

THE EFFECT OF DIFFERENT DELIVERY STRATEGIES AND LOCUS OF CONTROL ON PROCEDURAL LEARNING OUTCOMES

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Abstrak

Penelitian ini bertujuan untuk mengeksplorasi pengaruh strategi penyampaian terhadap hasil belajar prosedural siswa pada pembelajaran teks anekdot, dengan locus of control sebagai variabel moderator. Penelitian ini menggunakan metode kuasi-eksperimental dengan desain faktorial dua kali dua dan melibatkan enam puluh empat siswa yang dibagi menjadi dua kelas: eksperimental (menggunakan media video) dan kontrol (menggunakan buku ajar). Analisis data dilakukan dengan menggunakan teknik *Two-Way ANOVA*. Hasil penelitian menunjukkan bahwa strategi pembelajaran berbasis media video secara signifikan meningkatkan hasil belajar siswa dibandingkan dengan buku ajar. Siswa dengan locus kontrol internal memiliki hasil belajar rata-rata yang lebih tinggi daripada siswa dengan locus kontrol eksternal, meskipun pengaruh locus kontrol tidak signifikan secara statistik. Selain itu, tidak ditemukan interaksi yang signifikan antara strategi penyampaian dan locus kontrol pada hasil belajar. Penelitian ini merekomendasikan penggunaan strategi berbasis multimedia untuk mengoptimalkan hasil pembelajaran, terutama untuk materi prosedural. Temuan ini juga memberikan wawasan praktis untuk mempertimbangkan faktor karakteristik masing-masing siswa, seperti locus kontrol, dalam memilih metode pembelajaran yang lebih efektif dan relevan.

Kata Kunci: *Delivery Strategies; Locus of Control; Procedural Learning Outcomes*

Abstract

This study aims to explore the influence of delivery strategies on students' procedural learning outcomes on anecdotal text learning, with locus of control as the moderator variable. This study used a quasi-experimental method with a two-to-two factorial design and involved sixty-four students who were divided into two classes: experimental (using video media) and control (using textbooks). Data analysis was carried out using the Two-Way ANOVA technique. The results show that video-based learning strategies significantly improve student learning outcomes compared to textbooks. Students with internal control loci had higher average learning outcomes than students with external control locus, although the influence of the control locus was not statistically significant. In addition, no significant interaction was found between delivery strategies and control loci on learning outcomes. This study recommends the use of multimedia-based strategies to optimize learning outcomes, especially for procedural materials. These findings also provide practical insights to consider the characteristic factors of each student, such as the control locus, in choosing a more effective and relevant learning method

Keyword: *Delivery Strategies; Locus of Control; Procedural Learning Outcomes*

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INTRODUCTION

One of the important aspects of life is education. Education is an effort to prepare the young generation to welcome and face life in the future, therefore education must be carried out as best as possible to produce quality human resources (Puspa et al., 2023). In the world of education, it is inseparable from one of the main keys, namely the learning process. In the learning process, there are various activities designed in such a way by teachers where they aim to help the learning process. Furthermore, students form their own experiences by interpreting the knowledge (Setyosari et al., 2023). The learning process can be said to be carried out well and successfully if student learning outcomes improve. Learning outcomes are behavioral changes resulting from the learning process that are observed and measured in the form of changes in knowledge, attitudes and skills (Hanshaw & Dickerson, 2020). However, in its implementation, not a few students experience obstacles when learning which has an impact on the low learning outcomes obtained (Priliyanti et al., 2021). Low learning outcomes can be influenced by several factors, one of which is caused by improper learning strategies.

The problem of learning strategies also occurs in Indonesian subjects, especially those related to procedural knowledge in one of the schools, namely SMK Negeri 7 Jember. Procedural knowledge is knowledge of how individual's complete tasks related to the selection of strategies and problem-solving processes that contain steps from beginning to end (Pertwi, 2021). From the results of interviews conducted by researchers, it was found that the delivery of material during teaching and learning activities was less than optimal, less varied, and seemed very monotonous. One of the reasons is that the way teachers *deliver* material rarely applies strategies that are suitable for the type of knowledge to be taught. So many students do not understand the material presented. Therefore, to overcome this problem, one of the strategies that can be used is to implement a delivery strategy. Delivery strategy is a variable component in the method to carry out the learning process. Overall, there are three components that need to be considered in the delivery strategy, namely learning media, student interaction with media, and teaching and learning forms.

As the moderator variable in this study, the locus of control was chosen to fill the gap. Locus of Control as an innate characteristic of students is believed to have a role in the teaching and learning process related to learning outcomes in general and the attractiveness of learning in particular. This is considered to influence students in exercising control over themselves in various aspects of their lives, including in learning (Al Qusaeri & Sunarto, 2024) Understanding the locus of control is also very necessary for educators to find the most appropriate way in the learning delivery process (Degeng, 2021). In contrast to the design of learning activities in western countries that also emphasize learning strategies such as organizational strategies, delivery strategies and management strategies, Indonesia's learning strategies so far have been more likely to learn only to get learning results in the form of final grades. Almost never has a learning concept that also lifts the innate nature of students or the characteristics of students into the learning process itself. The importance of adding these innate learner traits will be able to provide significant added value for learning success, the control locus can help educators and counselors create more efficient teaching and learning strategies for students (Sabda et al., 2024).

Locus of control as individual characteristics can be sorted into two types, namely internal and external. Groups of students with an innate nature of the internal control locus tend to be proactive in learning, such as looking for new information or processing and utilizing various other sources of information that are not even provided by the teacher. While the group of students with the external locus of control is known to be more likely to be passive in learning, this group of students tends to prefer to receive control from outside themselves, or in other words prefer to

wait for the teacher's orders in the learning process or to do tasks related to the subject (Rotter, 1966). At the other end of the continuum, individuals with more external LOCs consider themselves to have little or no control over their lives; they tend to feel insecure and are more prone to stress and depression (Sujadi, 2020). Scientific evidence of the influence of control locus characteristics on learning outcomes shows that groups with internal control almost always achieve higher average achievement than students with external control locus types (Tambunan, 2021). Students who have an internal locus realize that they have more control over the achievement of their learning achievement so that they obtain better learning outcomes (Rahmawati & Suciati, 2023). From this description, it can be concluded that the orientation of the locus of control owned by students is positively correlated with the learning outcomes achieved. In this case, it also refers to the results of research that states that the locus of control can affect students' confidence in the learning process so that students have an attitude that is able to direct them to behave positively and have responsibility for their future (Hidayatulloh et al., 2021).

In the learning process, a strategy is called a delivery system, in which it is defined as "the sum of all the components necessary to make an instructional system operate as it should" (Gagne & Briggs, 1978). Thus, the delivery strategy includes the physical environment, teachers, learning materials, and activities related to learning. In other words, media is one of the important components of the learning delivery strategy. That is why learning media is a key area of study in this strategy. Learning media is a component of a strategy that is loaded with messages that will be conveyed to students in the form of people, tools, and materials. The application of delivery strategies in Indonesian learning can support learning outcomes related to procedural knowledge, because it has one component, namely learning media. Where learning media is part of the study of delivery strategies and can refer to the methods used to convey learning to students. The choice of media in the implementation of the right delivery strategy can have an impact on student learning outcomes later. The learning materials packaged through the media program will be clearer, more complete, and attract students' interest in carrying out the learning process (Herawati & Sidik, 2023).

The implementation of delivery strategies can increase focus in receiving the material delivered by teachers (Nasikhin & Mahfud Junaedi, 2022). Not only that, after the use of appropriate and sustainable learning delivery strategies in cultural arts and crafts subjects, students will achieve good or high achievements (Agustina et al., 2023). Therefore, it can be said that the selection of the right learning strategy can affect student learning outcomes, especially in procedural knowledge. This study supports the view that multimedia-based learning strategies are more effective in improving learning outcomes. Learning with a multimedia approach helps students understand the material more deeply through the integration between visual and audio (Mayer, 2021). In addition, the use of video media has been proven to be able to increase student involvement in the learning process, as stated by (Fazarini et al., 2024), that video-based learning provides visual stimulation that motivates students to learn more actively.

Based on the explanation that has been explained, research on the application of different delivery strategies can be used as a good learning delivery strategy in procedural materials in Indonesian subjects at SMKN 7 Jember. In the hope of providing deeper insights into how effective teaching methods, especially those related to procedural knowledge, educators can choose which delivery strategies are more in line with their students' needs in improving the overall quality.

METHOD

This study uses a quasi-experiment, where this research aims to find out the existence of an influence or effect of something added to the subject or in this case students. The quasi-experimental method was chosen because the population in this study was confirmed to be heterogeneous and did not form a new group (Gopalan et al., 2020).

In this quasi-experiment, the sample taken consisted of two classes, namely the experimental class and the control class. Where in each class there are 32 students. The control class uses a delivery strategy using the help of a textbook. Meanwhile, the experimental class uses a delivery strategy by utilizing the help of video media for learning anecdotal texts in Indonesian subjects. This study was designed using a 2 x 2 factorial technique with a data analysis technique using two-way Anova. This study uses the free variable, namely the delivery strategy and the bound variable, namely the learning outcome, as well as the moderator variable locus of control.

RESULT

By using a questionnaire to measure the locus of control tendency of students, out of 64 students, 35 students had internal tendencies, and 29 students had external tendencies. The distribution in the control class was 16 students with internal tendencies and 16 students with external tendencies. Meanwhile, in the experimental class, there were 19 students with internal locus of control tendencies and 13 students with external tendencies. Each class gets different treatment on the same material in the same period of time.

Tabel 1. Descriptive analysis

Class	Locus	N	Mean	Std. Deviation
Control	Internal	16	57.50	12.383
	External	16	52.50	12.649
Experiment	Internal	19	71.31	13.523
	External	13	67.69	12.519

Based on table 1, the learning outcomes of the experimental class were higher than that of the control class, both in students who had internal and external locus of control tendencies. When viewed from the locus of control of students, in both classes it can be seen that students with internal tendencies have a higher average when compared to students who have external tendencies. To find out the data results more accurately, parametric analysis was carried out using the two-way anova technique. The normality test was carried out to see if the distribution of data was normal, with a significance level $\alpha = 0.05$.

Tabel 2. Normality test

Class	Statistic	df	Sig.
Control	.971	32	.524
Experiment	.956	32	.211

Based on Table 2, the significance value for the control class was 0.524 and in the experimental class, a significance value of 0.211 was obtained. From the data of the two classes, the results were obtained that the significance value of both was greater than the predetermined significance level ($\alpha = 0.05$). So it can be concluded that the data obtained from the control class and the experiment are normally distributed, then a homogeneity test is carried out using the Levene technique.

Tabel 3. Homogeneity test

Levene Statistic	df1	df2	Sig.
.196	3	60	.899

Based on Table 3, it was obtained that the significance value was 0.899 which was greater than the predetermined significance level ($\alpha = 0.05$). This shows that the data variants of the two classes are homogeneous. Furthermore, to find out the influence on each variable, data analysis was carried out using the Two-Way Anova technique.

Table 4. Tests of between-subjects effects

Dependent Variable: HasilBelajar					
Source	Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	3826.735	3	1275.578	7.752	<.001
Kelas	3305.654	1	3305.654	20.089	<.001
Locus	292.135	1	292.135	1.775	.188
Kelas*Locus	7.444	1	7.444	.045	.832
Error	9872.874	60	164.548		
Total	263075.000	64			
Corrected Total	13699.609	63			

a. R Squared = .279

DISCUSSION

Indonesian language learning has an important role, especially related to procedural knowledge in the world of education. But in reality, this learning, which was initially considered easy and interesting by students, ended up becoming boring and monotonous learning because the learning strategies used by teachers in creating a learning environment were still not interesting (Sari & Sinaga, 2024). One of the important tasks of teachers is to design strategies that will be used in teaching and learning activities to achieve student learning outcomes (Intan et al., 2022). This is in line with opinion that learning strategies aim to be a very important activity in learning in schools and efficiently regulate teaching and learning patterns to improve student learning outcomes at school (Widowati et al., 2023). Therefore, this study aims to find out one of the factors influenced by learning strategies, namely delivery strategies. This study had 20 questions on the questionnaire that were responded to by students of class XI DKV SMK Negeri 7 Jember. This question is made based on the material in the Learning Implementation Plan, the material to be tested is about the structure and linguistic rules of anecdotal texts.

In the experimental class, the teacher provided the application of delivery strategies through learning media in the form of learning videos. During the learning process, the students' responses in understanding the material were very enthusiastic. This is in line with the opinion that if the strategy used is right, the results achieved will be maximized (Djagom et al., 2023). Furthermore, to train more deeply about students' procedural knowledge from the material, structure, and language rules in students, teachers form groups that aim to determine and analyze the material that has been learned by students through the learning media that the teacher has previously given, then presented by students, and the final stage of this learning activity is to provide a posttest that aims to know the students' learning outcomes on procedural knowledge. Procedural knowledge is the steps that must be taken to solve problems and be able to explain or justify a way to solve problems (Rahayu et al., 2024). Therefore, the selection of delivery strategies through learning media in this experimental class can be said to meet the criteria for learning desire from students. Then in the control class, the delivery strategy given by the teacher in the classroom learning activities only uses learning media in the form of books, then continues with provide a posttest that aims to know the learning outcomes of students on procedural knowledge. In the context of education, the locus of control plays an important role in student motivation and performance. Students with an internal locus of control show a higher level of learning independence (Al Mulhim, 2020). Internal locus of control has a significant positive correlation with learning

motivation and academic achievement, especially in technology-based learning (Althubaiti et al., 2024). The locus of control also affects the individual's ability to manage time and academic pressure, which is especially relevant in modern digital-based education (Musyarofah et al., 2024). From the above explanation, to find out the effect of the use of different delivery strategies on procedural learning outcomes in Indonesian subjects, it can be seen in table 4.

Based on the results of the analysis of Table 4, delivery strategy employed in learning significantly influences procedural learning outcomes, as indicated by a significance value of 0.001 ($\alpha < 0.05$). This result underscores the critical role of well-designed instructional strategies in enhancing student performance in procedural tasks. The implication is that educators need to carefully plan and implement delivery methods to optimize learning outcomes. Conversely, the locus of control, as a moderator variable, did not demonstrate a significant effect on procedural learning outcomes, with a significance value of 0.188 ($\alpha > 0.05$). This suggests that individual differences in locus of control may not directly impact the effectiveness of procedural learning, highlighting that external instructional strategies could have a more dominant role in determining outcomes than internal learner characteristics in this context. Additionally, the interaction between delivery strategy and locus of control was also not significant, with a significance value of 0.832 ($\alpha > 0.05$). This indicates that the combination of these factors does not produce a synergistic effect on learning outcomes. The overall model explained 27.9% of the variability in procedural learning outcomes ($R\text{-Squared} = 0.279$), suggesting that other unexamined factors contribute substantially to learning outcomes. Future research should explore additional variables that might interact with delivery strategies to provide a more comprehensive understanding of the factors influencing procedural learning outcomes.

The findings of this study highlight the significant role of delivery strategies in influencing procedural learning outcomes. It was observed that the way instructional content is delivered has a meaningful impact on how well students perform in tasks requiring procedural knowledge. This suggests that effective design and implementation of delivery methods are critical in facilitating better learning outcomes. Educators and instructional designers must prioritize the selection of strategies that align with the learning objectives and the nature of the content to ensure optimal engagement and understanding among students. Interestingly, the study also revealed that the locus of control, which represents an individual's belief in their ability to influence outcomes based on internal or external factors, does not have a notable impact on procedural learning outcomes. This finding indicates that, in this context, individual differences in locus of control do not significantly shape the effectiveness of learning strategies. It highlights the possibility that procedural tasks are more influenced by external instructional factors than by the learner's personal orientation toward control over their learning process.

Furthermore, the interaction between the delivery strategy and locus of control was found to be non-significant. This means that combining these two variables does not create a compounded effect on learning outcomes, suggesting that their influence operates independently. These results emphasize the importance of focusing on refining external instructional methods rather than attempting to tailor strategies based on individual differences in locus of control. Overall, the study underscores the necessity of exploring additional variables that may affect procedural learning outcomes. While the delivery strategy is critical, other factors—such as prior knowledge, motivation, or environmental aspects—could also play significant roles. Future research should aim to identify and examine these factors to develop a more comprehensive understanding of how to optimize procedural learning in diverse educational settings.

CONCLUSION

This study highlights the significant role of delivery strategies in improving procedural learning outcomes, demonstrating that well-designed instructional methods, particularly multimedia approaches like video-based learning, enhance student engagement and comprehension. Additionally, the lack of interaction between delivery strategies and locus of control suggests these factors operate independently. The findings emphasize the need for educators to thoughtfully select and implement delivery strategies that align with learning objectives and student needs. It also underscores the necessity for further research to identify additional factors influencing procedural learning outcomes, such as prior knowledge, motivation, and environmental influences, to develop a more comprehensive understanding of effective teaching strategies in diverse educational contexts.

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