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THE STRATEGIC COMPETENCE OF VOCATIONAL SCHOOL STUDENTS IN SOLVING ARITHMETIC ROW AND SERIES PROBLEMS IS REVIEWED FROM COGNITIVE STYLE

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Abstract
This study describes the strategic competence of vocational high school students in solving arithmetic sequence and series problems based on their cognitive styles: Field Independent (FI) and Field Dependent (FD). Four indicators of strategic competence were examined formulating, representing, solving, and evaluating problems. Using a qualitative descriptive approach, the study involved four Grade X Software Engineering students from SMKN 4 Bojonegoro, selected purposively through the Group Embedded Figures Test (GEFT). Data were collected through problem-solving tests and in-depth interviews, then analyzed using the Miles and Huberman model with source triangulation. The findings show that FI students exhibit strong strategic competence across all indicators: they can systematically formulate information, construct accurate mathematical representations, apply flexible solution strategies, and evaluate processes reflectively. In contrast, FD students demonstrate limited strategic competence, relying heavily on examples, producing mechanical representations, and showing minimal self-evaluation. These results highlight the significant influence of cognitive style on students' strategic thinking. The study suggests that mathematics teachers should adapt instruction by providing open-ended tasks, conceptual scaffolding, and reflective activities to support strategic competence development, especially for FD learners.

Keywords: strategic competence, cognitive style, field independent, field dependent, arithmetic sequences and series.

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INTRODUCTION

Mathematics learning plays a strategic role in shaping the ability to think critically, sharply, and structurally in students. Among the main goals of learning mathematics today is to strengthen the ability to solve problems as the basis for mastering concepts and their application. Through problem-solving activities, students are trained to meaningfully relate mathematical ideas to real-life situations. Thus, problem solving is not only an additional skill, but the core of mathematical competence at all levels, including vocational education.

Problem solving in mathematics does not stop at achieving the correct answer, but emphasizes a thought process that involves understanding the problem, planning strategies, implementing procedures, and reviewing solutions. Within the framework of the National Research Council, these abilities are known as strategic competencies that include four main aspects: formulating problems, representing mathematical models, solving procedurally, and evaluating results. The four form a unified high-level thinking process that is important in reasoning-based learning.

In the Vocational High School (SMK) environment, strategic competence has an important value because students are expected to be able to use mathematics as a tool in solving technical problems. In the Software Engineering expertise program, the concepts of arithmetic rows and series are used to estimate data growth, calculate algorithm complexity, and analyze the efficiency of computational processes. This emphasizes that mathematics learning in vocational schools must be directed to real applications that are relevant to the student's field of expertise.

Nonetheless, students' strategic abilities do not always develop evenly. One of the internal factors that affect the difference in the way students solve problems is cognitive style. Cognitive style shows an individual's tendency to receive, process, and organize information. In the study of mathematics education, the Field Independent (FI) and Field Dependent (FD) styles are often used to explain the variation of students' thinking approaches to mathematical problems.

Field Independent students have analytical tendencies and are able to separate important elements from complex contexts. They are more independent in identifying the structure of the problem and strategizing solutions systematically. In contrast, Field Dependent students tend to look at problems holistically and rely on external help, such as examples or visual cues, in understanding the problem. These differences in characteristics have direct implications for the strategies used in mathematical problem solving.

These differences in cognitive styles are evident in arithmetic row and series material, which requires the ability to recognize patterns, make generalizations, and compile symbolic models. FI students are generally able to find inter-tribal relationships independently and determine appropriate mathematical models. Meanwhile, FD students more often rely on memorizing formulas without understanding the meaning of the underlying pattern. This condition has the potential to cause inequality in the mastery of strategic competencies.

Various research results reinforce this phenomenon. Nasution (2020) reported that FI students showed greater independence and accuracy in solving open-ended questions. Marlina and Purnomo (2021) also found that FI students are more flexible in designing alternative strategies than FD students who tend to follow the procedures exemplified by the teacher. However, studies that specifically examine strategic competencies based on the Kilpatrick indicator in the context of vocational school students are still rare.

In the field, mathematics learning in vocational schools is generally still oriented towards final results and procedural accuracy. The assessment of students' thinking processes has not received adequate attention. As a result, FD-style students who require gradual direction often do not obtain appropriate support to develop their thinking strategies. In fact, an adaptive learning approach can help all students achieve strategic competencies optimally.

Based on these conditions, research is needed that examines students' thinking processes in depth by considering cognitive styles in each stage of strategic competence. Analysis of how FI and FD students formulate, represent, solve, and evaluate arithmetic row and series problems will provide an empirical basis for the development of differentiated learning. This approach is expected to be able to help teachers design teaching strategies that are in line with students' cognitive characteristics so that strategic competencies can develop more effectively and evenly.

RESEARCH METHOD

This research is a qualitative research with a descriptive approach that aims to describe the strategic competence of vocational school students in solving arithmetic row and series problems based on cognitive style. Data validity is strengthened through the principle of external internal validity and trail audits as emphasized by Yusuf (2020). Four instruments were used: the GEFT Test, the Mathematical Ability Test (TKM), the Mathematical Problem Solving Test (TPMM), and the interview guidelines, with the researcher acting as the main instrument. The GEFT test is given to identify the students' cognitive style as per the guidance of Witkin et al. (1971). This instrument consists of 25 questions presented in three sessions, namely a practice session (7 questions) and two main test sessions (9 questions each), with a maximum score of 18. The GEFT score category refers to Gordon & Wyant (1994), The score range of 0–11 and 12–18 is used as a categorization boundary because it is widely used in mathematics education research that utilizes GEFT. Thus, the use of this grouping threshold aims to obtain a clear separation of subjects according to the characteristics of cognitive styles. This process is the basis for the selection of research subjects.

After the GEFT test, all X RPL 3 students worked on TKM to identify high and equivalent mathematical skills as a requirement for subject selection. TKM contains 10 description questions adapted from the 2022–2025 SMK AKM questions and assessed using scoring guidelines developed by researchers. The selection of subjects is based on three main criteria: (1) the same gender (2) different cognitive styles (3) have equivalent mathematical abilities (high category), which is determined through the results of the Mathematical Ability Test (TKM) using a range of scores categorized as high, medium, or low based on the TKM scoring guidelines. Data on gender, GEFT results and TKM results can be seen in Table 1.$80 \leq x < 10060 \leq x < 800 \leq x < 60$

Table 1.
Student Categorization

No.	Initials Name	Gender	Skor GEFT	Category GEFT	Score TKM	Categories of Math Ability
1	MRR	Male	5	FD	64	Medium
2	MAK	Male	14	F1	72	Medium
3	MAP	Male	8	FD	86	Height
4	BE	Male	15	FI	78	Medium
5	MKA	Male	14	FI	78	Medium
6	THOUSANDS	Male	11	FD	74	Medium
7	BUT	Male	11	FD	72	Medium
8	MDF	Male	18	FI	90	Height
9	MDL	Male	8	FD	73	Medium
10	MDR	Male	9	FD	50	Low
11	MKA	Male	13	FI	79	moderate
12	MAG	Male	8	FD	72	Medium
13	MAY	Male	3	FD	68	Medium
14	MAN	Male	14	FI	72	Medium
15	FOOD	Male	14	FI	50	Low
16	MDY	Male	17	FI	50	Low
17	MEA	Male	9	FD	74	Medium
18	MFS	Male	6	FD	72	Medium
19	MFW	Male	1	FD	50	Low
20	MKF	Male	14	FI	72	Medium

21	MIS	Male	2	FD	70	Medium
22	MSF	Male	5	FD	63	moderate
23	MAZ	Women	10	FD	75	moderate
24	MNM	Women	11	FD	72	moderate
25	MLD	Women	14	FI	68	Medium
26	MY	Women	11	FD	72	Medium
27	COUN TRY	Women	9	FD	50	Low
28	DAY	Women	10	FD	55	Low
29	NSS	Women	8	FD	73	moderate
30	NE	Women	8	FD	90	Height
31	NEF	Women	5	FD	83	Height
32	NH	Women	13	FI	78	Medium
33	NBS	Women	14	FI	73	Medium
34	NAR	Women	5	FD	72	Medium
35	MALE	Women	13	FI	52	Low
36	NTF	Women	9	FD	52	Low

Source : Gender Data, GEFT and TKM Results

Based on Table 1, 22 male students and 14 female students were obtained in the first category, 4 *Field Independent* (FI) female students, and 10 *Field Dependent* (FD) female students, 9 *Field Independent* (FI) male students, and 13 *Field Dependent* male students (FD) in the second category and 4 students in the same (high) ability category in the third category. So that the research subjects can be seen in Table 2.

Table 2.
List of Research Subjects

No.	Initials Name	Label	Gender	Skor GEFT	Score TKM	Categories of Math Ability
1	MAP	MFD	Llaki Act	8	86	Height
2	MDF	MFI	Male	18	90	Height

The selected subjects then worked on the TPMM which consisted of two questions describing the arithmetic line and series material prepared by the researcher with the approval of the supervisor.

Table 3.
TPMM Questions

No.	Questions
1	A student saves regularly every week to buy a laptop for Rp3,000,000. In the first week, he saves Rp50,000, and every subsequent week he increases his savings amount by Rp10,000 from the previous week. However, in the 5th week he did not save because there was a sudden need. How do you determine how many weeks the student has to save to buy a laptop, and how much savings in the last week before buying the laptop?
2	An intern in a workshop receives a steady increase in salary every month. In the first month he received IDR 1,000,000, and every next month his salary increased by IDR 150,000. The internship contract lasted until the total salary received reached IDR 12,600,000. How do you determine how many months the worker will complete his contract, and what will be the salary in his last month?

Answers are analyzed based on strategic competency indicators which include *formulate, represent*, *solve,* and *evaluate aspects.*

Strategic competency indicators refer to the ability to formulate/formulate problems, represent information, complete planned strategies, and evaluate the accuracy of results and processes. Each indicator is described in a code that is the basis for the analysis of students' answers.

Table 3.
Strategic Competency Indicators

No.	Indicator	Sub Indicator	Code
1	*Formulate*	Formulate and identify problems into mathematical sentences or mathematical equations	F
2	*Represent*	Transform a pre-formulated problem into a meaningful representation or appropriate solution strategy.	R
3	*Solve*	Apply math procedures that have been planned appropriately	S
4	*Evaluate*	Review the completion process to ensure the correctness of the results and the suitability of the context of the question.	E

To reinforce the validity of the findings, the interview was conducted using structured guidelines to validate written responses and explore the reasons behind the completion steps that were not always contained in the answers. Interviews also help ensure the consistency of students' understanding of their thinking process. This stage serves as an important triangulation in qualitative research, so that the results of the analysis can be accounted for scientifically and in-depth.

RESEARCH RESULTS AND DISCUSSION

Results

Based on the results of GEFT in class X RPL 3, 23 students with *Field Dependent* (FD) style and 13 Field *Independent* (FI) students were obtained. Through the Mathematical Ability Test (TKM), two subjects with high and equivalent abilities were selected, namely MFD (GEFT score 8, TKM 86) and MFI (GEFT score 18, TKM 90). Both subjects underwent the Mathematical Problem Solving Test (TPMM) and interviews to identify strategic competencies based on *formulate*, *represent*, *solve*, and *evaluate indicators*. The results of the analysis showed significant differences between the two cognitive styles, especially in the ability to formalize and verify mathematically. MFDs tend to rely on verbal comprehension, whereas MFIs exhibit strong symbolic reasoning. The triangulation process is carried out to ensure data consistency.

Strategic Competencies of Field Dependent (FD) Students

As a result of written work and interviews, MFD subjects in *the Field Dependent style* showed a fairly good understanding of the context at the formulating stage (F). This can be seen when MFD is able to explain the situation again, for example, in the first question he stated that "a student saves 50 thousand and every week increases 10 thousand, except for the fifth week he does not save," while in the second question he describes that "the internship salary increases by 150 thousand every month." However, when asked to write a mathematical model, MFD still had difficulty and only mentioned formulas verbally such as "use the formula Un... The first quarter is 50" without being able to write it in full. The representation given is also more narrative, seen when he explains the early tribes in colloquial language and says "I immediately close the result" when asked how to find the value . At the completion stage (S), the MFD was able to produce the final answer, but there were mistakes such as setting the saving week to 16 and the last salary of 1,900,000 without mathematical verification. The evaluation (E) carried out is contextual, for example, MFD states that if the price of the laptop rises, "every week the savings are added or additional requested," but he has not been able to re-check the suitability of the procedure. These findings suggest that MFD understands stories globally, but still relies on intuitive reasoning and is not yet able to formalize and evaluate mathematics in depth.n

Strategic Competencies of Independent Field (FI) Students

As a result of written work and interviews, FI subjects show very strong strategic competence in all aspects, especially at the formulating stage (F). FI was able to understand the context of the problem clearly, as seen when he reexplained important information such as "initial savings of Rp50,000, increase of Rp10,000 per week, and fifth week of no savings," and in the second question it was stated that "the initial salary of one million increased by one hundred and fifty thousand per month." FI is also able to formulate mathematical models precisely using arithmetic sequence formulas, for example when stating "Sn = (2a + (n–1)b)" and writing down the substitutions in full. In the aspect of representation (R), FI draws up a settlement plan in sequence and shows a strong symbolic understanding, as can be seen from his explanation that the total value must be equalized to Sn before looking for n. At the completion stage (S), FI can explain the step-by-step procedure, including changing the shape to a quadratic equation, until it finds n = 21 in the first problem and n = 9 in the second problem. In addition, at the evaluation stage (E), FI was able to relate the mathematical results to the real context, for example when he stated that if the price of the laptop rose to Rp3,500,000, then he "would increase the weekly savings to Rp15,000 or increase the time to 25 weeks." These findings suggest that FI not only correctly solves problems, but is also able to provide reflective justifications and contextual alternative strategies, in line with $\frac{n}{2}$ *the analytical and independent* cognitive characteristics of Field Independent.

Discussion

The following is an explanation of the discussion provided by the researcher regarding the strategic competence of vocational school students in solving arithmetic row and series problems reviewed from cognitive style.

Strategic Competencies of *Field Dependent* (FD) Students

At the problem formulation stage, *Field Dependent students* are able to understand the situation in general and recognize basic information such as initial tribes, differences, and requested targets. However, they are often less careful in extracting numerical details and specific relationships between elements. This tendency is in line with the character of FDs that process information globally and depend on external contexts (Witkin et al., 1971; Nasser & Carifio, 1993; Nasution, 2020). As a result, the resulting formulation has not fully led to a clear mathematical structure and still requires explicit directions.

Interview data showed that FD students were able to name important components of the problem, but were not yet able to express the relationships between variables into a formal model. This pattern was also found in the studies of Agustiningtyas et al. (2020) and Ningtiyas (2021), which showed that FD pupils understood context but had difficulty organizing it into systematic mathematical forms. This indicates that the formulation stage is still intuitive and has not been strategically controlled.

At the representation stage, FD students tend to use verbal descriptions or simple lists of numbers rather than building symbolic models such as row or series formulas. These findings are consistent with the results of Agustiningtyas et al. (2020) and Risani et al. (2018) who affirm that FD students are less effective in producing formal mathematical representations. Reliance on context causes their representation to not yet support the efficiency of completion.

In the completion stage, FD students prefer a gradual strategy such as adding or adding terms one by one without utilizing a general formula. This pattern is similar to the findings of Alimuddin (2019) and Nasution (2020) which showed that FD students tend to use hands-on, example-based procedures rather than planned strategies. This shows that the solve aspect is still dominated by an empirical approach.

The evaluation stage showed that FD students rarely double-checked the results and strategies used. These findings are reinforced by Sihotang et al. (2024) who state that FD students have limitations in metacognitive control when verifying solutions. Thus, the strategic competency profile of FD students appears strong in understanding the context, but weak in formal representation, procedural efficiency, and self-evaluation as the Kilpatrick framework.

Strategic Competencies of *Independent Field* (FI) Students

Students with *the Field Independent* (FI) cognitive style showed stable and dominant performance in all strategic competency indicators. At the formulation stage, they are able to select important information completely and immediately organize it into a formal mathematical structure. This ability is evident from the way they relate contextual data to the concept of arithmetic rows and series precisely. These findings are in line with the research of Nasution (2020) and Nasser & Carifio (1993) which showed that FI students are more effective at extracting relevant information and compiling it into structured mathematical models.

At the representation stage, FI students consistently use symbolic and formal representations such as formulas, notations, and tables to illustrate the relationships between variables. They are able to separate numerical elements from verbal contexts so that the model built becomes accurate and systematic. This pattern is reinforced by Agustiningtyas et al. (2020) and Ningtiyas (2021) who affirm that FI students have higher productivity of mathematical representation than FD students, both in symbolic and visual form.

In the completion stage, FI pupils demonstrate a logical, concise, and efficient completion procedure. They are able to apply formulas appropriately, maintain consistency of steps, and complete complex calculations without relying on trial and error strategies. These results are in line with the findings of Alimuddin (2019) and Andriyani & Ratu (2018) who stated that FI students tend to use analytical and systematic approaches in solving mathematical problems.

At the evaluation stage, FI students re-check the results and procedures used, and are able to consider alternative strategies rationally when the conditions of the questions are modified. This ability reflects strong cognitive control as demonstrated in research by Waluya et al. (2024) and Rahman et al. (2022) who found that FI individuals have better ability to reflect and reason on variable relationships.

Overall, FI students demonstrate comprehensive and consistent strategic competencies at all four stages, from formulation to solution evaluation. This dominance indicates that the analytical character and cognitive independence of FI contribute directly to the effectiveness of mathematical problem solving, as supported by various previous studies in the context of cognitive style and problem solving.

CONCLUSION

The results of the study show that cognitive style has a very significant influence on the actualization of students' strategic competencies in solving arithmetic row and series problems. Students with *a Field Independent* (FI) cognitive style appear superior in almost all strategic competency indicators, especially in the ability to formally represent problems, carry out systematic solution procedures, and reflect and evaluate the results of their completion. They are able to connect important information with relevant formulas, build accurate mathematical models, and critically review steps that have been taken.

In contrast, *Field Dependent* (FD) students tend to only understand the context in general and write down simple representations such as verbal lists or tables, but have difficulty transforming the information into formal mathematical forms. These limitations make their completion process less consistent, especially in the use of formulas, symbolic manipulation, and outcome evaluation procedures. Thus, the strategic competence of FI students is more mature comprehensively from the *formulate, represent, solve* to *evaluate* stages, while FD students are more often stopped at the initial stage of simple formulation and represent, and are not optimal at the solve and evaluate stages which require more in-depth mathematical reasoning.

SUGGESTIONS/RECOMMENDATIONS

In mathematics learning, teachers need to apply a differentiation approach that adjusts students' cognitive styles so that their strategic competencies develop optimally. For *Field Dependent* (FD) students, scaffolding is required in the form of step-by-step guidance, the use of visual and symbolic representations, results verification exercises, and explicit guidance in transforming the context into a formal mathematical form. Meanwhile, *Field Independent* (FI) students can be challenged through open-ended questions, complex problems, or real-world problems that encourage reflective evaluation, generalization, and strategy creativity. Furthermore, follow-up research is important to examine the effectiveness of hybrid learning methods that combine visual, symbolic, and contextual representations, to help FD students develop more comprehensive strategic competencies. This approach also has the potential to optimize the creative and metacognitive abilities of FI students so that they are not only procedurally strong, but also innovative in problem solving.

REFERENCES

Agustiningtyas, I. T., Trapsilasiwi, D., Yudianto, E., Fatahillah, A., & Oktavianingtyas, E. (2020). *Students' mathematical representation abilities in solving mathematical problems are reviewed from the Field Dependent and Field Independent cognitive styles*. Journal of Mathematics Learning Education and Innovation Research, 4(1), 31–44. https://journal.unesa.ac.id/index.php/jrpipm/article/view/9787

Alimuddin, M. (2019). *The analysis of students' thinking strategies in solving mathematical problems is reviewed from cognitive styles*. Journal of Mathematics Learning and Education, 3(2), 97–107.

Andriyani, R., & Ratu, N. (2018). *The thinking profile of junior high school students in solving mathematical problems is reviewed from the cognitive style of field independent and field dependent*. Scientific Journal of Mathematics Education, 7(1), 12–23.

Britain, S. D. (1971). *Field-dependence-independence, Anxiety and Stress: Relation to Performance on a Cognitive-perceptual Task* (Doctoral dissertation, University of British Columbia).

Demit. (2014). *Student developmental psychology*. Bandung: Remaja Rosdakarya.

Haryanti, M., & Masriyah, S. (2018). *Analysis of students' problem-solving abilities based on cognitive style*. Journal of Mathematics Education, 6(2), 115–126.

Imamuddin, M. (2019). Students' math problem-solving skills based on learning style. *Al Khawarizmi: Journal of Mathematics Education and Learning*, *3*(1), 11-20.

Ismaimuza, D., & Lefrida, R. (2024). Mathematical communication of vocational students with field dependent and independent cognitive styles in solving linear programming problems. *Journal of Hunan University Natural Sciences*, *51*(8).

Maf'ulah, S., & Juniati, D. (2020). The Effect of Learning with Reversible Problem-Solving Approach on Prospective-Math-Teacher Students' Reversible Thinking. *International Journal of Instruction*, *13*(2), 329-342.

Muhammad, i. (2023). *Development of an accreditation form management information system model for private Islamic religious universities (SIMBA PTKIS)* (Doctoral dissertation, UIN RADEN INTAN LAMPUNG).

Nasser, F., & Carifio, J. (1993). *Field dependence–independence and the solving of mathematical word problems*. The Journal of Educational Research, 86(6), 361–367.

Nasution, E. (2020). *Mathematical problem-solving skills are reviewed from field independent and field dependent cognitive styles*. Journal of Mathematics Education, 14(1), 25–34.

Ningtiyas, H. A. (2021). *The mathematical representation of high school students was reviewed from the cognitive styles of field dependent and field independent*. MATHEdunesa: Scientific Journal of Mathematics Education, 10(1),80–88. https://ejournal.unesa.ac.id/index.php/mathedunesa/article/view/38126

Rahman, F., Juniati, D., & Siswono, T. Y. E. (2022). *Covariate reasoning profile of prospective mathematics teacher students with field-independent cognitive style in solving covariation problems*. Proximal: Journal of Mathematics Research and Mathematics Education, 5(2), 149–164. https://e-journal.my.id/proximal/article/view/2300

Risani, R. T., Nuriyatin, S., & Soerjono, B. (2018). The students' mathematical problem-solving profiles were reviewed from the cognitive styles of field dependent and field independent. *Repository STKIP PGRI Sidoarjo*.

Sihotang, M. R., Huda, N., & Novferma. (2024). *Metacognition analysis in problem solving of field-independent and field-dependent students*. Reimann: Research of Mathematics andMathematicsEducation,3(2),72–83.

Syukriani, A., Juniati, D., & Siswono, T. Y. E. (2017, August). Strategic competence of senior secondary school students in solving mathematics problem based on cognitive style. In *AIP Conference Proceedings* (Vol. 1868, No. 1, p. 050009). AIP Publishing LLC.

Umah, U. (2020). Comparison of Students' Covariational Reasoning Based on Differences in Field-Dependent and Field-Independent Cognitive Style. *NUMERICAL: Jurnal Matematika Dan Pendidikan Matematika*, 41-54.https://journal.sanagustin.ac.id/index.php/reimann/article/view/48

Utami, H. S., & Puspitasari, N. (2022). Junior high school students' problem-solving ability in solving story problems in quadratic equation material. *Journal of Mathematics Learning Innovation: PowerMathEdu*, *1*(1), 57-68.

Waluya, S., Sukestiyarno, Y. L., & Cahyono, A. N. (2024). *Construction of reflective thinking: A field independent student in numerical problems*. Journal on MathematicsEducation,15(1),151–172. https://jme.ejournal.unsri.ac.id/index.php/jme/article/view/486

Witkin, H. A., Oltman, P. K., Raskin, E., & Karp, S. A. (1971). *Group Embedded Figures Test: Manual*. Palo Alto, CA: Consulting Psychologists Press.

Woolfolk, A. (1993). *Educational psychology* (6th ed.). Boston: Allyn and Bacon.

Yusuf, A. M. (2020). *Research Methods: Quantitative, Qualitative, and Combined Research*. Jakarta: Prenadamedia.