AKSIOMA
Jurnal Program Studi Pendidikan Matematika
Publisher: UM METRO
UNIVERSITAS MUHAMMADIYAH METRO
AKSIOMA JURNAL
e-ISSN: 2442-5419
p-ISSN: 2089-8703

#6331 Summary

Submission

Authors	Ardina Mayasari, indaryanti indaryanti, Yusuf Hartono, Cecil Hiltrimartin, Jeri Araiku
Title	RELATIONSHIP ANALYSIS OF CRITICAL THINKING ABILITY WITH MATHEMATICAL MODELING ABILITY
Original file	6331-19745-3-SM.DOCX 2022-10-31
Supp. files	
Submitter	indaryanti indaryanti
Date submitted	October 31, 2022 - 04:57 AM
Section	Articles
Editor	Swaditya Rizki
Author comments	We Sincerely hope that our article can be publised in your journal
Abstract Views	0

Status

Status	Published Vol 12, No 1 (2023)
Initiated	2023-04-01
Last modified	2023-04-29

Submission Metadata

Authors

Name	Ardina Mayasari
Affiliation	Universitas Sriwijaya
Country	Indonesia
Bio Statement	—
Name	indaryanti indaryanti
Affiliation	Universitas Sriwijaya
Country	Indonesia
Bio Statement	—
Principal contact for editorial correspondence.	
Name	Yusuf Hartono
Affiliation	Universitas Sriwijaya
Country	Indonesia
Bio Statement	—
Name	Cecil Hiltrimartin
Affiliation	Universitas Sriwijaya
Country	Indonesia
Bio Statement	—
Name	Jeri Araiku
Affiliation	Universitas Sriwijaya
Country	Indonesia
Bio Statement	—

Title and Abstract

Title: RELATIONSHIP ANALYSIS OF CRITICAL THINKING ABILITY WITH MATHEMATICAL MODELING ABILITY

Abstract

Pemodelan matematika merupakan jantung dari pemecahan matematis. Agar siswa mampu memecahkan masalah dengan baik, maka mereka harus mampu berpikir secara kritis. Penelitian ini bertujuan untuk mengetahui apakah terdapat hubungan yang positif dan signifikan antara kemampuan berpikir kritis dengan kemampuan pemodelan matematika siswa. Jenis penelitian ini adalah penelitian kuantitatif dengan metode analisis korelasi. Sampel yang digunakan dalam penelitian ini sebanyak 35 orang siswa kelas VIII.9 SMPN 10 Palembang. Prosedur penelitian ini terdiri dari 3 tahap yaitu tahap persiapan, tahap pelaksanaan, dan tahap akhir. Teknik pengumpulan data dalam penelitian ini menggunakan tes tertulis. Berdasarkan hasil penelitian ini diperoleh nilai sig (0.021) < (0.05) dengan nilai korelasi sebesar 0.388. Sehingga dapat disimpulkan bahwa terdapat hubungan yang positif dan signifikan antara kemampuan berpikir kritis dan kemampuan pemodelan matematika siswa. Adapun kontribusi kemampuan berpikir kritis terhadap kemampuan pemodelan matematika adalah sebesar 15,1%.

Mathematical modeling is the heart of mathematical problem solving. In order for students to be able to solve problems well, they need to be able to think critically. This study aims to determine whether there is a positive and significant correlation between critical thinking skills and students' mathematical modeling abilities. This type of research is quantitative research with correlation analysis method. The sample used in this study were 35 students of class VIII.9 SMPN 10

ISSN BARCODE

9 772442 541014
ISSN Online

9 772089 870003
ISSN Print

Palembang. This research procedure consists of 3 stages, namely the preparation stage, the implementation stage, and the final stage. The data collection technique in this study used a written test. Based on the results of this study obtained the value of sig (0.021) < (0.05) with a correlation value of 0.388. Then it can be concluded that there is a positive and significant relationship between critical thinking skills and students' mathematical modeling abilities. The contribution of critical thinking skills to mathematical modeling abilities is 15.1%.

Indexing

Keywords: Kemampuan berpikir kritis; kemampuan pemodelan matematika; SPLDV
Language: id

Supporting Agencies

Agencies: —

References

References

Agus, I. (2021). Hubungan Antara Efikasi Diri dan Kemampuan Berpikir Kritis Matematika Siswa. Delta J. Ilm. Pendidik. Mat, 9(1), 1.

Bliss, K., dan Libertini, J. (2016). Guidelines for Assesment & Instruction in Matehamtical Modeling Education (GAIMME) (Second /edition). USA: COMAP, Inc. & SIAM.

Dancey, C. P., & Reidy, J. (2007). Statistics without maths for psychology. Pearson education.

Dehghani, M., Pakmehr, H., & Malekzadeh, A. (2011). Relationship between students' critical thinking and self-efficacy beliefs in Ferdowsi University of Mashhad, Iran. Procedia-Social and Behavioral Sciences, 15, 2952-2955.

Ennis, Robert H. (1998). Is Critical Thinking Culturally Biased? Teaching Philosophy 21 (1):15-33.

Harlen, W. & Symington, D. (1987) Helping children to observe. In W. Harlen (Ed.), Primary science: Taking the plunge, Heinemann, London. 21-35.

Hartama, D., Andani, SR., dan Pradana, TAY. (2020). Riset Operasi: Optimalisasi Produksi Menggunakan Metode Simpleks dan Metode Grafik. Pematang Siantar: Yayasan Kita Menulis.

Hartono, J. A., & Karnasih, I. (2017). Pentingnya Pemodelan Matematis Dalam Pembelajaran Matematika.

Hursen, C. The Effect of Problem-Based Learning Method Supported by Web 2.0 Tools on Academic Achievement and Critical Thinking Skills in Teacher Education. Tech Know Learn 26, 515–533 (2021). https://doi.org/10.1007/s10758-020-09458-2

Hu, W., Jia, X., Plucker, J. A., & Shan, X. (2016). Effects of a critical thinking skills program on the learning motivation of primary school students. Roeper Review, 38(2), 70-83.

Junsay, M. L. (2016). Reflective learning and prospective teachers' conceptual understanding, critical thinking, problem solving, and mathematical communication skills. Research in Pedagogy, 6(1), 43-58.

Kemendikbud. (2017). Model Silabus Mata Pelajaran Sekolah Menengah Pertama/Madrasah Tsanawiyah (SMP/MTs). Jakarta: Kementerian Pendidikan dan Budaya.

Kim, J., & Ryu, H. (2022). Effect of Problem Solving Ability and Critical Thinking Disposition on Communication Competency in Nursing Students. Journal of Convergence for Information Technology, 12(5), 83-91.

Kurfiss, J. G. (1988). Critical Thinking: Theory, Research, Practice, and Possibilities: ASHE-ERIC/Higher Education Research Report, Volume 17, Number 2, 1988 (2nd Printing). New York: Wiley.

Kurniadi, E., Darmowijoyo, D., & Pratiwi, W. D. (2020). Analisis Kemampuan Pemahaman Konsep Dasar Mahasiswa dalam Mengidentifikasi Karakteristik dan Menyelesaikan Soal Pemodelan Matematika. Jurnal Gantang, 5(1), 9-18.

Lestari, NGAMY. (2020). Pengenalan Konsep Matematika Usia Dini. Sutriyanti, NK. (Ed). Menyemai Dharma Perspektif Disiplin. Galesong: Yayasan Ahmar Cendekia Indonesia.

Mahardiningrum, A. S., & Ratu, N. (2018). Profil Pemecahan Masalah Matematika Siswa SMP Pangudi Luhur Salatiga Ditinjau dari Berpikir Kritis. Mosharafa: Jurnal Pendidikan Matematika, 7(1), 75-84.

Nasrulloh, M. F., & Umardiyah, F. (2021, April). The Effectiveness of Think-Talk-Write (TTW) Learning Strategy in the Critical Thinking and Mathematical Communication. In International Conference on Engineering, Technology and Social Science (ICONETOS 2020) (pp. 748-753). Atlantis Press.

Permatasari, R., Zulkardi, Z., & Hafizah, H. (2019). Analisis Kemampuan Pemodelan Matematika Mahasiswa Baru Program Studi Pendidikan Matematika. Desertasi. Palembang: Universitas Sriwijaya.

Pithers, R. T., & Soden, R. (2000). Critical Thinking in Education: A Review. Educational Research, 42, 237-249. DOI: http://dx.doi.org/10.1080/001318800440579

Rahman, Md. Mehadi. (2019). 21st Century Skill "Problem Solving": Defining the Concept. Asian Journal of Interdisciplinary Research, 2(1), 64-74. DOI: http://doi.org/10.34256/ajir1917.

Rahmawati, D., Darmawijoyo, & Hapizah. (2018). Desain Pembelaajran Materi Fungsi Linier Menggunakan Pemodelan Mateamtika. Aksioma, 7(1), 65-79.

Riyanto, O. R., & Mariani, S. (2019). Mathematics critical thinking reviewed from self-efficacy and motivation of learning in arias learning. Journal of Primary Education, 8(5), 243-250.

Sari, FM. (2019). Diagnosis Kesalahan Siswa dan Scaffolding dalam Menyelesaikan Pertidaksamaan Kuadrat. Dahlan, EM,. Aisyiyah, N., dan Istiwatie, D. (Ed.). Memotret Realita; Antologi Artikel Guru SMK Eksak. Trenggalek: Rose Book.

Siswono, TYE., Rosyidi, AH., Kohar, AW., Hartono, S., Nisa', K., dan Uripno, G. (2022). Integrasi Teknologi dalam Pembelajaran Matematika, Upya Meningkatkan Kemampuan Berpikir Kreatif Matematis Siswa. Malang: Literasi Nusantara Abadi.

Sugiyono. (2015). Metode Penelitian Pendidikan. Alfabeta. Bandung.

Sukmawati, R. (2018). Hubungan Kemampuan Literasi Matematika Dengan Berpikir Kritis Mahasiswa. Prosiding SEMPOA (Seminar Nasional, Pameran Alat Peraga, dan Olimpiade Matematika) 4 2018.

Sulistyorini, Y., & Napfiah, S. (2019). Analisis Kemampuan Berpikir Kritis Mahasiswa dalam Memecahkan Masalah Kalkulus. Aksioma Jurnal, 8(2), 279-287.

Suwanto, F. R., Tobondo, Y.V., & Riskiningtyas, L. (2017). Kemampuan Abstraksi dalam Pemodelan Matematika. Prosiding Seminar Matematika dan Pendidikan Matematika UNY 2017.

Wasqita, R., Rahardi, R., & Muksar, M. (2022). Analisis Kemampuan Berpikir Kritis Siswa pada Materi Bangun Datar Ditinjau dari Gaya Belajar. Aksioma Jurnal. 11(2), 1501-1513.

Wulandary, S., Indaryanti, I., Araiku, J., & Scristia, S. (2021). Analisis Hubungan Kemampuan Berfikir Kreatif Dengan Kemampuan Pemecahan Masalah Matematika Siswa SMPN 14 Bandar Lampung. Lentera Sriwijaya: Jurnal Ilmiah Pendidikan Matematika, 3(2), 47-57.

Valenzuela, J., Nieto, A., & Saiz, C. (2011). Critical thinking motivational scale: A contribution to the study of relationship between critical thinking and motivation.