

THE EFFECT OF LEARNING STRATEGY AND INITIAL KNOWLEDGE ON THE ABILITY TO DEVELOP WRITING SKILLS ASSESSMENT INSTRUMENTS

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Abstract

This study was aimed at identifying the the effect of learning strategies and initial knowledge on the ability in developing writing skills assessment instruments for students in the Indonesian Language and Literature Education Study Program, FBS, UNJ. The method used in this research was experimental research with 46 samples. Sample 3 PB1 was treated with metacognition strategy and sample 3 PB2 was treated, with strategy advance organizer. The research instrument was a test of the ability to develop writing skills assessment instruments and a test of initial knowledge. After testing the hypothesis with the ANOVA test, in the 2 X 2 calculation table, $F_{\text{count}} (\text{Inter-A}) 6.008 > F_{\text{table}} 4.200$ at the level of $\alpha = 0.05$, indicating that H_1 is accepted and H_0 is rejected. This means that there are differences in ability to develop writing skills assessment instruments between students who are treated with metacognition strategies and strategies advance organizer. Furthermore, testing the hypothesis about the effect of the interaction of learning strategies and initial knowledge on the ability to develop writing skills assessment instruments and testing prior knowledge, data shows $f_{\text{arithmetic}} (\text{AxB interaction}) = 5.485 > f_{\text{table}} = 4,200$ on the level of $\alpha = 0.05$, H_1 accepted and H_0 rejected. That is, there is an interaction effect between learning strategies (metacognition strategies and strategies advance organizer) and initial knowledge (high and low) on the ability to develop writing assessment skills instruments. The learning outcomes of the ability to develop students' writing assessment skills instruments are influenced by learning strategies and initial knowledge.

Keywords: Learning Strategy, Initial Knowledge, Writing Skills, Assesment

INTRODUCTION

The use of appropriate assessment instruments, Kusnadar (2013) will produce valid and accurate information on the achievement of student competencies. Arikunto (2013) good evaluation result can evaluate the actual situation. The writing skills assessment instrument used to show learning outcomes. The existence of writing skills instruments is expected to be a measure of achievement accurately and completely.

The assessment of Indonesian language learning is multifaceted. Ariyana (2019) explained that the assessment of Indonesian language and literature learning is a process of gathering information during learning activities. The emphasis of the assessment is on the four aspects of listening, reading, speaking and writing skills. The four aspects of language

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skills are considered in developing assessment instruments. However, this study only focused on the preparation of writing skills assessment instruments.

The writing skills assessment instrument as a performance-based measurement tool can be a product. Performance appraisal instruments in writing skills need to pay attention to several elements, namely the grading grid, performance assignment instructions and assessment rubrics. Things that need to be considered in the preparation of writing assessment instruments include the formulation of competency achievement indicators, assessment objectives, and standard performance criteria to be used, making performance assignments, in the form of instructions or orders, and assessment rubrics as assessment guidelines.

In the practice of assessment, teachers still encounter many difficulties. Hajaroh, Islam, & Mataram (2018) explained that the problem faced in assessment is the difficulty of changing the teacher's paradigm regarding what assessment should be carried out. The teacher only knows the assessment instrument in the form of a test and needs to be done after the students have done the learning process. Bisri & Ischsan (2017) in their research found that 50% of teachers in Bogor Regency experienced difficulties in making context-based instruments. In conducting the test, it has not paid attention to whether the results of students' abilities are in line with the set standards. Ansari (2018) explains that the form of questions for Indonesian language and literature exams to measure the achievement of language and literature learning outcomes has not been proportional, both in form and number of questions. Even if there are items that test language and literature material, it is more on mastery of cognitive aspects.

Regarding the development of writing skills assessment instruments, it turns out that Indonesian language teachers and students as prospective teachers, especially the Indonesian Language and Literature Education Study Program, the Language and Arts Faculty, state of Jakarta University are still experiencing difficulties. In particular for students, these difficulties include the preparation of a question grid, which includes formulating question indicators, determining the technique and form of assessment, making question instructions and item questions, and compiling assessment rubrics and scoring guidelines. This difficulty occurs partly because educators do not choose the right learning strategy. For that, it needs to be overcome by using effective learning strategies. Strategies that are appropriate and relevant to the above problems are metacognition strategies and advance organizer strategies.

Dawud (2008: 82) argued that metacognition strategy is an effort to use cognitive knowledge and organize learning through planning, monitoring and assessing learning for himself. Murtadho (2013) adds that this process consists of planning activities, cognitive monitoring activities and evaluation activities of what has been done. So, this strategy is based on how learning is presented so that students understand the concept of the subject matter by organizing their knowledge in the planning, monitoring, and evaluation stages.

Werdiningsih's (2015) showed that the use of metacognition strategies is effective in language skills. Elementary students can focus on learning, study planning, and evaluate progress and learning outcomes in achieving success in learning Indonesian. The effectiveness of using metacognition strategies is shown by Alshammari (2015). The results of the study proved that the metacognitive strategies help students' understand and develop better the learning skills in high school students in Saudi Arabia.

In addition, using metacognition strategies, develop writing skills assessment instruments can use strategies, *advance organizer*. Ausubel in Suprahatiningrum (2017), the *advance organizer* can be analogized as a bridge that connects initial knowledge with new knowledge. Naibaho (2016) explains that using an advance organizer when starting a lesson will help students see the "big picture" of what will be taught and how the meaning of related information is. So, the strategy *advance organizer* is a learning process to achieve a learning goal through action or the process of connecting existing material concepts with new material concepts so that teaching and learning activities can be carried out effectively and efficiently. Ernaeni & Gunawan's (2019) proved that the strategy *advanced organizer* has a significant effect on the creative thinking skills of students at SMP Negeri 33 Bandar Lampung.

Learning to develop writing skills assessment instruments will be achieved well if students already have initial knowledge. Pamungkas, Setiani, & Pujiastuti (2017) explain the initial knowledge of abilities or knowledge that students have before learning takes place. Initial ability is a prerequisite that will be used in following further learning.

The purpose of this study was to determine (1) the differences in the ability to develop writing assessment instruments between students who were treated with metacognition strategies and strategies advance organizer. (2) the effect of the interaction of learning strategies and the level of initial knowledge on the ability to develop instruments for assessing students' writing skills.

RESEARCH METHOD

This research is designed to test hypotheses to prove a causal relationship between two or more variables. In experimental research, a treatment (independent variable) is tested whether the treatment has an influence on other variables (dependent variable). This hypothesis test using ANOVA calculations. The data collection technique used the ability test instrument to develop writing skills assessment instruments and initial knowledge tests.

The ability to develop a writing skill assessment instrument is the student's ability to compile a tool used to assess skills in expressing ideas in the form of writing in the form of assessment grids, instructions and items, and an assessment rubric.

RESULTS AND DISCUSSION

There are three variables in this study, namely the ability to develop writing assessment instruments as the dependent variable, learning strategies as independent variables, and students' prior knowledge (high and low) as attribute variables. The following is a brief description of the data from statistical calculations.

Table 1. Data Description Hypothesis Testing for

Capabilities	Description	Learning Strategies		Total
		Metacognition (A1)	Advance Organizer (A2)	
Early	n	8	7	15
	ΣX	706	573	1279
	Average	88.30	81.85	72.571
	SD	5,175492	3,412163	8.5
	Var	26.8	11.6	38.4
	ΣX^2	498436	328329	826765
Height (B1)	N	8	7	15
	ΣX	618	508	1126
	Average	77.30	72.60	149.8
	SD	1.8	5.02	6.8
	Var	3.5	25.3	28.762
	ΣX^2	381924	258064	639988
Low (B2)	N	16	14	30
	ΣX	1324	1081	2405
	Average	165.5	154.4286	319.929
	SD	7.03	8.4	15.481
	Var	30.3	36.9	67.2
	ΣX^2	880 360	586 393	1466753
Total	N	16	14	30
	ΣX	1324	1081	2405
	Average	165.5	154.4286	319.929
	SD	7.03	8.4	15.481
	Var	30.3	36.9	67.2
	ΣX^2	880 360	586 393	1466753

Based on these data that test the ability to develop assessment instruments writing skill metacognition strategies on students group that has a high level of knowledge gained an average value of 88, 3 and in the group of students who have low-level knowledge of 77.3. The ability to develop writing skills assessment instruments with and strategy advance organizer in the group of students with high-level knowledge obtained an average score of 81.85 and for the group of students with low-level knowledge of 72.6.

Summary descriptions of frequency and percentage of data on the ability to develop instruments Assessment of writing skills of students who are treated with metacognition strategies, both groups of students who have high or low initial knowledge, can be seen in the following table.

Table 2. Frequency Distribution Capabilities Developing Student Writing Skills Assessment Tools with Metacognition Strategy

Class Interval	Frequency Absolute	Frequency Cumulative	Frequency Relative (%)
73.0 to 76.9	3	3	18.8%
77.0 to 80.9	5	8	31.3 %
81.0-84.9	2	10	12.5%
85.0-88.9	1	11	6.3%
89.0-92.9	3	14	18.8%
93.0-96.9	2	10	12, 5%
	16		100%

From the table, the calculation of the results of the test of the ability to develop a writing skill assessment instrument with metacognition strategies from the two groups of initial knowledge levels (high and low) has a range of scores of 1-100; the number of students is 16 students; the lowest score is 73 and the highest is 94; and an average score of 82.75. Class ranges of 21; the number of interval classes is 6 classes; and the length of the interval 4.

Furthermore, a summary description of the frequency and percentage of data on the ability to develop instruments for assessing writing skills of students who are treated with strategies, advance organizer both groups of students with the high and low initial knowledge, can be seen in the following table.

Table 3. Frequency Distribution of Ability to Develop Student Writing Skills Assessment Instruments with Advance Organizer Strategy

Class Interval	Absolute	Frequency Cumulative	Frequency Relative(%)
65.0-69.9	2	2	14.3%

70.0-74.9	3	5	21,4%
75.0-79.9	2	7	14.3%
80.0-84.9	7	14	50.0%
	14		100%

From the calculation of the results of the test the ability to develop writing skills assessment instruments for groups of students who take classes with and strategy advance organizer from both groups the high and low initial knowledge levels have a range of scores of 1-100; the number of students is 14 students; the lowest score is 65 and the highest is 84; and an average score of 77.2. The class range is 19; the number of interval classes is 4 classes, and the length of the interval 5.

Next, a statistical test was conducted to see the effect of the interaction between learning strategies and the level of initial knowledge on the ability to develop writing assessment instruments. Testing this hypothesis using two-way analysis of variance (ANOVA) technique. Analysis of variance used two-way analysis of variance (2 X 2) to test the effect (interaction effect) of the independent variables, namely metacognition strategy and strategy advance organizer on the dependent variable, namely the ability to develop writing skills assessment instruments.

The results of the calculation of the two-way ANOVA test can be briefly seen in the following table.

Table 4. Summary of Two-Path ANOVA Calculation Results of

Variance Source	JK	db	RJK	F _o	F _(0.05; 26)
Between A1 and A2	228,809	1	228,809	6,008	4,200
Interaction AB	77.12	1	5,485	5,486	4,200
Within	441,571	26	16,983		
Total	1527,800	29			

Kriteria Fcount to test the difference between A1 and A2 and AB Interaction

If $F_{count} > F_{table}$, then H_0 is rejected, H_1 is accepted

If $F_{counts} < F_{table}$, then H_0 accepted, H_1 rejected

Based on calculations in the table 4, the following will describe each of these hypotheses.

1. There are differences in the ability to develop writing assessment instruments between students who are treated with metacognition strategies and strategies advanced organizer

Statistically, the first hypothesis formulated as follows:

$H_0: \mu A_1 \leq \mu A_2$

$H_1: \mu A_1 > \mu A_2$

In the table above the ANOVA 2 X 2 calculation above, between A1 and A2 $f_{\text{count}} = 6.008 > f_{\text{table}} = 4.200$ at $\alpha = 0.05$, then H_1 is accepted and H_0 is rejected. This means that there are differences in the ability to develop writing skills assessment instruments between students who are treated with metacognition strategies and strategies advance organizer. This right proves that the learning outcomes of the ability to develop writing skills assessment instruments for groups of students treated with metacognition strategies are different from groups of students treated with advance organizer strategies.

Judging from the acquisition of average scores, the group of students who studied with metacognition strategies was 82.8 and those treated with advance organizer was 77.25. The average value of the ability to develop an instrument for assessing students' writing skills in the group treated with metacognition strategies was higher than those treated with the strategy of advance organizer.

When it is compared with the pre-test scores of students who were treated with the metacognition strategy, the mean scores for final test showed a significant improvement. The pre-test average score of this group was 61.2, while the average score for the final test increased by 82.8. This increase was due to the effectiveness of the metacognition strategies used in the treatment.

The initial test was given to determine the initial ability to develop writing skills assessment instruments that students had before being given treatment. At the end of the lesson, students are given a test to determine the final learning outcome. This final result is an indicator of the influence of the strategy used. In this study, two strategies can affect the ability to develop writing skills assessment instruments. However, these two strategies have different levels of effectiveness. Metacognition strategies are more effective than strategies advance organizer in increasing the ability to develop students' writing skills assessment.

2. There is an interaction effect between learning strategies (metacognition strategies and strategies advance organizer) and initial knowledge (high and low) on the ability to develop student writing assessment instruments

Statistically, the second hypothesis can be formulated as follows.

$H_0: INT A \times B = 0$

$H_1: INT A \times B \neq 0$

In the ANOVA 2 X 2 calculation table above 4, the interaction of AB $f_{counts} 5.486 > f_{table} = 4.200$ at the level $\alpha = 0.05$, then H_1 is accepted and H_0 is rejected. That is, there is an interaction effect between metacognition strategies and strategies advance organizer and initial knowledge (high and low) on the ability to develop instruments for writing assessment skills.

The results of the calculation of the average value of the ability to develop writing skills assessment using metacognition strategies in the group of students who have high initial knowledge (A_1B_1) was 82.25 and in the group of students who have low initial knowledge (A_1B_2) amounted to 77.3. Meanwhile, using strategies advance organizer in the group of students with high initial knowledge (A_2B_1) was 81.9 and in the group of students who had low initial knowledge (A_2B_2) was 72.6. This interaction can be described in the following graph.

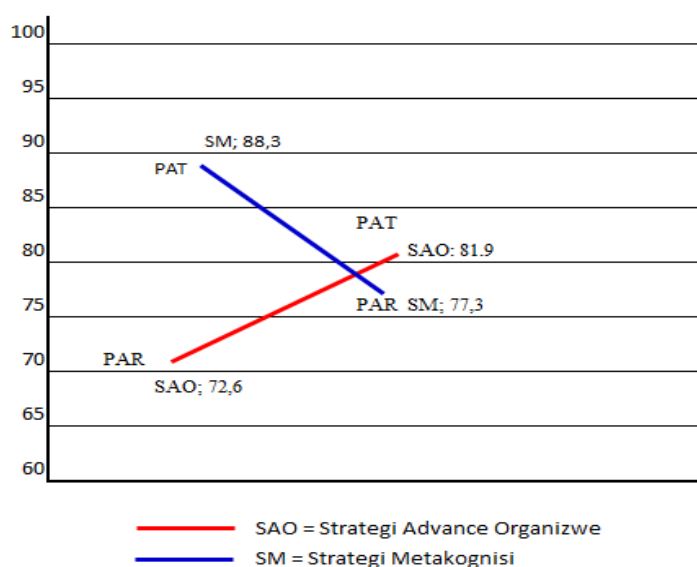


Figure 1. The interaction between Metacognition Strategies, Strategies Advance Organizer, and Initial Knowledge of the Ability to Develop Students' Writing Skills Assessment Instruments

Based on the ANOVA calculation, there is an interaction effect of learning strategies and initial knowledge on the ability to develop writing skills assessment. The application of this strategies and students' initial knowledge level interacts are affects toward the ability to develop writing skills assessment instruments. This means that the metacognition strategy and advance organizer was affect the student's ability to develop writing skills assessment instruments if they match the level of initial knowledge (high and low) the student has.

Each student has differences in mastering the material in developing writing skills assessment instruments. These differences are influenced by internal and external factors. The internal factors referred are the level of initial knowledge, while the external factors are learning strategies, namely metacognition strategies and strategies advance organizer. The students who were treated with metacognition strategies has an interaction between the metacognition strategies and two groups of students with high and low levels of initial knowledge. This interaction affects the ability to develop writing skills assessment instruments as abilities resulting from this process. Likewise, in the class, the students was treated with strategy advance organizer got interaction with two groups of students, namely students who had a high level of initial knowledge and those who had a low level of initial knowledge. Initial knowledge affects learning outcomes to develop writing skills assessment instruments. This is consistent with the research of Muammar, Harjono, & Gunawan (2017), the diversity of students' backgrounds and experiences causes their initial knowledge is not the same. Students who have high initial knowledge can learn better than their peers who have average and low abilities.

CONCLUSION

Based on the calculation of the results of hypothesis testing, it has been stated that there are differences in the ability to develop writing skills assessment instruments between students who are treated with metacognition strategies and strategies advance organizer. This proves that the ability to develop writing skills assessment instruments for groups of students treated with metacognition strategies is different from groups of students treated with advanced organizer strategies. Learning strategies and students' initial knowledge level interact and influence the ability to develop students' writing skills assessment instruments. This means the metacognition strategy and advance organizer used by the lecturer in learning affect the ability to develop writing skills assessment instruments if they match the level of initial knowledge (high and low) possessed by students.

REFERENCES

- Ansari, K. (2018). Assessment of Learning Indonesian Literature with High Level Thinking Skills (HOTS). *National Seminar on Indonesian Language and Literature Education I* (pp. 21-34). Medan: State University of Medan. Retrieved from U
- Alshammari, MK (2015). The effect of Using Metacognitive Strategies for Achievement. *International Journal of Education, Learning and Development*, 3(7), 47-54.
- Arikunto, S. (2013). *Basics of Educational Evaluation*. Jakarta: Earth Literacy.
- Ariyana. (2019). Evaluation of Indonesian language and literature learning. In *the National Seminar on Language Month (Semiba) 2019* (pp. 1-21), Bisri, & Ischsan. (2017). *Authentic, Practical and Easy Assessment*. Bogor.
- Dawud. (2008). *Indonesian Language Learning Perspective*. Malang: State University of Malang Press.
- Djiwandono, (2008). Soenari. (2011). *Language Tests: A Handbook for Language Teachers*. Jakarta: Index Press.
- Ernaeni, L., & Gunawan, I. (2019). Advanced Organizer Model: Its Effect on Creative Thinking Ability. *Indonesian Journal of Science and Mathematics Education*, 2(1), 7983. <https://doi.org/10.24042/ij sme.v2i1.3974>
- Hajaroh, S., Islam, U., & Mataram, N. (2018). Teacher Difficulties in Implementing. *Journal of the PGMI Department*, 10(2), 131-152.
- Kusnadar. (2013). *Authentic Assessment (Assessment of Student Learning outcomes based on the 2013 Curriculum)*. Jakarta: RajaGrafindo.
- Muammar, H., Harjono, A., & Gunawan, G. (2017). The Influence of the Assure Learning Model and Initial Knowledge on the Science-Physics Learning Outcomes of Class Viii SMPN 22 Mataram. *Journal of Physics and Technology Education*, 1(3), 166. <https://doi.org/10.29303/jpft.v1i3.254>
- Murtadho, F. (2013). Critical Thinking and Metacognition Strategies: Alternative Tools for Optimizing Argument Writing Exercises. In *Critical Thinking and Metacognition Strategies: Alternative Optimizing Argumentation Writing Exercises Tools for* (pp. 530-541).
- Naibaho, T. (2016). "The Influence of Advance Organizer Model Based on Naturalist Intelligence on Learning to Write Poetry", 2, (1) 104-112 Check Language (March). <https://doi.org/10.17509/Rb.V2i1.8779>.
- Nurgiyantoro, B. (2013). *Assessment of competency-based language learning* (Vol.). Yogyakarta: BPFE.
- Nurmasyitah, & Hudiyatman. (2014). Teachers' Constraints in Formulating Assessment Instruments in IPS Learning In Accordance with Affective Domains in Cluster I SD

Negeri Uteun Pulo Seunagan Timur Nagan Raya. *Pesona Dasar Journal*, 2(4), 48-62.

Pamungkas, AS, Setiani, Y., & Pujiastuti, H. (2017). The Role of Early Knowledge and Mathematical Self Esteem on Thinking Ability Student Logical: *Kreano, Journal of Creative-Innovative Mathematics*, 8(1), 61-68.
<https://doi.org/10.15294/kreano.v8i1.7866>

Suprahatiningrum, J. (2017) *Learning Strategies: Theory and Application*. Yogyakarta: Ar-Ruzz.

Werdiningsih, D. (2015). Keywords: metacognitive strategies, intensity, intercorrelations, the effect of education. *Horizon Pe Education*, XXXIV(1), 107-117. Writing Arguments. In *Critical Thinking and Metacognition Strategies: Alternative Tools for Optimizing Argumentation Writing Exercises* (pp. 530-541).