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# THE EFFECT OF LEARNING STRATEGY AND COGNITIVE STYLE ON STUDENTS' NARRATIVE WRITING ABILITY

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**Abstract:** In the class, most of the teacher use a single teaching strategy to students who have different cognitive styles when teaching narrative essays in the class. Therefore, it is necessary to improve teaching strategies in the teaching and learning process. The teaching strategies that fit with the cognitive style of students in order that the learning objective is improved. This paper investigates the effect of learning strategy and cognitive style on student's narrative writing ability. This study was conducted on the VII grade students at Madrasah Tsanawiyah Ibnu Taimiyah Bogor, West Java. Treatment by level design and two-factorial ANOVA analysis with $\alpha = 0.05$ were applied in this experimental study. The sample was 40 students grouped into experiment classes and 40 students was grouped into control classes. There was a different ability in narrative writing in Bahasa Indonesia between students having field independent cognitive style (A1) and students having field dependent cognitive style (A2). Results of two-way interrow analysis of variance showed that Fcalculated (4.123) was higher than Ftable (3.97) at a significant level of $\alpha = 0.05$. The findings showed the ability to write a narrative writing in Bahasa Indonesia of students having a field independent cognitive style was higher than that of students having a field dependent cognitive style.

**Keywords**: *inquiry-based learning strategy; expository-based learning strategy; writing narrative text; cognitive style.*

## INTRODUCTION

The study of the relationship between learning strategies and cognitive styles interest many researchers. Changju Shi from School of Foreign Language and Cultures, Nanjing Normal University, China focuses on relationship between cognitive styles and learning strategies of 184 second-years English majors from the Foreign Language School of a university in Wuhan. In this study, quantitative data is presented. Two self-reported inventories are employed. Learning Survey Style is used to examine the learning style of the participants and the Chinese version of Oxford's Strategy Inventory for Language Learning (SILL) is conducted to survey the subjects' learning strategies. The results show that cognitive styles have significant influence on learners' choices of learning strategies. Synthesizing style, sharpener style, field-independent style, and impulsive style of cognitive styles correlate positively almost with every strategy presented in this paper, so they turn to be the most influential cognitive styles that have an impact on learners' learning strategy choices (Shi, 2011).

The other study related to communicative language learning in class was titled Students'

Output in Communicative Language Teaching Classrooms by Ahamad Shah and Normala Othman. The study was conducted in two learning classes, one of which was in a university in Malaysia. In this study, data were collected from two classes of elementary and intermediate levels in a Malaysian university. Interaction between teacher and students in class was recorded and analyzed. This was expected to motivate students to modify their utterances. Results of the study showed that the chance of output production was not always applicable to students. This indicated the necessity of adaptation by teacher during the interaction process in class in order to improve communication and make a better language teaching (Mohamed, Ismail, Ahamad, Shah, & Othman, 2006) considering learning implementation in the classroom also influences students' success in learning (Damopolii, Keley, Rianjani, & Hendriek, Nunaki, Nusantari, & Kandowangko, 2020).

In a learning process, the teacher should be creative to find an appropriate leaning srategy. Learning will be more meaningful if students are given the opportunity to know and be actively involved in finding concepts from existing phenomena from the environment with the guidance of teachers (Suwandy and Irhasyuarna, 2017). Moreover, teachers are required to be more creative in providing materials or topics that suit the needs of students to achieve learning objectives by creating techniques that can create classes, more interesting and fun (Ode & Suherman, 2022). As stated by Brown (2007), an interaction between the approach and practice of teaching in class is a key to the creation of dynamic and spirited teaching (Richards & Renandya, 2002). Teachers' experience in class can support the teacher to find and practice that learning strategy. Considering teachers' experience in class, the principles of a teaching approach should not be rigid. Learning experiences given by teacher are the aim of training students' process skills (Af'idayani, Setiadi, Fahmi, 2018). Furthermore, setting and context play an important role in acquiring a language as well as to be successful in language learning (Diptoadi, Mindari, and Tedjasuksmana, 2018).

There are internal and external factors that influence the student's learning succes. External factors are factors that come from outside of students, such as family factors, school environment, quality of teaching and learning, and playing environment. While internal factors are factors that come from within a person such as intelligence, interests, talents, and motivation. In addition to these two factors, other factors can affect student learning outcomes, namely cognitive style (Vergas, Ibáñez, & Prada, 2017; Payung, Nuriah, & Sarkadi, 2019; & Lin, Lu, & Lin, 2018). Cognitive style relates to how a person receives, processes, and uses the information to address various environmental problems or situations (Kozhevnikov, 2007). Herman A. Witkin was one of the pioneers of the theory of cognitive style and a learning style by using the field-dependency and field-independency concepts (Witkin, 2016). Knowledge of cognitive style is needed to design or modify learning material, learning objectives, and learning methods as it is expected that with the interaction of cognitive style factors, goals, materials, and learning methods, student learning outcomes can be achieved to the maximum extent possible (Wahyuddin, Satriani, Ernawati, Nursakiah, 2022). Further, it assists them in planning their learning and developing strategies that bridge with different learning environments to make learning more meaningful and effective (Liyadipita, 2021). This is proven by previous researcher, Singh (2017) who highlighted and found that there is a specific bond between cognitive style with academic achievement of students. Students with good cognitive style ability can perceive and organize the information they get such as how to remember, think, solve problems, and make conclusions (Nahdi, Cahyaningsih, Jatisunda, Suciawati, Sofyan, 2022). Compared to field-dependent learner type, learners with field-independent type are considered to be independent in developing their skills. In this study, the instrument developed by Othman, Raskin, and Witkin, known as a group embedded figures test (GEFT), was used as the instrument to develop the cognitive style. This instrument was used to measure students' ability to find a simple form hidden in a complex pattern. The test consisted of three parts containing 7 problems in the first part, 9 in the second part, and 9 in the third part. Through this test, students were grouped into field independent and field dependent cognitive style learners.

In this study, inquiry-based language learning strategy was used. Inquiry learning is considered appropriate to be used for seventh grade students of

SMP, because the characteristics of class VII junior high school students who are still not fully able to learn self-directed, the level of cognitive development of students in the intermediate stage from concrete operations to formal operations (Rahayu, Hadi, Istyadji, Zaini, Sholahuddin, & Fahmi, 2018). According to Bruce Joyce and Marsha Wei, an inquiry teaching method is a method which makes students as the center of learning (child-centered learning). Maryam, Kusmiyati, Merta, & Artayasa (2020) asserted that the process of inquiry begins with collecting sources and data using the human senses, like listening, seeing, touching, tasting, and smelling. The inquiry based learning model seeks to instill the basics of scientific thinking in students, and places students in a role that demands great initiative in finding important things for themselves (Yusuf, Hobri, & Suparti, 2022) which is developed to find and use various sources of information and ideas to improve their understanding of specific problems, topics, or issues (Ulansari, Ansori, & Yennita, 2018). In inquiry based learning, the students can explore their ability to express their thoughts and feelings in the text (Masyithah, Jufrida, & Pathoni, 2017). All students' abilities or by inquiry is a process that involves students in the learning activity, formulate the question, investigating objectively and then developing new understanding, knowledge and meanings (Amelia & Prystinianta, 2021). Whereas in an expository method, teacher is the center of learning (teacher-centered learning) (Joyce & Weil, 2015). Expository learning strategy is a series of learning activities that emphasize the delivery of facts, ideas and important information to students sourced from textbooks, references, or personal experiences using lecture techniques, demonstrations, and study reports (Nasution, 2020). In expository method, the students only become object not subject of the learning as the model is such a direct explanation from lecturer or teacher to student (Heryadi & Sundari, 2020).

In the class, most of the teacher use a single teaching strategy to students who have different cognitive styles when teaching narrative essays in the class. Therefore, it is necessary to improve teaching strategies in the teaching and learning process. The teaching strategies that fit with the cognitive style of students in orther that the learning objective is improved. In this study, the researcher conducted a study using inquiry-based language learning strategies and expository-based language learning strategies.

In this study, an inquiry-based language learning strategy was implemented in experimental classes. Cognitive style of students was determined before the learning process started. The narrative writing ability of students with field independent cognitive style was expected to improve after they received narrative writing materials by using an inquiry-based language learning strategy. Students easily acquire writing skills when they bring and show positive responses during their learning (Aditiya, 2022). The complexities of writing lie both on how ideas are generated and organized, and on how these notions are translated into legible text (Budiharto, 2018). Students naturally believe that writing is difficult because they must pay attention to a variety of factors, including ideas, concepts, vocabulary, and grammar (Falihah, Rahmawati, & Baihaqi, 2020). Likewise, that of students with field dependent cognitive style was expected to improve after they received narrative writing materials by using an expository-based language learning strategy.

This research concerns in the writing skills of junior high school learners either grade 7, 8, or 9. and equivalent taught both in grades VII, VIII, and IX. Narrative texts themselves are generally taught to the intermediate level (Azis, Bugis, Harziko, 2022). Writing naration is one of the subject taught continouslly for the three grades. The narrative text is a type of English text that aims to tell a story that has a series of connected chronological events (Hidayatullah, 2022). The genre mapping of Indonesian language subject carried out based on the basic competencies of KI-3 and KI-4 of Junior High School Curriculum 2013, the narrative writing materials focus on narrative stories and local fables/legends for grade 7, drama narration for grade 8, and inspiring story narratives for grade 9.

The hypothesis in this study is the ability to write a narrative writing in Bahasa Indonesia of students in the field independent cognitive style group is higher than that of students in the field dependent cognitive style group. The tested statistical hypothesis was:

H0 : $\mu B1 \leq \mu B2$

H1 : $\mu B1 > \mu B2$.

## METHOD

John W. Creswell stated that an experimental research is conducted to assess whether an idea (practice or procedure) affects the results or dependent variables (Cresswell, 2012). An experimental method in a 2 x 2 factorial design was used in this research. A 2 x 2 factorial design was used and the layout of the experiment is shown in Table 1.

Table 1. *The experimental design*

| Cognitive Style (B) | Learning Strategy (A) | |
|---|---|---|
| | Inquiry-based Language Learning Strategy ($A_1$) | Expository-based Language Learning Strategy ($A_2$) |
| *Field Independent* ($B_1$) | $A_1B_1$ | $A_2B_1$ |
| *Field Dependent* ($B_2$) | $A_1B_2$ | $A_2B_2$ |
| Ability to Write a Narrative Writing in *Bahasa Indonesia* | Result of Narrative Writing in *Bahasa Indonesia* | Result of Narrative Writing in *Bahasa Indonesia* |

Notes:
Dependent Variable: Ability to Write a Narrative Writing in *Bahasa Indonesia*
Treatment Variables:
A = Learning Strategy
A1 = Inquiry-based Learning Strategy
A2 = Expository-based Learning Strategy
Attribute Variables:
B = Cognitive Style
B1 = *Field Independent* Cognitive Style
B2 = *Field Dependent* Cognitive Style
$A_1B_1$ = Students participating in learning process using an inquiry-based strategy and having field independent cognitive style
$A_2B_1$ = Students participating in learning process using an expository-based strategy and having field independent cognitive style
$A_1B_2$ = Students participating in learning process using an inquiry-based trategy and field dependent cognitive style
$A_2B_2$ = Students participating in learning process using an expository-based strategy and field dependent cognitive style

The population in this study was all 180 students of Grade VII in odd semester, academic year of 2017/2018 in MTs Ibnu Taimiyah, Bogor. These students were divided into six learning groups, namely VII A, VII B, VII C, VII D, VII E, and VII F. All students had equal chance to be selected as samples in this study.

Samples were taken by using a cluster random sampling method. Wibisono stated that in a cluster random sampling method, all elements of a population share equal chance and are known to be selected as subjects. For example, if there are 1000 elements and the researcher needs to select 100 subjects, each element will have a 0.1 chance to be selected as subject. This sampling method is known as a simple random sampling which has the smallest bias and offers a good generalizability (Wibisono, 2013).

Four of six classes of Grade VII including VII A, VII B, VII D, and VII E in MTs Ibnu Taimiyah, Bogor were selected by using a drawing method. Then, another drawing was taken to select 2 classes as experiment and control classes. The drawing was conducted by using ballot paper. Each ballot paper was identified as either experiment or control class. Results of the drawing showed that classes VII A and VII D were selected as experiment classes and classes VII D and VII F as control classes.

Twenty of 59 students in the experiment class had a field independent cognitive style and 20 students had a field dependent cognitive style. Nineteen students were excluded from the subject of the study. These students followed a narrative writing in Bahasa Indonesia by using an inquiry-based strategy. Twenty of 58 students in the control class had a field independent cognitive style and 20 students had a field dependent cognitive style. Eighteen students following a narrative writing in Bahasa Indonesia by using an expository-based strategy were excluded from the subject of the study.

In grouping the students into field independent cognitive style and field dependent cognitive style in both experiment and control classes, 33% of students of high score group and 33% of students of

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low score group were selected. This was in line with what was stated by Naga (1992) that subjects of the study could be divided into three parts which should not be equal in number. The top part was called the highest group and the bottom part, which was usually as big as the top part, was called the lowest group. No attention was given the middle part (Naga, 1992).

The experiment class was the one followed by students who became the samples of the study. These students were given a learning process by using an inquiry-based language learning strategy in a narrative writing class by considering the students' field independent and field dependent cognitive styles. Meanwhile, students in the control class were sample students who followed a narrative writing learning process by using an expository-based language learning strategy by considering the students' field independent and field dependent cognitive styles.

## RESULTS AND DISCUSSION

The followings are the results of the test of the study hypothesis.

Table 2. *Ability of narrative writing in Bahasa Indonesia score calculation results*

| Cognitive Style Learning Strategy | Inquiry-based learning | Expository-based learning | Total |
|---|---|---|---|
| *Field independent* | n = 20<br>$\sum x$ = 87<br>$\sum x^2$ = 7569 | n = 20<br>$\sum x$ = 74<br>$\sum x^2$ = 5476 | n = 40<br>$\sum x$ = 80<br>$\sum x^2$ = 6400 |
| *Field dependent* | n = 20<br>$\sum x$ = 76<br>$\sum x^2$ = 5776 | n = 20<br>$\sum x$ = 81<br>$\sum x^2$ = 6561 | n = 40<br>$\sum x$ = 77<br>$\sum x^2$ = 5929 |
| Total | n = 40<br>$\sum x$ = 81<br>$\sum x^2$ = 6561 | n = 40<br>$\sum x$ = 77<br>$\sum x^2$ = 5929 | n = 80<br>$\sum x$ = 157<br>$\sum x^2$ = 24649 |

Notes:
n : number of data in each cell
ẍ : mean score of narrative writing ability

There was a different ability in narrative writing in Bahasa Indonesia between students having field independent cognitive style (A1) and students having field dependent cognitive style (A2). Results of two-way interrow analysis of variance showed that $F_{calculated}$ (4.123) was higher than $F_{table}$ (3.97) at a significant level of $\alpha = 0.05$. This meant that $H_0$ was rejected and $H_1$ was accepted. Therefore, the hypothesis stating that there is a different ability of narrative writing in Bahasa Indonesia between students having field independent cognitive style ($A_1$) and students having field dependent cognitive style ($A_2$) was accepted at a significant level of $\alpha = 0.05$. This indicated that the ability to write a narrative text of students having a field independent cognitive style was higher than that of students having a field dependent cognitive style.

Students in the field independent cognitive style group had better ability to write narrative text in Bahasa Indonesia than those in the field dependent cognitive style group did. This might be caused by the finding that students in the field independent cognitive style group had higher analytical ability than those in the field dependent cognitive style group. Writing a narrative text in Bahasa Indonesia requires strong analytical and abstraction ability in order to produce a writing which has good content and organization.

Witkin in Tennant (2006) stated that in the test called the embedded figures test, designed to measure this general ability, the subject is asked to locate a simple figure in a complex design. Once again some people find this task easy and complete it quickly (field independent), while others find it difficult and take longer to complete the test (field dependent).

Students in the field independent cognitive style group had better ability to analyze data in the form of interesting experiences which were experienced by the students themselves or others than those in the field dependent cognitive style group. With better analysis ability, students in the field independent cognitive style group had better availability of narrative materials than those in the field dependent cognitive style group did. These students were easier to be independent and did not depend on others with authority. In general, in order to draw a conclusion or finish a work, they believed more in their own or standardized values.

Nugraha & Awalliyah (2016) on the study with the aim to analyze the differences in cognitive styles of students, namely field dependent and field independent cognitive style towards mastery of concepts found the students with field dependent cognitive style increased mastery of concepts with n-gain of 0.27, while students with field independent cognitive style increased mastery of concepts with n-gain 0.23. Based on the research results, mastery concepts for field dependent students slightly larger than field independent students, it is predicted because of the learning process tend to be clustered so that more support dependent cognitive style.

In contrast, students in the field dependent cognitive style group, in the language learning process, tended to have dependency on other people having authority in certain thing and had preferences in works requiring cooperation with others. In order to draw conclusions, they needed guidance from authority holder or peer groups.

In addition, the students in the field independent cognitive style group can fully develop their imagination in writing their narrative texts in Bahasa Indonesia. In general, students were found to have difficulty in developing their imagination which made it not easy for them to pour their ideas down in the narrative form. The students develop their own narrative ideas so that they needed to write independently. This had resulted in more varied narrative ideas and more interesting narrative organization.

For the students in the field independent cognitive style group, the learning process did not only push them to develop their narrative ideas in the form of narrative writing but also gave them chance to organize the intrinsic elements and structure of narrative text by themselves. This made students get accustomed to analyzing data and draw conclusion.

In contrast, the students in the field dependent cognitive style group get a lot of examples and guidance in the process of narrative text writing. Students received exercises and assignments in the process of narrative text writing. Teacher played a role as the center of the learning process.

## CONCLUSION

Based on the results of data analysis described previously, the following conclusion was drawn. The ability to write a narrative writing in Bahasa Indonesia of students having a field independent cognitive style was higher than that of students having a field dependent cognitive style.

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