

**METAKOGNISI SISWA SMA DALAM MENYELESAIKAN SOAL
TIPE AKM KONTEN ALJABAR DITINJAU DARI
KELOMPOK GAYA KOGNITIF**



TESIS

diajukan untuk memenuhi sebagian syarat untuk memperoleh gelar
Magister Pendidikan

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FAKULTAS PENDIDIKAN MATEMATIKA DAN ILMU PENGETAHUAN ALAM
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TIPE AKM KONTEN ALJABAR DITINJAU DARI
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ABSTRAK

Cut Nadia Rachmi (2317292) Metakognisi Siswa SMA dalam Menyelesaikan Soal Tipe AKM Konten Aljabar Ditinjau dari Kelompok Gaya Kognitif

Penelitian ini bertujuan untuk mendeskripsikan metakognisi siswa SMA dalam menyelesaikan soal tipe Asesmen Kompetensi Minimum (AKM) konten aljabar ditinjau dari gaya kognitif. Fokus penelitian mengarah pada kemampuan siswa dalam melalui tiga tahapan metakognisi, yaitu mengembangkan rencana tindakan, memonitor tindakan, dan mengevaluasi tindakan. Penelitian ini adalah penelitian kualitatif dengan desain penelitian *case study*, dengan subjek 28 siswa kelas XI SMA yang akan dikelompokkan ke dalam empat kelompok gaya kognitif, yaitu *fast-accurate*, reflektif, impulsif, dan *slow-inaccurate*. Pengumpulan data dilakukan melalui tes *Matching Familiar Figures Test* (MFFT), tes AKM konten aljabar, dan wawancara. Analisis data dilakukan melalui reduksi data, penyajian data, dan penarikan kesimpulan dengan triangulasi sumber untuk menjaga keabsahan temuan. Hasil penelitian menunjukkan bahwa setiap kelompok gaya kognitif memiliki karakteristik metakognisi yang berbeda pada setiap tahapan. Siswa reflektif mampu mencapai seluruh tahapan metakognisi dengan baik, ditandai oleh kesadaran berpikir yang tinggi, perencanaan yang matang, serta evaluasi diri yang mendalam terhadap strategi penyelesaian. Siswa *fast-accurate* juga mampu mencapai seluruh tahapan metakognisi dengan baik, meskipun lebih menekankan efisiensi dan kecepatan dibanding eksplorasi strategi alternatif. Sebaliknya, siswa impulsif hanya mampu mencapai tahap mengembangkan rencana tindakan secara terbatas, dengan proses monitoring dan evaluasi yang masih bersifat spontan dan bergantung pada bantuan eksternal. Adapun siswa *slow-inaccurate* tidak mampu mencapai setiap tahapan metakognisi secara optimal karena kesulitan memahami informasi, lambat dalam menyusun strategi, serta kurang reflektif dalam menilai proses dan hasil penyelesaian. Secara keseluruhan, hasil penelitian ini menunjukkan bahwa gaya kognitif berpengaruh terhadap kemampuan metakognisi siswa dalam menyelesaikan soal AKM konten aljabar. Oleh karena itu, guru diharapkan dapat mengembangkan strategi pembelajaran yang menyesuaikan dengan gaya kognitif siswa dan menekankan pada pelatihan berpikir reflektif agar kemampuan metakognisi siswa dapat berkembang secara optimal.

Kata kunci: metakognisi, gaya kognitif, AKM, aljabar, pemecahan masalah.

ABSTRACT

Cut Nadia Rachmi (2317292) High School Students' Metacognition in Solving AKM-Type Algebra Content Problems Reviewed from Cognitive Style Groups

This study aims to describe high school students' metacognition in solving Minimum Competency Assessment (AKM) questions on algebra content in terms of cognitive style. The focus of the study is on students' ability to go through three stages of metacognition, namely developing an action plan, monitoring actions, and evaluating actions. This is a qualitative study with a case study design, with 28 high school 11th grade students as subjects who will be grouped into four cognitive style groups, namely fast-accurate, reflective, impulsive, and slow-inaccurate. Data collection was carried out through the Matching Familiar Figures Test (MFFT), the AKM algebra content test, and interviews. Data analysis was conducted through data reduction, data presentation, and conclusion drawing with source triangulation to maintain the validity of the findings. The results showed that each cognitive style group had different metacognitive characteristics at each stage. Reflective students were able to achieve all stages of metacognition well, characterized by high awareness of thinking, careful planning, and in-depth self-evaluation of solution strategies. Fast-accurate students were also able to achieve all stages of metacognition well, although they emphasized efficiency and speed over exploring alternative strategies. In contrast, impulsive students are only able to reach the stage of developing action plans to a limited extent, with monitoring and evaluation processes that are still spontaneous and dependent on external assistance. Slow-inaccurate students are not yet able to reach each stage of metacognition optimally due to difficulties in understanding information, slowness in developing strategies, and a lack of reflection in assessing the process and results of problem solving. Overall, the results of this study indicate that cognitive style influences students' metacognitive abilities in solving AKM algebra content questions. Therefore, teachers are expected to develop learning strategies that are tailored to students' cognitive styles and emphasize reflective thinking training so that students' metacognitive abilities can develop optimally.

Keywords: metacognition, cognitive style, AKM, algebra, problem solving.

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- Abdullah, I. Hi., Suharna, H., & Ruhama, M. AH. (2024). The Structure of Students' Mathematical Errors in Solving Calculus Problems Based on Cognitive Style. *International Education Studies*, 17(4), 25. <https://doi.org/10.5539/ies.v17n4p25>
- Aditomo, A., Felicia, R. N., Shihab, N., & Handayani, F. (2019). Kajian Akademik dan Rekomendasi Reformasi Sistem Asesmen Nasional. Dalam *Badan Penelitian dan Pengembangan dan Perbukuan Kementerian Pendidikan Dan Kebudayaan dan Pusat Studi Pendidikan dan Kebijakan*.
- Agustin, R., Sujatmiko, P., & Kurniawati, I. (2017). Profil Metakognitif Siswa yang Bergaya Kognitif Reflektif dan Impulsif Kelas VIII SMP Negeri 16 Surakarta Tahun Pelajaran 2016/2017. *Jurnal Pendidik Mat. dan Mat. Solusi*.
- Aini, N., Juniati, D., & Siswono, T. Y. E. (2019). Profile of Students' Strategy in Senior High School with Cognitive Reflective and Impulsive Style in Solving the Combinatorial Questions. *Journal of Physics: Conference Series*, 1417(1), 012058. <https://doi.org/10.1088/1742-6596/1417/1/012058>
- Aini, Q. (2019). Profil Metakognisi Siswa Sekolah Dasar Dalam Menyelesaikan Masalah Matematika Ditinjau Dari Gaya Kognitif. *Pendas: Jurnal Ilmiah Pendidikan Dasar*, 2, 2477–2143. <https://doi.org/10.23969/jp.v3i2.1129>
- Akhidayati, R. R., Purwanto, P., & Rahardi, R. (2024). Kesulitan Siswa dalam Menyelesaikan Soal AKM pada Konten Domain Data dan Ketidakpastian. *Edumat: Jurnal Pendidikan Matematika*, 12(1), 67. <https://doi.org/10.20527/edumat.v12i1.17052>
- Ancillotti, J. P. (1984). Rythme Conceptuel et Apprentissage Cognitif [Conceptual Tempo and Cognitive Learning]. *Psychologie Française*, 29–38. https://scholar.google.com/scholar?hl=id&as_sdt=0%2C5&q=Ancillotti%2C+1984&btnG=
- Anderson, L., & Krathwohl, D. (2001). *A Taxonomy for Learning, Teaching, and Assessing: A revision of Bloom's Taxonomy of Educational Objectives: Complete Edition*. Addison Wesley Longman. <https://eduq.info/xmlui/handle/11515/18824>
- Arifah, I. N., Murtiyasa, B., Kholid, M. N., Utama, S., & Rahmawati, L. E. (2025). *Analysis of Metacognition in Solving Mathematical Problems with Reflective and Impulsive Cognitive Styles in Elementary School* (hlm. 200–214). https://doi.org/10.2991/978-2-38476-412-9_17
- Arofa, A., & Ismail, I. (2022). Kemampuan Numerasi Siswa MA dalam Menyelesaikan Soal Setara Asesmen Kompetensi Minimum pada Konten

- Aljabar. *MathEdunesa*, 11(3).
<https://ejournal.unesa.ac.id/index.php/mathedunesa/article/view/47764>
- Asrijanty, A. (2020). *Asesmen Kompetensi Minimum (AKM) dan Implikasinya pada Pembelajaran*. Pusat Asesmen dan Pembelajaran Badan Penelitian dan Pengembangan dan Perbukuan Kementerian Pendidikan dan Kebudayaan. https://repository.kemdikbud.go.id/19690/1/file_akm2.pdf
- Ausburn, L. J., & Ausburn, F. B. (1978). Cognitive Styles: Some Information and Implications for Instructional Design. *Springer*, 26(4), 337–354. <https://doi.org/10.1007/BF02766370>
- Ayabe, H., Manalo, E., & Vries, E. de. (2022). Problem-Appropriate Diagram Instruction For Improving Mathematical Word Problem Solving. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.992625>
- Azhil, I. M., Ernawati, A., & Lutfianto, M. (2017). Profile of Students' Mathematical Problem Solving in Terms of Reflective and Impulsive Cognitive Styles. *Jurnal Review Pembelajaran Matematika*, 60–68.
- Azmi, S., Baidowi, B., Hikmah, N., Tyaningsih, R. Y., & Kurniawan, E. (2022). Analysis Of Students' Mathematics Communication Ability Based On Cognitive Styles And Mathematical Knowledge. *Jurnal Pijar Mipa*, 17(2), 231–238. <https://doi.org/10.29303/jpm.v17i2.3384>
- Bado, B. (2022). *Model Pendekatan Kualitatif: Telaah Dalam Metode Penelitian Ilmiah* (Media Tahta, Ed.).
- Bakar, M. A. A., & Ismail, N. (2020). Express students' problem solving skills from metacognitive skills perspective on effective mathematics learning. *Universal Journal of Educational Research*, 8(4), 1404–1412. <https://doi.org/10.13189/ujer.2020.080433>
- Bani, B. S., Ekawati, R., & Rahaju, E. B. (2019). Metacognition Behavior of Junior High School Students in Solving Algebra Problems in Terms of Mathematical Abilities. *International Journal of Scientific and Research Publications (IJSRP)*, 9(9), 93–106. <https://doi.org/10.29322/IJSRP.9.09.2019.p93106>
- Braithwaite, D. W., & Sprague, L. (2021). Conceptual Knowledge, Procedural Knowledge, and Metacognition in Routine and Nonroutine Problem Solving. *Cognitive Science*, 45(10). <https://doi.org/10.1111/cogs.13048>
- Brown, A., & Campione, J. C. (1987). Metacognitive Components of Instructional Research with Problem Learners. *Metacognition, motivation, and understanding*, 117–140.
- Cahyanovianty, A., & Wahidin, W. (2021). Analisis Kemampuan Numerasi Peserta Didik Kelas VIII dalam Menyelesaikan Soal Asesmen Kompetensi Minimum

- (AKM). *Jurnal Cendekia*, 5(2), 1439–1448.
<https://doi.org/https://doi.org/10.31004/cendekia.v5i2.651>
- Campbell, R., Williams, R. G., Feeney, H., & Cabral, G. F. (2020). Assessing Triangulation Across Methodologies, Methods, and Stakeholder Groups: The Joys, Woes, and Politics of Interpreting Convergent and Divergent Data. *American Journal of Evaluation*, 41(1), 125–144.
<https://doi.org/10.1177/1098214018804195>
- Chan, J. Y. C., Ottmar, E. R., Smith, H., & Closser, A. H. (2022). Variables Versus Numbers: Effects of Symbols and Algebraic Knowledge on Students' Problem-Solving Strategies. *Contemporary Educational Psychology*, 7(1), 102–114. <https://doi.org/10.1016/j.cedpsych.2022.102114>
- Chusnudhin, R. M. F., Ahshoni, A. F., Nafsak, A. A., Permana, K. L., & Sari, A. F. (2023). The Mathematical Reasoning Abilities of Students in Solving Numeracy Literacy Problems Reviewed from Reflective-Impulsive Cognitive Style. *Jurnal Math Educator Nusantara: Wahana Publikasi Karya Tulis Ilmiah di Bidang Pendidikan Matematika*, 9(2), 219–229.
<https://doi.org/10.29407/JMEN.V9I2.21273>
- Cohen, L., Manion, L., & Morrison, K. (2017). *Research Methods in Education*. Routledge. <https://doi.org/10.4324/9781315456539>
- Cohors-Fresenborg, E., Kramer, S., Pundsack, F., Sjuts, J., & Sommer, N. (2010). The Role of Metacognitive Monitoring in Explaining Differences in Mathematics Achievement. *ZDM Mathematics Education*, 42(2), 231–244.
<https://doi.org/10.1007/s11858-010-0237-x>
- Couchman, J. J., Coutinho, M. V. C., Beran, M. J., & Smith, J. D. (2009). Metacognition is Prior. *Behavioral and Brain Sciences*, 32(2), 142–142.
<https://doi.org/10.1017/S0140525X09000594>
- Craig, K., Hale, D., Grainger, C., & Stewart, M. E. (2020). Evaluating Metacognitive Self-Reports: Systematic Reviews of the Value of Self-Report in Metacognitive Research. *Metacognition and Learning*, 15(2), 155–213.
<https://doi.org/10.1007/s11409-020-09222-y>
- Creswell, J. W., & Poth, C. N. (2016). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*. Sage publications.
- Cromley, J. G., & Kunze, A. J. (2020). Metacognition in education: Translational research. *Translational Issues in Psychological Science*, 6(1), 15–20.
<https://doi.org/10.1037/tps0000218>
- Desoete, A., Roeyers, H., & Huylebroeck, A. (2006). Metacognitive Skills in Belgian Third Grade Children (Age 8 to 9) with and without Mathematical Learning Disabilities. *Springer*, 1(2), 119–135.
<https://doi.org/10.1007/S11409-006-8152-9>

- Deviana, T., & Aini, D. (2022). Learning Progression Guru Sekolah Dasar dalam Pengembangan Konten Soal Asesmen Kompetensi Minimum (AKM). *Jurnal Basicedu*. <https://doi.org/https://doi.org/10.31004/BASICEDU.V6I1.2095>
- Dina, R., & Ekawati, R. (2022). Student's Critical Thinking Skills In Solving Minimum Competency Assessment Problems On Social Arithmetics Topics. *MathEdunesa*, 11(3), 657–667. <https://doi.org/10.26740/mathedunesa.v11n3.p657-667>
- Dyah, N. W., & Setianingsih, R. (2019). Critical Thinking Processes Of Junior High School Students In Solving Contextual Problems Of Direct And Inverse Proportions Based On Reflective-Impulsive Style. *Jurnal Ilmiah Pendidikan Matematika*, 8(2).
- Efklides, A. (2006). Metacognition and Affect: What Can Metacognitive Experiences Tell Us About the Learning Process? *Educational Research Review*, 1(1), 3–14. <https://doi.org/10.1016/j.edurev.2005.11.001>
- Fadilatussyifa, Z., & Setyaningsih, N. (2023). Analisis Keterampilan Metakognisi Siswa dalam Memecahkan Masalah Asesmen Kompetensi Minimum (AKM) Ditinjau dari Gaya Kognitif. *Math Didactic: Jurnal Pendidikan Matematika*, 9(2), 264–277. <https://doi.org/10.33654/math.v9i2.2163>
- Faradillah, A., Hadi, W., & Tsurayya, A. (2018). Pre-Service Mathematics Teachers' Reasoning Ability In Solving Mathematical Non-Routine Problem According To Cognitive Style. *Journal of Physics: Conference Series*, 948, 012006. <https://doi.org/10.1088/1742-6596/948/1/012006>
- Fisher, R. (1998). Thinking About Thinking: Developing Metacognition in Children. *Early Child Development and Care*, 141(1), 1–15. <https://doi.org/10.1080/0300443981410101>
- Fiskha, S., Patri, D., & Heswari, S. (2022). Analisis Kemampuan Numerasi Siswa Kelas VIII SMP se-Kota Sungai Penuh dalam Menyelesaikan Soal AKM. *Jurnal Muara Pendidikan*, 7(2). <https://doi.org/https://doi.org/10.52060/mp.v7i2.919>
- Fitriyani, H., Setyawan, F., Hendroanto, A., & Istihapsari, V. (2021). Describing Student's Mathematical Power: Do Cognitive Styles Make Any Difference? *Bulletin of Applied Mathematics and Mathematics Education*, 1(1), 39. <https://doi.org/10.12928/bamme.v1i1.3856>
- Flavell, J. H. (1979). Metacognition and Cognitive Monitoring: A New Area of Cognitive Developmental Inquiry. *American Psychologist*, 34(10), 906–911. <https://doi.org/10.1037/0003-066X.34.10.906>
- Fuady, A., Purwanto, S., & S Rahardjo. (2020). Student reflective abstraction of impulsive and reflective in solving mathematical problem. *International Journal of Scientific*.

<https://www.academia.edu/download/109912414/Student-Reflective-Abstraction-Of-Impulsive-And-Reflective-In-Solving-Mathematical-Problem.pdf>

- Gaipman, B. (1986). The Application of Cognitive Style Research to Fieldwork Education. *Canadian Journal of Occupational Therapy*, 53(2), 75–80. <https://doi.org/10.1177/000841748605300203>
- Gantiyani, H., Hobri, Cahya, A., Atika, D., & Hariati, A. (2022). *Student's Critical Thinking Ability in Solving AKM Numeration Problems with Three Different Cognitive Levels*. 19–30. <https://doi.org/10.1063/5.0109966>
- García, T., Rodríguez, C., González-Castro, P., González-Pienda, J. A., & Torrance, M. (2016). Elementary Students' Metacognitive Processes And Post-Performance Calibration On Mathematical Problem-Solving Tasks. *Metacognition and Learning*, 11(2), 139–170. <https://doi.org/10.1007/s11409-015-9139-1>
- Güner, P., & Erbay, H. N. (2021). Metacognitive Skills and Problem-Solving. *International Journal of Research in Education and Science*, 715–734. <https://doi.org/10.46328/ijres.1594>
- Hairani, H., Prayitno, S., Turmuzi, M., & Soepriyanto, H. (2023). Analisis Kemampuan Pemecahan Masalah Matematika Pada Materi Pola Bilangan Ditinjau Dari Gaya Kognitif Konseptual Tempo. *Media Pendidikan Matematika*, 2(11), 177–196.
- Hamimah, A., & Kartika, E. D. (2019). Pengaruh Penerapan Problem Based Learning (PBL) Terhadap Metakognisi Siswa. *Laplace : Jurnal Pendidikan Matematika*, 2(2), 99–105. <https://doi.org/10.31537/laplace.v2i2.247>
- Hammarberg, K., Kirkman, M., & Lacey, S. de. (2016). Qualitative Research Methods: When to Use Them and How to Judge Them. *Human Reproduction*, 31(3), 498–501. <https://doi.org/10.1093/HUMREP/DEV334>
- Hermin, A. P., Pathuddin, R. L., & Alfisyahra. (2025). Exploring Students' Metacognition in Numeracy Problem Solving: The Role of Reflective and Impulsive Cognitive Styles. *Jurnal Pendidikan MIPA*, 26(1), 688–707. <https://doi.org/10.23960/jpmipa/v26i1.pp688-707>
- Hidayanto, E., Permadi, H., & Lestari, W. I. (2022). *Thinking Process Of Reflective Impulsive Cognitive Style's Student To Solving The Mathematics Problems*. 030039. <https://doi.org/10.1063/5.0102188>
- Israwati, D., Johar, R., & Ansari, B. I. (2021). The Development of Students' Metacognition in Mathematical Problem-Solving. *AIP Conference Proceedings*, 2331(1), 020026. <https://doi.org/10.1063/5.0042250>

- Istinabila, A. F., & Fardah, D. K. (2022). Misconception Analysis Of Students With Impulsive-Reflective Cognitive Style In Solving Patterns Of Numbers Problems. *MATHEdunesa*, 11(2). https://doi.org/10.26740/mathedunesa.v11n2.pPDF_525-535
- Jacobs, J. E., & Paris, S. G. (1987). Children's Metacognition About Reading: Issues in Definition, Measurement, and Instruction. *Educational Psychologist*, 22(3–4), 255–278. <https://doi.org/10.1080/00461520.1987.9653052>
- Jaenudin, S., Aminah, M., & Yusuf, Y. (2025). Analysis of Students' Mathematical Problem-Solving Abilities. *Jurnal Cendekia : Jurnal Pendidikan Matematika*, 9(1), 195–202. <https://doi.org/10.31004/cendekia.v9i1.3743>
- Janssen, N., & Lazonder, A. W. (2024). Meta-analysis of Interventions for Monitoring Accuracy in Problem Solving. *Educational Psychology Review*, 36(3), 96. <https://doi.org/10.1007/s10648-024-09936-4>
- Jupri, A., Drijvers, P., & Panhuizen, M. van den H. (2014). Difficulties in Initial Algebra Learning in Indonesia. *Mathematics Education Research Journal*, 26(4), 683–710. <https://doi.org/10.1007/S13394-013-0097-0/TABLES/13>
- Kagan, J. (1966). Reflection-Impulsivity: The Generality and Dynamics of Conceptual Tempo. *Journal of Abnormal Psychology*, 71(1), 17–24. <https://doi.org/10.1037/h0022886>
- Kartika, D. L., & Muhassanah, N. (2023). Profile of Student Metacognition in Solving Elementary Linear Algebra Problems Viewed from Tempo Conceptual Cognitive Style. *Edumatica: Jurnal Pendidikan Matematika*, 13(3), 235–246.
- Kathayat, B. B. (2024). Metacognitive Skills in Mathematics Learning: A Systematic Review of Literature. *Journal of Musikot Campus*, 2(1), 41–57. <https://doi.org/10.3126/jmc.v2i1.70785>
- Kemendikbud. (2020). *AKM dan Implikasinya pada Pembelajaran*.
- Kemendikbud. (2021). *Framework Asesmen Kompetensi Minimum (AKM)*.
- Kholid, M. N., Imawati, A., Swastika, A., Maharani, S., & Pradana, L. N. (2021). How are Students' Conceptual Understanding for Solving Mathematical Problem? *Journal of Physics: Conference Series*, 1776(1), 012018. <https://doi.org/10.1088/1742-6596/1776/1/012018>
- Kholid, M. N., Sa'Dijah, C., Hidayanto, E., & Permadi, H. (2022). Students' Reflective Thinking Pattern Changes And Characteristics Of Problem Solving. *Reflective Practice*, 23(3), 319–341. <https://doi.org/10.1080/14623943.2021.2025353>
- Lee, M., & Baylor, A. L. (2006). Designing Metacognitive Maps for Web-Based Learning. *Educational Technology & Society*, 9(1), 1176–3647.

- Ling, M. K. D., & Loh, S. C. (2023). Relationships between cognitive pattern recognition and specific mathematical domains in mathematics education. *International Journal of Mathematical Education in Science and Technology*, 54(2), 159–179. <https://doi.org/10.1080/0020739X.2021.1949059>
- Macneil, R. D. (1980). The Relationship of Cognitive Style and Instructional Style to the Learning Performance of Undergraduate Students. *The Journal of Educational Research*, 73(6), 354–359. <https://doi.org/10.1080/00220671.1980.10885265>
- MacNeil, R. D. (1980). The relationship of cognitive style and instructional style to the learning performance of undergraduate students. *The Journal of Educational Research*, 73(6), 361–364. <https://doi.org/10.1080/00220671.1980.10885265>
- Mappanyompa, B., Suastika, K., Ibrahim, A. Bin, & Nurhayadi. (2024). Explore Reflective and Impulsive Styles to Form Student Thinking Principles for Solving Mathematics Problems. *Eurasian Journal of Educational Research (EJER)*, 114, 16.
- Mardiana, N. P., Lestari, N. D. S., Putri, I. W. S., Trapsilasiwi, D., & Murtikusuma, R. P. (2024). Tinjauan Gaya Belajar: Bagaimana Kemampuan Numerasi Siswa Auditorial Dalam Menyelesaikan Soal Tes Tertulis AKM Materi Bentuk Aljabar. *JIPM (Jurnal Ilmiah Pendidikan Matematika)*, 13(1), 79–92. <https://doi.org/10.25273/JIPM.V13I1.20538>
- Mefoh, P. C., Nwoke, M. B., Chukwuorji, J. C., & Chijioke, A. O. (2017). Effect of Cognitive Style and Gender on Adolescents' Problem Solving Ability. *Thinking Skills and Creativity*, 25, 47–52. <https://doi.org/10.1016/j.tsc.2017.03.002>
- Mertasari, N. M. S., Sastri, N. L. P. P., & Pascima, I. B. N. (2023). Performance assessment: Improving metacognitive ability in mathematics learning. *Journal of Education and e-Learning Research*, 10(4), 837–844. <https://doi.org/10.20448/jeelr.v10i4.5260>
- Messick, S. (1976). *Individuality in Learning*. Jossey-Bass.
- Messick, S. (1994). The Matter of Style: Manifestations of Personality in Cognition, Learning, and Teaching. *Educational Psychologist*, 29(3), 121–136. https://doi.org/10.1207/s15326985ep2903_2
- Miles, & Huberman. (1994). Qualitative Data Analysis. Dalam *Thousand Oaks*. Sage Publication, Inc.
- Miller, M. B., Donovan, C.-L., Bennett, C. M., Aminoff, E. M., & Mayer, R. E. (2012). Individual Differences in Cognitive Style and Strategy Predict Similarities in the Patterns of Brain Activity Between Individuals. *NeuroImage*, 59(1), 83–93. <https://doi.org/10.1016/j.neuroimage.2011.05.060>

- Narimo, S., Utama, Prayitno, H. J., Fuadi, D., Novitasari, M., Setiawan, O., Handayani, T. K., & Rahim, F. A. (2021). Metacognitions of Senior High Students in Solving Mathematics Problems. *Journal of Physics: Conference Series*, 1720(1). <https://doi.org/10.1088/1742-6596/1720/1/012014>
- NCREL. (1995). *Metacognition - Thinking about thinking - Learning to Learn, Strategic Teaching and Reading Project Guidebook*.
- Ozturk, N. (2017). Assessing Metacognition: Theory and Practices. *International Journal of Assessment Tools in Education*, 134–134. <https://doi.org/10.21449/ijate.298299>
- Paivio, A. (1971). Imagery and Language. Dalam *Imagery* (hlm. 7–32). Elsevier. <https://doi.org/10.1016/B978-0-12-635450-8.50008-X>
- Palladino, P., Poli, P., Masi, G., & Marcheschi, M. (1997). Impulsive-Reflective Cognitive Style, Metacognition, and Emotion in Adolescence. *Perceptual and Motor Skills*, 84(1), 47–57. <https://doi.org/10.2466/pms.1997.84.1.47>
- Palmer, S. E. (1975). The Effects Of Contextual Scenes On The Identification Of Objects. *Memory & Cognition*, 3(5), 519–526. <https://doi.org/10.3758/BF03197524>
- Pan, Y., & Kim, H. (2022). Effects of Scaffolding Type and Metacognition Level on Higher-order Thinking Skills and Task Performance in Mathematical Learning: Lens of Neo-Vygotskian Theoretical Learning. *The SNU Journal of Education Research*, 31(4), 1–21. <https://doi.org/10.54346/sjer.2022.31.4.1>
- Panaoura, A., & Philippou, G. (2005). The Measurement of Young Pupils' Metacognitive Ability in Mathematics: The Case of Self-Representation and Self-Evaluation. *Prosiding of CERME*, 1–10.
- Pandey, K., & Mohan, A. (2024). Metacognitive Skills in Learning and Pedagogy: a Systematic Review and Analysis. *Journal of Cognition and Culture*, 24(3–4), 268–284. <https://doi.org/https://doi.org/10.1163/15685373-12340189>
- Pandey, N., & Mishra, R. C. (2014). Perceptual Learning and Memory of Reflective and Implusive Children. *Social Science International*, 30(1), 31.
- Patriana, W., Utama, S., & Wulandari, M. (2022). Pembudayaan Literasi Numerasi Untuk Asesmen Kompetensi Minimum dalam Kegiatan Kurikuler pada Sekolah Dasar Muhammadiyah. *Jurnal Basicedu*, 5(5), 3413–3430. <https://doi.org/https://doi.org/10.31004/basicedu.v5i5.1302>
- Perry, J., Lundie, D., & Golder, G. (2019). Metacognition in schools: what does the literature suggest about the effectiveness of teaching metacognition in schools? *Educational Review*, 71(4), 483–500. <https://doi.org/10.1080/00131911.2018.1441127>

- Polya, G. (1945). *How to Solve It*. Princeton University Press. <https://doi.org/10.1515/9781400828678>
- Popham, M., Adams, S., & Hodge, J. (2020). Self-Regulated Strategy Development to Teach Mathematics Problem Solving. *Intervention in School and Clinic*, 55(3), 154–161. <https://doi.org/10.1177/1053451219842197>
- Pramesti, T. I., & Retnawati, H. (2019). Difficulties in Learning Algebra: An Analysis of Students' Errors. *Journal of Physics: Conference Series*, 1320(1). <https://doi.org/10.1088/1742-6596/1320/1/012061>
- Pratama, N. I., Kamid, K., & Efendi, M. H. (2020). Analisis Proses Metakognitif Siswa Tipe Kepribadian Idealist, Artisan, Guardian dan Rational dalam Pemecahan Masalah Matematika. *JP3M (Jurnal Penelitian Pendidikan dan Pengajaran Matematika)*, 6(2), 71–82. <https://doi.org/10.37058/jp3m.v6i2.1940>
- Pusat Asesmen Pendidikan. (2023). *Frame Asesmen Kompetensi Minimum (AKM)*. Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi.
- Rachmawati, F. K., Lestari, N. D. S., Oktavianingtyas, E., Trapsilasiwi, D., & Murtikusuma, R. P. (2024). Profil Literasi Numerasi Siswa SMA dalam Menyelesaikan Soal AKM Konten Aljabar Berdasarkan Kemampuan Matematika. *JIPM (Jurnal Ilmiah Pendidikan Matematika)*, 12(2), 294. <https://doi.org/10.25273/jipm.v12i2.18983>
- Ramadanti, A. V., Syahri, A. A., & Kristiawati. (2022). Deskripsi Keterampilan Metakognitif Dalam Memecahkan Masalah Matematika Ditinjau Dari Gaya Kognitif Konseptual Tempo. *Paradikma Jurnal Pendidikan Matematika*, 15(1), 32–42.
- Ramadhanti, D., Ghazali, A. S., Hasanah, M., & Harsiati, T. (2019). Students' metacognitive weaknesses in academic writing: A preliminary research. *International Journal of Emerging Technologies in Learning*, 14(11), 41–57. <https://doi.org/10.3991/IJET.V14I11.10213>
- Rambe, K. N., & Asmin, B. S. (2019). Analysis of Metacognitive Skills in Solving Mathematical Problems Reviewed from Students' Learning Style. *American Journal of Educational Research*, 7(11), 780–793. <https://doi.org/10.12691/education-7-11-5>
- Rangkuti, A. N. (2022). Diagnostik Kesulitan Belajar Siswa pada Materi Aljabar. *AXIOM: Jurnal Pendidikan dan Matematika*, 11(2), 116. <https://doi.org/10.30821/axiom.v11i2.13310>
- Rasheed, U., & Zafar, J. M. (2023). Effect of Metacognitive Strategies on Secondary School Students to Achieve Sustainable Learning Skills. *Academy of Education and Social Sciences Review*, 3(4), 521–529. <https://doi.org/10.48112/aessr.v3i4.601>

- Restini, I. L., Pathuddin, P., Bakri, B., & Sukayasa, S. (2023). Profile of Students' Metacognitive Skills in Solving Math Problems in Terms of Mathematical Ability. *JME (Journal of Mathematics Education)*, 8(2), 172–187. <https://doi.org/10.31327/jme.v8i2.1970>
- Rhodes, M. G. (2019). Metacognition. *Teaching of Psychology*, 46(2), 168–175. <https://doi.org/10.1177/0098628319834381>
- Riani, Asyiril, & Untu, Z. (2022). Metakognisi Siswa dalam Memecahkan Masalah Matematika. *Jurnal PRIMATIKA*, 11(1), 51–60.
- Rollins, H., & Genser L. (1977). Role of Cognitive Style in a Cognitive Task: A Case Favoring the Impulsive Approach to Problem Solving. *Journal of Educational Psychology*, 69(3), 281–287. <https://doi.org/https://psycnet.apa.org/doi/10.1037/0022-0663.69.3.281>
- Rosita, I., & Nindiasari, H. (2021). Analisis Keterampilan Metakognisi Siswa SMP dengan Gaya Kognitif Reflektif-Impulsif Dalam Pemecahan Masalah Geometri. *Symmetry: Pasundan Journal of Research in Mathematics Learning and Education*, 6(2), 148–166.
- Rozencwajg, P., & Corroyer, D. (2005). Cognitive Processes in the Reflective-Impulsive Cognitive Style. *The Journal of genetic psychology*, 166(4), 451–463. <https://doi.org/10.3200/GNTP.166.4.451-466>
- Rustam, A., & Wahyuni, D. (2020). Pengaruh Efikasi Diri dan Regulasi Diri Terhadap Hasil Belajar Matematika Siswa Kelas X SMA Alkhairaat 1 Palu. *Jurnal Pendidikan*, 3(1), 61–68. <https://core.ac.uk/download/pdf/327192873.pdf>
- Saiful, S., Hobri, H., & Tohir, M. (2020). Analisis Metakognisi Siswa Berbasis Lesson Study For Learning Community (LSLC) Ditinjau Dari Gaya Kognitif. *Alifmatika: Jurnal Pendidikan dan Pembelajaran Matematika*, 2(1), 73–91. <https://doi.org/10.35316/alifmatika.2020.v2i1.73-91>
- Saputri, V. N., & Kesumawardani, A. D. (2021). Problem-Based Learning (PBL) Model: How Does It Influence Metacognitive Skills and Independent Learning? Dalam *Journal of Advanced Sciences and Mathematics Education* (Vol. 1, Nomor 1). <https://www.journal.foundae.com/index.php/jasme/index>
- Sari, D. R., Lukman, E. N., & Wahid, M. R. M. (2021). Analisis Kemampuan Siswa SD dalam Menyelesaikan Soal Geometri Asesmen Kompetensi Minimum. *JPG: Jurnal Pendidikan Guru*, 2(4), 186–190. <https://ejournal.uika-bogor.ac.id/index.php/jpg/article/view/5133>
- Sari, P. O., & Wulan, E. R. (2024). Level of Students' Mathematical Literacy Based on Cognitive Conceptual Tempo (Reflective-Impulsive). *JRPM (Jurnal Review Pembelajaran Matematika)*, 9(1), 1–19. <https://doi.org/10.15642/jrpm.2024.9.1.1-19>

- Satriawan, M. A., Budiarto, M. T., & Siswono, T. Y. E. (2018). Students' Relational Thinking of Impulsive and Reflective in Solving Mathematical Problem. *Journal of Physics: Conference Series*, 947, 012030. <https://doi.org/10.1088/1742-6596/947/1/012030>
- Schneider, W., & Artelt, C. (2010). Metacognition and Mathematics Education. *Springer*, 42(2), 149–161. <https://doi.org/10.1007/S11858-010-0240-2>
- Schneider, W., & Shiffrin, R. M. (1977). Controlled and Automatic Human Information Processing: I. Detection, search, and attention. *Psychological Review*, 84(1), 1–66. <https://doi.org/10.1037/0033-295X.84.1.1>
- Schoenfeld, A. H. (2013). *Cognitive Science and Mathematics Education*. Routledge. <https://doi.org/10.4324/9780203062685>
- Schraw, G., & Moshman, D. (1995). Metacognitive theories. *Educational Psychology Review*, 7(4), 351–371. <https://doi.org/10.1007/BF02212307>
- Setiawan, A. (2020). The Effect Of Cognitive Styles On Reasoning And Problem Solving Ability. *Journal for the Mathematics Education and Teaching Practices*, 1(2), 87–93.
- Siagian, M. V., Saragih, S., & Sinaga, B. (2019). Development of Learning Materials Oriented on Problem-Based Learning Model to Improve Students' Mathematical Problem Solving Ability and Metacognition Ability. *International Electronic Journal of Mathematics Education*, 14(2). <https://doi.org/10.29333/iejme/5717>
- Silvania, S. A., & Widya, F. P. (2024). Analisis Kesulitan Belajar Siswa pada Materi Aljabar untuk Soal AKM. *JiIP (Jurnal Ilmiah Ilmu Pendidikan)*, 7(10), 11316–11323. <https://doi.org/https://doi.org/10.54371/jiip.v8i7>
- Son, A. L., Darhim, D., & Fatimah, S. (2020). Students' Mathematical Problem-Solving Ability Based on Teaching Models Intervention and Cognitive Style. *Journal on Mathematics Education*, 11(2), 209–222. <https://doi.org/10.22342/jme.11.2.10744.209-222>
- Stanton, J. D., Sebesta, A. J., & Dunlosky, J. (2021). Fostering Metacognition to Support Student Learning and Performance. *CBE Life Sciences Education*, 20(2), 1–7. <https://doi.org/10.1187/CBE.20-12-0289>
- Stein, N., & Prindaville P.S. (1976). Discrimination Learning and Stimulus Generalization by Impulsive and Reflective Children. *Journal of Experimental Child Psychology*, 21(1), 25–39. [https://doi.org/https://doi.org/10.1016/0022-0965\(76\)90054-0](https://doi.org/https://doi.org/10.1016/0022-0965(76)90054-0)
- Sugiyono. (2013). *Metode Penelitian Pendidikan Pendekatan Kuantitatif, Kualitatif dan R&D*. Alfabeta.

- Sulisawati, Noviani, D., Lutfiyah, & Murtinasari, F. (2019). Difference of Mistakes Reflective-Impulsive Students In Mathematical Problem Solving. *International Journal of Trends in Mathematics Education Research*, 2(2), 101–105. <https://ijtmer.saintispub.com/ijtmer/article/view/47>
- Sulistiyani, D., Subekti, E. E., & Wardana, M. Y. S. (2021). Students' Learning Difficulties Review from Mathematics Problem-Solving Ability in Third-Grade Elementary School. *Indonesian Journal Of Educational Research and Review*, 4(2), 345. <https://doi.org/10.23887/ijerr.v4i2.30310>
- Sutama, Narimo, S., Harsono, Sari, D. P., & Adnan, M. (2022). Cognitive Experience of Junior High School Students in Numerical Problem Solving on Minimum Competency Assesment Based on Cognitive Style. *AIP Conference Proceedings*, 030022. <https://doi.org/10.1063/5.0102927>
- Taufik, A. R., Natsir, I., & Mayasari, D. (2019). The Metacognition of Junior High School Students in Posing Mathematical Problems Viewed From Cognitive Style. *International Conference on Social Science (ICSS)*, 137–143.
- Thenmozhi, C. (2019). Models of Metacognition. *Shanlax International Journal of Education*, 7(2), 1–4. <https://doi.org/10.34293/education.v7i2.303>
- Thi-Nga, H., Thi-Binh, V., & Nguyen, T. (2024). Metacognition in Mathematics Education: From Academic Chronicle to Future Research Scenario—A bibliometric Analysis with the Scopus Database. *Science and Technology Education*, 20(4), 24–27. <https://doi.org/10.29333/ejmste/14381>
- Tju, M., & Murniarti, E. (2021). Analisis Pelatihan Asesmen Kompetensi Minimum. *Jurnal Dinamika Pendidikan*, 14(2), 110–116. <https://doi.org/10.51212/jdp.v14i2.7>
- Tralisno, A., & Syafmen, W. (2021). Analisis Pengetahuan Metakognisi Siswa Dengan Gaya Belajar Reflektif Pada Pemecahan Masalah Matematika. *SAINMATIKA UNJA Jurnal Sains dan Matematika Universitas Jambi*, 2(2).
- Ulya, M. F. N., Sumaji, S., & Rahayu, R. (2023). Analisis Kemampuan Pemecahan Masalah Matematis Siswa Smp Ditinjau Dari Gaya Kognitif Reflektif Impulsif. *AKSIOMA: Jurnal Program Studi Pendidikan Matematika*, 12(1), 246. <https://doi.org/10.24127/ajpm.v12i1.5889>
- Urban, M., & Urban, K. (2025). Does Metacognition Matter in Creative Problem-Solving? A Mixed-Methods Analysis of Writing. *The Journal of Creative Behavior*, 59(1). <https://doi.org/10.1002/jocb.630>
- Veenman, M. V. J., Wolters, B. H. A. M. V. H., & Afflerbach, P. (2006). Metacognition and Learning: Conceptual and Methodological Considerations. *Metacognition and Learning*, 1(1), 3–14. <https://doi.org/10.1007/s11409-006-6893-0>

- Viator, R. E., Harp, N. L., Rinaldo, S. B., & Marquardt, B. B. (2020). The Mediating Effect of Reflective-Analytic Cognitive Style on Rational Thought. *Thinking & Reasoning*, 26(3), 381–413. <https://doi.org/10.1080/13546783.2019.1634151>
- Vidad, D. C., & Quimbo, M. A. T. (2021). Students' Problem-solving Difficulties and Coping Strategies in Mathematics: A Model- Building Study. *International Journal of Learning, Teaching and Educational Research*, 20(9), 136–173. <https://doi.org/10.26803/ijlter.20.9.9>
- Volkova, E., & Rusalov, V. M. (2016). Cognitive Styles and Personality. *Personality and individual differences*, 99, 266–271. <https://doi.org/10.1016/j.paid.2016.04.097>
- Wang, M.-T., Binning, K. R., Del Toro, J., Qin, X., & Zepeda, C. D. (2021). Skill, Thrill, and Will: The Role of Metacognition, Interest, and Self-Control in Predicting Student Engagement in Mathematics Learning Over Time. *Child Development*, 92(4), 1369–1387. <https://doi.org/https://doi.org/10.1111/cdev.13531>
- Wati, R., & Nurcahyo, A. (2022). Kemampuan Numerasi Siswa dalam Menyelesaikan Soal Geometri pada Asesmen Kompetensi Minimum. *Jurnal Cendekia*, 11(3), 2199–2208. <https://doi.org/10.24127/ajpm.v11i3.5780>
- Webster, R. (2003). Cognitive Styles, Metacognition and the Design of E-Learning Environments. Dalam *Virtual Education* (hlm. 225–240). IGI Global. <https://doi.org/10.4018/978-1-93177-739-1.ch015>
- Widadah, S., & Afifah, D. (2013). Profil Metakognisi Siswa dalam Menyelesaikan Soal Sistem Persamaan Linear Dua Variabel Berdasarkan Gaya Kognitif. *Jurnal Pendidikan Matematika STKIP PGRI Sidoarjo*, 1(1), 13–24.
- Witkin, H. A., Moore, C. A., Goodenough, D., & Cox, P. W. (1977). Field-Dependent and Field-Independent Cognitive Styles and Their Educational Implications. *journals.sagepub.com*, 47(1), 1–64. <https://doi.org/10.3102/00346543047001001>
- Wulandari, & Listiana, Y. (2021). Analysis of Students' Metacognition Ability in Mathematical Problem Solving in Problem Based Learning. *Jurnal MathEducation Nusantara*, 4(1), 38–51.
- Yasir, M., & Dwiyanti, L. (2023). Analysis of Critical Thinking Levels of Prospective Science Teachers in Ethnoscience Learning Based on Reflective and Impulsive Cognitive Styles. *Jurnal Pendidikan Sains Indonesia*, 11(4), 808–825. <https://doi.org/10.24815/jpsi.v11i4.31799>