh et al., 2023; Nalintippayawong et al., 2023). Through these learning platforms, educators can deliver learning material more easily (Mahmud et al., 2021; Maman et al., 2021)

Currently, the integration of digital technology, such as the use of social media and

education, has been proven to bring institutions and students closer together (Karvounidis et al., 2014; Manca & Ranieri, 2016a, 2016c; Mbatha, 2014; Moghavvemi et al., 2018a). For example, Facebook can be a learning medium (Moghavvemi & Salarzadeh Janatabadi, 2018), connecting students and gathering information (Lau, 2017). Besides that, YouTube can also be an example of social media used for learning and searching for information. In other words, YouTube generates knowledge and thus offers multimedia education. In line with Amaliyah et al. (2021) and Swandi et al. (2022), YouTube is widely used for learning because it has several benefits, such as being informative, free, practical, shareable, and interactive.

Previous research found that YouTube has advantages as a learning medium that teachers use. Utilizing YouTube as a learning medium can increase students' learning motivation. YouTube is also a learning resource that can be accessed for free. Of course, students can choose videos according to the learning material they want (Hendar et al., 2022). YouTube effectively enhances learning (Chtouki, Harroud, Khalidi, & Bennani, 2012). In line with Majeed et al. (2017), using YouTube can improve the teaching and learning process quality because it has audio-visual features that can be heard and seen, making it easier for students to understand the learning material. According to DeWitt et al. (2013), the level of understanding of a subject is higher than 75% when seeing, hearing, and producing material during learning, while 20% of students only understand during preparation, and 40% of students who only see and hear. So, learning using videos such as YouTube has positively influenced learning activities.

The use of YouTube as a learning medium in classrooms (secondary and higher education) is increasingly receiving attention because this media can encourage students and educators to watch videos, help student-educator coordination efforts, improve the learning process, and provide feedback from students (Torres-Ramírez, García-Domingo, Aguilera, & De La Casa, 2014). As a result, many schools are realising the benefits of using digital technology as a teaching tool and are adopting appropriate technology in the classroom to complement conventional learning. This awareness prompted much research into the effectiveness of learning media and tools in the school, such as YouTube. However, literature on the use of YouTube in education is still minimal. Similar to (Moghavvemi, Sulaiman, Jaafar, & Kasem, 2018b), many educators and students use YouTube to learn and search for information, but research on the use of YouTube for learning and its effectiveness as a learning tool is still rarely studied compared to other social media. Even though the potential for using YouTube as a learning tool is a booming topic that needs to be explored more deeply (Manca & Ranieri, 2016c, 2016b).

Previous research recommends that future research provide empirical evidence regarding online videos and new digital learning resources such as YouTube to assist the learning process (Olasina, 2017b). For this reason, this research intends to explore using YouTube as a learning resource for improving financial management skills. Statistical data shows that 90% of internet users in Indonesia visit YouTube at least once a day. Strengthened by Putra & Patmaningrum (2018), 20 million people regularly visit YouTube monthly, and almost all are aged 12 – 17. Therefore, this research will detail the use and purpose of YouTube among students. The findings of this research will help educators in schools develop new curricula, which is vital for determining the learning experiences that educators need to attract students to learn financial management in the future. Schools can also benefit from this research because it will determine how innovative and creative ways to achieve academic performance are applied to

achieve learning goals. As part of the study's focus on digital learning platforms, the research is structured around these core questions: (1) How do students and teachers perceive YouTube as a digital learning resource for financial management education? (2) Does using YouTube significantly improve students' understanding and skills in financial management? (3) What features of YouTube videos contribute most to students' motivation and learning effectiveness?

METHOD

Participants

The research sample consisted of 71 students, comprising two classes, namely 35 students and 36 students in the Program Competency of Office Management and Business Services (OMBS) at the Bantul Regency. The participants were an average of 17 years old and comprised 60% females and 40% males. All participants were 12th-grade students enrolled in the office management vocational program.

This study used semi-structured interviews and questionnaires to determine how YouTube is used for learning financial management. The questionnaire comprised respondents' profile data and views on implementing YouTube to improve their financial skills. The demographic data of the research respondents can be seen in the following table.

Table 1. Respondent demographic data

Category	Total	Percentage
Age		
a. 16-year-old	12	16.9%
b. 17-year-old	45	63.4%
c. 18-year-old	14	19.7%
Gender		
a. Male	28	39.4%
b. Female	43	60.6%
Class		
a. A	35	
b. B	36	
Frequency of YouTube Use for Learning		
a. Every day	18	25.4%
b. 3 – 5 times a week	24	33.8%
c. 1 – 2 times a week	20	28.2%
d. Rarely/during assignments	9	12.7%

The results, from 71 respondents, show that most students actively use YouTube as a learning medium, especially when it comes to understanding financial management materials. YouTube is used by 33.8% of respondents three to five times a week, suggesting that moderate frequency is the most common usage pattern. Additionally, 25.4% of respondents use YouTube daily, indicating familiarity with digital, video-based learning. Furthermore, 28.2% of respondents access YouTube 1-2 times a week, while 9.9% only use YouTube when there is an assignment, and 2.8% stated that they never use it for learning. Most students use YouTube to learn. More than 87% of students use it regularly. This information underscores the promise of incorporating digital platforms like YouTube into professional training, particularly in areas that demand a grasp of hands-on principles like financial administration.

Conversely, this study's selection of interview participants is typically quite limited, based on a qualitative approach that priorities exploring meaning, in-depth understanding, and intricate social contexts. According to Creswell (2017), qualitative researchers do not pursue statistical generalizations; they explore participants' experiences and perspectives holistically. Therefore, the number of participants is limited, enabling a more detailed and reflective analysis of the obtained data. Additionally, Patton (2002) emphasized that, in qualitative research, the sample size is determined by the principle of information-rich cases—namely, participants who can provide in-depth information, not by quantitative representation. In other words, the quality of information is prioritized over the quantity of informants.

Research Design and Procedures

This research uses a mixed method to collect quantitative and qualitative data and combines interviews and questionnaires. Quantitative data is obtained through questionnaire instruments to identify trends and relationships between variables systematically and measurably. The results of the quantitative data aim to map the overview of phenomena within the research population. Meanwhile, qualitative data were collected through semi-structured interviews to obtain an in-depth explanation of the context, material, and reasons behind the identification of quantitative data. The flexibility in the preparation and execution of semi-structured interviews allows for the adjustment of questions based on participants' responses, ensuring that the data obtained is meaningful and contextual (Meng et al., 2014).

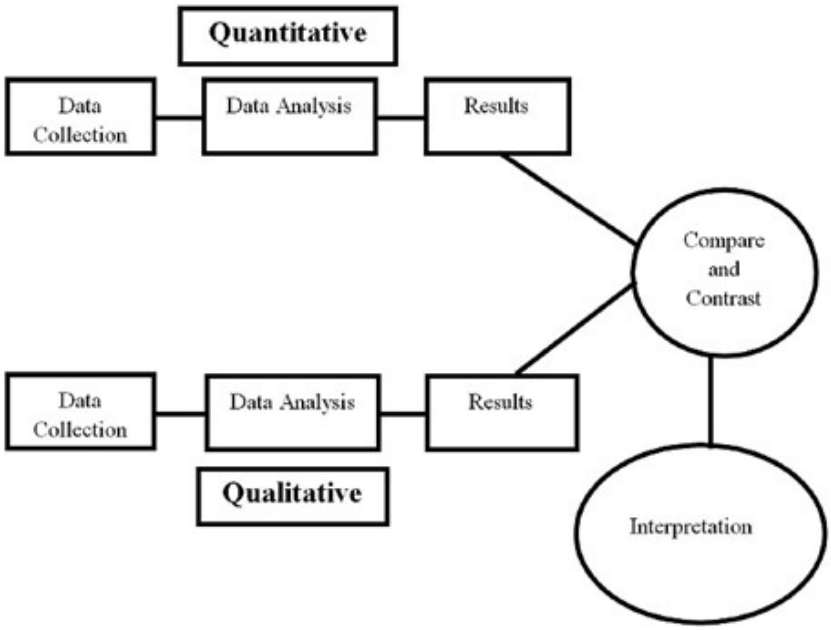

Figure 1. Research procedure

In the final process, both data types are integrated by linking descriptive and inferential quantitative results with qualitative findings in the form of narratives. The integration allows the research to answer the what or how aspects based on numbers and statistics, as well as the why and how aspects (John W. Creswell, 2018). Thus, integrating quantitative and qualitative data in mixed methods enhances the validity of findings and provides more holistic insights, deepening academic and practical understanding of research problems (Tashakkori & Teddlie, 2015).

Instruments

The first stage was an interview to determine the participants' perceptions and understanding. In the semi-structured interview process, questions are formulated first, but the order and modifications of questions are made according to participant reactions (Meng et al., 2014). This qualitative research used semi-structured interviews to explore more in-depth and contextual data (Adams, 2015). Some of the main focuses of the interviews were education, educational evaluation, learning media, and educational technology. The education topic was based on Biggs (2014) constructive alignment theory, which states that learning should be directed at learning outcomes. For example, "What are the prospects for current financial management learning, in improving students' skills?", "The most important competencies mastered by students in this subject", and "can digital-based learning, such as YouTube, help achieve these competencies".

The topic of evaluation and learning methods was based on the experiential learning approach (Kolb, 2015). Some of the interview questions were "Have you ever integrated learning videos or YouTube in the teaching process? How is it implemented?", "What kind of content on YouTube is most relevant for financial learning?", "Are there any challenges in teaching? Do students experience difficulties? If so, what aspects? Can the use of digital media overcome these challenges?" Finally, utilizing media and learning technology is based on the theory of media richness and the cognitive theory of multimedia learning (Mayer, 2014), which suggests that audio-visual media such as YouTube can improve understanding and motivation to learn. Therefore, this study explores "how enthusiastic are students in using YouTube in learning financial management?", "Is there a change in their understanding or performance after using this media?", and "What is the role of YouTube in improving students' motivation to learn?".

Analyzing interview transcripts with experts developed the second part of the questionnaire. The views or opinions collected are by the expert field, namely regarding the prospects for learning financial management in improving financial management skills, teaching methods that can be used by educators in financial management practice classes, problems and obstacles encountered by educators during the teaching and learning process, YouTube contributions in the teaching and learning process, as well as students' interest and performance in using YouTube.

Quantitative data from the perception questionnaire contains statement items adopted from Aprilia & Trihantoyo (2020), Mailizar et al. (2021), and Rohmania et al. (2023), with six indicators, namely ease of access and use, understanding of the material, learning independence, interest and comfort in learning, effectiveness and efficiency of learning, and applications and additional information. The preparation of these items considers the principles in instrument development from Ballouk et al. (2022), namely the importance of the data triangulation process in compiling the interview questionnaire. In addition, this study also uses a quantitative instrument in the form of a cognitive test consisting of 20 multiple-choice questions arranged based on indicators of financial management skills competency. There are several indicators used in the cognitive test, namely measuring students' understanding of the basic concepts of financial management, measuring students' ability to analyse needs and desires in spending, skills in compiling and recording finances systematically, the ability to manage cash flow and prepare simple financial reports, the ability to operate simple software for financial management, and the ability to recognise various financial products.

Data Analysis

This research was analysed using qualitative and quantitative data analysis techniques.

Quantitative data in this study were analysed using descriptive and experimental methods. For the descriptive method, this study used the Pearson correlation test to identify the relationship between students' perceptions of using YouTube as a learning medium and their learning outcomes in financial management courses. Meanwhile, the experimental method with a pre-test and post-test design was used to measure the effectiveness of using YouTube as a digital learning source in improving students' financial management skills. Students were divided into two groups: an experimental group that used YouTube videos as a learning medium, and a control group that used conventional learning methods.

Data were collected through pre-test and post-test intervention tests. Data analysis was conducted using a peer-reviewed sample t-test to determine significant differences between pre-test and post-test scores in each group and an independent sample t-test to compare results between experimental and control groups. The analysis showed that using YouTube as a learning medium positively and significantly improves students' financial management skills.

Qualitative data obtained from semi-structured interviews were analyzed using thematic analysis. Interview transcripts were analyzed to facilitate the preparation of a questionnaire on using YouTube to improve financial management skills. To ensure the validity of qualitative data, several strategies were carried out, including: (a) extending the time of data collection to gain a deeper understanding of the participants' perspectives, (b) conducting continuous and profound observations during the data collection process, (c) applying triangulation techniques such as comparing interview data with expert opinions and relevant literature, and (d) conducting peer debriefing to review data interpretation and minimize researcher bias.

The thematic analysis method allows researchers to identify, analyse systematically, and report patterns (themes) in data. The analysis process begins with open coding, where meaningful pieces of data are identified and labelled based on ideas that emerge from the data. The codes are then grouped into main themes that reflect participants' views on learning prospects, teaching methods, obstacles in the teaching and learning process, YouTube's contribution, and students' interests and performance.

■ RESULT AND DISCUSSION

Data analysis began using 71 questionnaires collected during quantitative data collection. Data was tested using descriptive statistics and presented in tabular form. To analyze the use of YouTube in learning, this research calculated the proportion of respondents who agreed - strongly disagreed (Table 2).

Table 2. Proportion of respondents' answers

Item	Percentage (%)				Correlation
	1	2	3	4	
YouTube makes it easy for me to learn financial management material	0.00	0.00	52.11	47.89	0.613
YouTube allows me to learn clearly	0.00	0.00	11.27	88.73	0.615
YouTube makes me understand the lesson material faster	0.00	0.00	35.21	64.79	0.421
I understand the material better using YouTube	0.00	0.00	15.49	84.51	0.413
YouTube encourages me to be more independent in learning financial management	0.00	0.00	39.44	60.56	0.606

YouTube makes it easier for me to access learning material both online/offline	0.00	0.00	32.39	67.61	0.720
I always concentrate on following lessons by using YouTube learning resources	0.00	0.00	32.39	67.61	0.584
I do not get bored easily learning financial management material using YouTube	0.00	0.00	32.39	67.61	0.578
I enjoy learning to use YouTube because it is more varied	0.00	0.00	18.31	81.69	0.443
I am happy if teachers use YouTube in every lesson	0.00	0.00	18.31	81.69	0.497
I can master the subject matter by using YouTube	0.00	0.00	4.23	95.77	0.529
Using YouTube makes study time more efficient	0.00	0.00	26.76	73.24	0.687
YouTube makes classroom learning more effective	0.00	0.00	35.21	64.79	0.644
I always use YouTube because the learning material is more complete	0.00	0.00	64.79	35.21	0.539
YouTube displays formulas that are packaged thoroughly so that they help me learn well	0.00	0.00	42.25	57.75	0.460
YouTube is very appropriate for applying in theoretical learning	0.00	0.00	2.82	97.18	0.356
I use YouTube as a learning platform	0.00	0.00	2.11	97.89	0.665
I downloaded the YouTube video that will be used so that the display quality is good	0.00	0.00	5.63	94.37	0.469
I like using YouTube because the learning material becomes more informative	0.00	0.00	18.31	81.69	0.509
I use YouTube because the learning material becomes more applicable	0.00	0.00	16.90	83.10	0.441

Table 2 shows that 97.89% of students strongly agree that YouTube is a digital learning resource, making it easier to access online and offline material. Table 1 also explains that 95.77% of students strongly agree that they can master the lesson material using YouTube. Thus, YouTube is very appropriate to apply in theoretical learning. This finding aligns with previous empirical evidence where 98% of students used YouTube as a source of information, and 86% of them stated that YouTube helped their learning (Felanie, 2021; Olasina, 2017a). Therefore, videos are a viable teaching tool. The reliability of this research instrument was tested using the Cronbach Alpha technique, and the results were 0.910, which is more than 0.7. It shows that this research instrument is reliable.

Utilising YouTube as a Digital Learning Resource to Improve Financial Management Skills

Viewed from the perspective of respondents, namely students, this research distributed a questionnaire on using YouTube as a digital learning source to improve financial management skills. This study uses experimental tests with pre-test and post-test designs in quantitative data analysis. The data collected can be seen in the following graph.

The survey results above found that the experimental class showed a higher level of Perception in all learning aspects than the control class, showing that the learning approach or intervention given to the experimental class positively impacts students' learning experiences.

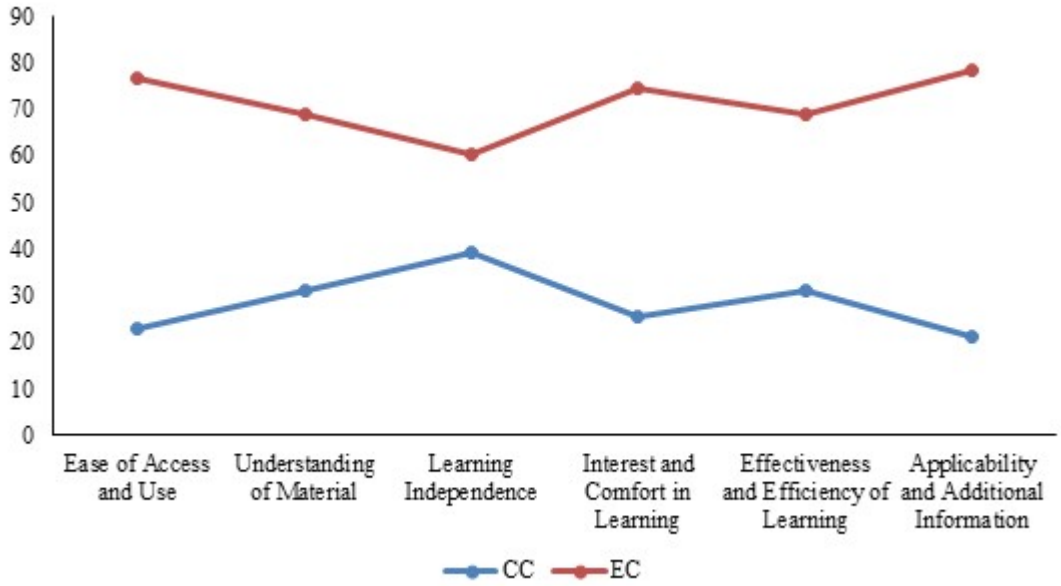

Figure 2. Perception comparison chart

The "Ease of Access and Use" aspect showed the most striking difference, where the experimental class recorded a figure approaching 77%, much higher than the control class, which was only around 23%. It indicates that the media or learning methods in the experimental class are easier for students to access and use. Furthermore, in the "Understanding of Material" aspect, the experimental class also showed a significant advantage, with a score of around 69% compared to 31% in the control class. It shows that delivering material in the experimental class helps students understand the learning content better. However, in the "Learning Independence" aspect, the difference between the two classes is insignificant: around 60% in the experimental class and 40% in the control class. It shows that although the experimental class is slightly superior, developing student learning independence is still a challenge that needs considered in both groups.

The aspect of "Learning Interest and Comfort" shows that students in the experimental class feel much more interested and comfortable participating in learning, which is 74%, compared to only 25% in the control class. It indicates that the experimental class's learning atmosphere and approach are more conducive and enjoyable. In the aspect of "Learning Effectiveness and Efficiency", the experimental class again showed a higher score (around 69%) than the control class (around 31%), which indicates that the method used is more appropriate in terms of time and learning outcomes. Finally, "Application and Additional Information" was the highest in the experimental class, reaching almost 79%. In contrast, the control class only got around 21%. In contrast, students in the experimental class felt that the material presented was more relevant to the real world and was supported by additional helpful information.

The comparison in the graph above shows that the experimental class's learning approach is more effective in improving the quality of students' learning experiences. Therefore, the strategies applied in the experimental class are worthy of being adopted more widely, while still paying attention to strengthening aspects that are still relatively weak, such as learning independence. Furthermore, the analysis results of this research survey with the Ideal Mean (Mi) and Ideal Standard Deviation (SBi) values can be seen in Table 3.

Table 3. Analysis of respondents' perspectives on the use of youtube as a digital learning source

Interval	F	Percentage (%)	Category
$X \geq 3.25$	21	55.26	Strongly agree
$3.25 > X > 2.5$	17	44.73	Agree
$2.5 > X > 1.75$	0	0	Disagree
$X \geq 1.75$	0	0	Strongly disagree
Total	38	100	

Table 3 explains that the response to using YouTube as a digital learning resource in learning Financial Management falls into the strongly agree category. In the table above, the interval score X e" 3.25 is the highest, namely 38 or 53.52% of all participating respondents. Therefore, educational institutions must implement YouTube to develop and improve students' financial management skills. Digital technology plays an essential role in enhancing students' understanding. According to Almurashi (2016), using YouTube videos can effectively teach English, allowing students to practice pronunciation and expand their vocabulary. In addition, YouTube videos help store material in long-term memory, supporting a deeper learning process (Mohammed et al., 2016).

The results of interviews with students and teachers revealed that the combination of face-to-face and digital learning through YouTube helped students solve practical questions about financial transactions. In other words, using YouTube can help the learning process vary so that students do not get bored and can understand the material more easily. Students stated that they understood the material that had not been previously understood from the teacher's explanation after watching the tutorial on YouTube.

This finding aligns with Piaget's constructivist theory, which emphasizes the importance of active student involvement in building their knowledge. Through digital media such as YouTube, students can independently explore and internalize new concepts, strengthening their understanding through meaningful interactions.

A study by Ilyas & Putri (2020) showed that using YouTube videos allows students to understand lessons faster and motivates them to learn. This finding is supported by research, which revealed that learning videos provide a more interactive learning experience and help improve conceptual understanding significantly. Likewise, research by Felanie (2021) shows that the use of online videos increases students' learning motivation. Research by Morris & Rohs (2021) also confirms that integrating videos into learning can strengthen student engagement and improve learning outcomes. Thus, YouTube can be an effective learning medium, supporting student understanding and motivation, especially when meaningfully integrated into instructional design (Burke et al., 2009; Delfisanur, 2020; Utsman et al., 2016).

Opportunities and Challenges of Using YouTube as a Digital Learning Resource in Improving Financial Management Skills

The opportunity for YouTube to be used for education is due to its high pedagogical flexibility, namely 29%, which can be seen in Figure 1. This figure reveals that YouTube's capabilities support online and offline learning in the classroom (Dyosi & Hattingh, 2018). Therefore, YouTube has an excellent opportunity to become a digital platform for learning (Rosenthal, 2018).

Several researchers emphasise that YouTube content in learning can help students increase self-confidence, reduce anxiety, and increase student motivation in learning (Al-Hunaiyyan et al., 2018; Jackman & Roberts, 2014; Saud Albahlal, 2019). Added by Dyosi &

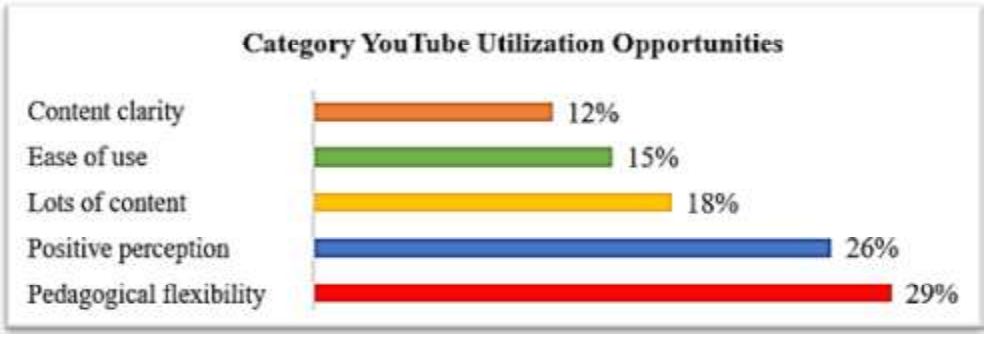

Figure 3. Categorisation of opportunities for using youtube in education

Hattingh (2018) and Sulistianingsih (2019), YouTube has a lot of content that provides interesting educational opportunities. Therefore, YouTube is widely used because it offers various content sources such as tutorials, lectures, and real-time examples (Mukwakungu et al., 2019).

Video-based technologies like YouTube enhance learning by providing rich visualisations and interactive elements, which help students better understand complex concepts such as financial management. Visual aids, animations, and step-by-step tutorials make abstract ideas more concrete and relatable, enabling students to grasp practical applications more effectively (Kay, 2012). Interactivity through pause, rewind, and replay features allows learners to control their learning pace, reinforcing comprehension and retention.

In integrating digital learning resources such as YouTube into the classroom, educators encounter several obstacles in the learning process, namely difficulties in classroom management, because educators cannot control what students access during teaching and learning activities. Students have the freedom to access the internet to open YouTube, so it is less specific whether students are using YouTube to study related material. Besides that, another challenge to using YouTube for education is that educators sometimes lack digital competence (Ve Uzaktan et al., 2019).

Moreover, using YouTube in digital learning influences the student-teacher relationship by shifting the traditional dynamics. On one hand, YouTube can empower students to take more responsibility for their education, fostering autonomy. On the other hand, this can challenge teachers' roles as the sole source of knowledge, requiring them to become facilitators and guides rather than just lecturers. Effective integration of YouTube demands that teachers actively engage with students, guiding them in selecting quality content and encouraging critical thinking about the material presented. This collaborative approach can strengthen the educational relationship but requires teachers to develop digital literacy skills and adapt to new pedagogical roles (Ve Uzaktan et al., 2019)

Regarding content, the challenge when using YouTube as a digital learning resource is that there are many choices of video content and inappropriate comments. The lack of reviews to assess content quality makes searching for helpful videos time-consuming (Krauskopf et al., 2012; Ve Uzaktan et al., 2019). Therefore, reviewing videos is necessary to find content appropriate to the subject (Snelson, 2018). Thus, the use of YouTube in learning is determined mainly by how educators use technology and students' behaviour.

The Effectiveness of Using YouTube as a Digital Learning Resource in Improving Financial Management Skills

Data collection based on the learning outcomes of students who use YouTube and students who do not use YouTube shows that

there is a difference. The quantitative findings are supported by qualitative data from interviews with students and teachers, which revealed that using YouTube increased learning motivation and understanding of the material. One student stated, "With YouTube, I can repeat the explanation of the material that I don't understand from the teacher, so I am more confident when doing assignments."

Thematic analysis of qualitative interview data identified several main patterns in students' experiences using YouTube as a learning medium, including: increased learning motivation, ease of access to materials, and a sense of comfort and confidence in understanding financial concepts. This pattern is consistent with the survey results, which showed a high percentage of interest and comfort in learning.

Integrating quantitative and qualitative findings strengthens the conclusion that YouTube improves learning outcomes statistically and plays a vital role in building a more enjoyable and meaningful learning experience for students. Thus, using YouTube can be seen as an effective learning strategy that combines academic outcomes and psychological aspects of student motivation. After doing the test questions and calculating the N-Gain values, the average learning outcomes of control and experimental class students are as follows.

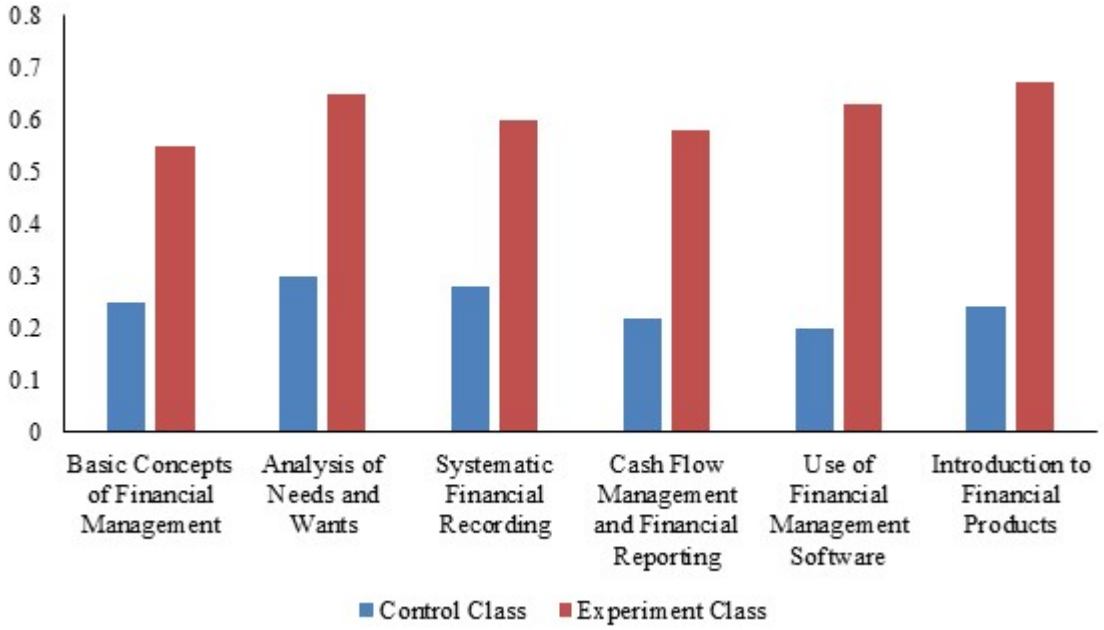

Figure 4. Improvement learning performance

The study results showed a significant difference in the improvement of learning outcomes between the control and experimental classes in all learning indicators. Overall, the experimental class that used YouTube learning media showed a higher increase in N-Gain than the control class. In the indicator of basic financial management concepts, the experimental class recorded an N-Gain of 0.55, much higher than the control class, which only reached 0.25, indicating that students find it easier to understand basic concepts through visual media, such as learning videos.

Furthermore, in the indicator of the ability to analyse needs and wants, the experimental class achieved an N-Gain of 0.65, while the control class only 0.30, which shows that the use of YouTube helps students identify their financial priorities in a more realistic and applicable way. In terms of systematic financial recording skills,

the experimental class again excelled with an N-Gain of 0.60, compared to the control class, which was only 0.28, confirming that visualizing the financial recording process in the form of videos makes it easier for students to understand systematic steps.

Meanwhile, on the indicator of the ability to manage cash flow and prepare simple financial reports, the N-Gain of the experimental class was 0.58 compared to 0.22 in the control class, indicating that video-based explanations are more helpful for students in understanding the calculation process and preparing reports logically. In terms of the use of financial management software, the N-Gain of the experimental class reached 0.63, while the control class was only 0.20. shows that video tutorials are very effective in helping students operate financial management software or applications.

On the indicator of financial product recognition, the experimental class again showed superiority with an N-Gain of 0.67, higher than the control class, which was only 0.24. indicates that visual explanations related to various types of financial products via YouTube help students understand and distinguish products more clearly. In general, these data show that using YouTube media significantly improves students' understanding of concepts, practical skills, and the use of technology in financial management. Thus, YouTube can be considered an effective, interactive learning medium that optimally supports learning objectives.

The normality test results in the control class showed a significance value of 0.368; in the experimental class, it was 0.866. Both are greater than the specified significance value (á = 0.05), so it can be concluded that the data from both groups are normally distributed. Furthermore, the homogeneity test produced a significance value of 0.238, which is also greater than 0.05, indicating that the variance of the two groups is homogeneous. With the fulfillment of the assumptions of normality and homogeneity, it can be continued to the hypothesis test using the independent t-test.

The results of the t-test show that the calculated t value = 6.482, while the t table = 1.994 at a significance level of 0.05 and a certain degree of freedom (df). Because the calculated t value is greater than the t table, there is a statistically significant difference between the learning outcomes of students who use YouTube and those who do not. To measure the magnitude of the influence of YouTube use on learning outcomes, the effect size calculation is carried out using Cohen's d formula. Based on the average difference between the experimental class (80.31) and the control class (66.39) and the assumption of the relevant combined standard deviation, the Cohen's d value H" of 1.1 was obtained, which is included in the large effect category according to Cohen's (1988) interpretation. Thus, using YouTube as a learning medium produces statistically significant differences and shows a considerable practical influence on improving student learning outcomes. This finding strengthens the evidence that video-based learning media can effectively enhance students' understanding of subject matter.

Thus, there is a difference between the control class and the experimental class in improving financial management skills. The findings of this study prove that learning with the use of a digital platform, namely YouTube, is more helpful for teachers and students in the learning process. Learning materials are more interesting through digital platforms, so they can help students understand concepts and help teachers achieve learning objectives in the classroom. Therefore, using YouTube-based learning platforms can improve students' concept understanding and learning achievement (Abdullah, 2013).

Previous findings explain that YouTube benefits students' learning, helps complete assignments, and increases knowledge (Samosir et al., 2018). Furthermore, using YouTube media has proven to be significant for student learning

outcomes and activities compared to using conventional media. Corroborated by Moghavvemi et al. (2018), YouTube is an effective tool to enhance the learning experience. A significant increase in student achievement occurred after learning using the YouTube channel (Ilyas & Putri, 2020). According to Rachmawati & Cahyani (2020), using YouTube videos as a learning resource positively influences improving students' skills. Thus, YouTube effectively enhances student achievement and learning skills (Kibirige & Odora, 2021).

Technology integration, including YouTube, has become an important strategy to improve student competency in Indonesia's vocational education context. In their literature review, Suhanto et al. (2024) emphasized that YouTube can be an effective alternative media in vocational education, allowing for more interesting and interactive delivery of materials. Syarif & Janata (2023) highlighted the importance of improving the competency of vocational high school teachers through technology to face the challenges of the Industrial Revolution 4.0, which includes the use of digital media in learning. Widaningsih et al. (2024) also emphasised the importance of digital competency for TVET educators in Indonesia to optimise technology-based learning.

In other developing countries, digital platforms in vocational education have also shown positive results. Douglas et al. (2017) developed an e-learning portal for developing countries, emphasising the importance of content design that aligns with current e-learning and social trends. In a study in Chakravarty et al. (2019) found that technology-based vocational training programs improved labour market outcomes for youth, especially women, by providing training aligned with local social and cultural norms.

However, this study makes a unique contribution by focusing on improving financial management skills through YouTube in vocational education. Unlike previous, more general studies, this study highlights how targeted digital content can improve critical life skills among vocational students, particularly in Indonesia, where financial literacy is a national priority. Thus, this study confirms the existing literature and provides new insights into how digital platforms such as YouTube can be used strategically to bridge the pedagogical gap and improve the quality of vocational education in developing countries.

Despite the positive results, there were several significant challenges when implementing YouTube as a classroom learning medium. Significant barriers identified included unstable or slow internet connections that limited the smoothness of video streaming and access to materials, technical constraints such as limited digital devices owned by students, and occasional platform glitches. Feedback from teachers and students highlighted that these constraints sometimes hampered the optimization of the learning process.

To improve the implementation of YouTube-based learning, recommendations that can be given include improving internet infrastructure in schools so that connections are more stable and faster, providing adequate digital devices for students, and training for teachers to enhance digital literacy and the ability to integrate YouTube content into learning designs effectively. In addition, preparing quality and relevant video selection guidelines can help teachers and students maximize using YouTube as a learning medium (Koehler et al., 2009; Shamsuddin et al., 2013).

■ CONCLUSION

This research concludes that YouTube is helpful for students in supporting learning in the Simple Financial Management subject. Through YouTube, video tutorials are easily accessible to help students overcome difficulties in understanding learning material. YouTube is a digital learning resource that is very popular among young people, students, and adults. Therefore, educators should utilize YouTube to

support students' understanding of online learning and practice.

However, the use of YouTube in this research object is still not entirely focused on using YouTube as a digital learning resource. Because many other features can be accessed via the internet, it allows students to access content other than YouTube, which is already provided, can certainly disturb students when working on financial transaction questions takes a long time and cannot be finished on time because students do not immediately complete the YouTube video in the end, students are free to access the internet during class hours. The learning process becomes less effective due to the time it takes to complete assignments. Thus, educators are advised to supervise students and pay attention to what they access content to avoid the negative impacts of technological developments.

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