Vol. 4, No. 4, December 2026, pp. 4027-4036
INTERNATIONAL JOURNAL OF
POST AXIAL
FUTURISTIC TEACHING AND LEARNING
https://journal.amorfati.id/index.php/postaxial | | ISSN 3025-7549

The Effectiveness of *Missouri Mathematics Project Learning* Model Assisted by *Trageda* on Primary School Students' Mathematical Connection Ability

Linda Safitri [1a]*, Hesti Yunitiara Rizqi [2b]
[1,2] Universitas Ngudi Waluyo, Indonesia

[a]linlinv22k@gmail.com, [b]hestiyunitiara@gmail.com

Article History:
Received:
21-09-2026
Revised:
29-10-2026
Accepted:
19-11-2026
Avaiable online:
09-12-2026

Keywords:
Mathematical connection ability, Missouri mathematics project, Trageda

***Correspondence Address:**
linlinv22k@gmail.com

Abstract:
This study is motivated by the low mathematical connection ability of students, who tend to understand material procedurally and in isolation without being able to link concepts or apply them in real-life contexts. The purpose of this study is to determine the effectiveness of implementing the Missouri Mathematics Project learning model assisted by Trageda on students' mathematical connection ability. Due to practical field limitations, this research employed a pre-experimental method using a one-group pretest-posttest design focusing solely on a single intact class of 11 fifth-grade students at SDTQ Sahabat Keluarga, selected via saturated sampling. The research instruments included observations, questionnaires and tests comprising both pretest and posttest. Data were analyzed using normality testing as a prerequisite and hypothesis testing was conducted using a Paired Samples T-Test and N-Gain test. The analysis revealed a significant increase between the pretest and posttest scores, with the average pretest score rising from 51.55 to an average posttest score of 81.73, yielding an average improvement of 30.18 points. Furthermore, the average N-Gain score obtained was 0.6266, which falls into the moderate category. These results indicate that the application of the Missouri Mathematics Project learning model assisted by Trageda shows an effect in improving students' mathematical connection ability.

This is an open-access article under the CC–BY-SA license.

Introduction (مقدمة)

The quality of human resources is one of the fundamental aspects that needs to be improved. Efforts to enhance this quality can be achieved through education. Education is a

continuous process that not only serves to convey knowledge, but also builds character, core values, and the skills needed by individuals in society (Baiti et al., 2024). At the elementary education level, learning focuses not only on mastering subject matter, but also on critical thinking that can be applied practically. This principle aligns with a contextual approach that connects learning materials with real-life reality, allowing students to comprehend and apply knowledge more meaningfully (Yolanda et al., 2024).

Mathematics is an essential subject that plays a vital role in shaping thinking abilities. Far from merely focusing on numbers and calculations, mathematics trains logical, systematic, critical, and creative reasoning; thus, its instruction in elementary school must be designed optimally to develop students' mathematical abilities. Mathematical abilities encompass several crucial aspects, such as conceptual understanding, reasoning, communication, problem-solving, and mathematical connection abilities. These five capabilities are interconnected and play an integral role in building a comprehensive understanding of mathematics (National Council of Teachers of Mathematics, 2000).

Among these various abilities, mathematical connection ability is considered essential to develop as it encompasses students' capacity to integrate mathematical concepts across topics, interdisciplinary fields, and real-life situations (Andini et al., 2024; Nurmala et al., 2025). Through this ability, students no longer understand learning materials in isolation; instead, they are able to perceive the interrelationships between concepts comprehensively, making learning more meaningful and effective in supporting contextual problem-solving (Astriani et al., 2025; Upara et al., 2024). Particularly in geometry topics such as the area of 2D shapes, mastery of mathematical connections has been proven to help students understand spatial relationships and the concept of area more concretely (Sari & Rizqi, 2025).

The indicators of mathematical connection ability used in this study refer to the framework by Apipah and Kartono (2017), which has been adapted to the characteristics of elementary school students. The six primary indicators measured include: (1) identifying and understanding the relationships between representations of concepts and procedures, (2) understanding the interrelationships among mathematical topics, (3) applying mathematics to other disciplines and daily life, (4) understanding equivalent representations of the same concept or procedure, (5) discovering connections between procedures in equivalent representations, and (6) utilizing connections among mathematical topics as well as their relationships with other disciplines.

However, several previous studies indicate that the mathematical connection ability of elementary school students remains relatively low (Kurniawan & Algi, 2023; Sari & Rizqi, 2025). The results of a preliminary study test conducted at SDTQ Sahabat Keluarga also revealed that the mathematical connection ability of fifth-grade elementary school students is still categorized as low and has not developed optimally across most indicators. The researcher also distributed questionnaires to reinforce the preliminary test findings, covering aspects of learning models, instructional media, and mathematical connection abilities. The results demonstrated that students still require mathematics learning that is more engaging, interactive, and meaningful.

One relevant alternative learning model to implement is the Missouri Mathematics Project (MMP) learning model. This is a mathematics learning model systematically designed through the stages of review, concept development, controlled practice, seatwork, and homework assignment, making it suitable for helping elementary school students understand concepts step-by-step while providing opportunities for repeated practice. Research by Daulay et al. (2024) shows that the use of the *Missouri Mathematics Project* model is effective in improving students' mathematics learning achievement.

The *Missouri Mathematics Project* is a learning model designed to enhance students' ability to understand concepts, solve exercises, and tackle mathematical problems through learning

experiences gained from gradual practice (Ervinasari & Astuti, 2023). The *Missouri Mathematics Project* model is effective in improving students' mathematical connection ability. This demonstrates that the *Missouri Mathematics Project* model is capable of helping students link ideas across mathematical concepts and apply them in problem-solving (Prihandhika et al., 2022). The *Missouri Mathematics Project* learning syntax consists of five stages: (1) introduction/review; (2) development; (3) controlled practice; (4) seatwork/independent work; and (5) assignment or homework (Daulay et al., 2024).

While the *Missouri Mathematics Project* model optimizes time management and strengthens students' skills through intensive practice, its teacher-centered nature can limit self-exploration and cause boredom. To overcome these limitations and sustain student motivation, the *Missouri Mathematics Project* model should be integrated with interactive, manipulative-based learning media (Trisnowali, 2018).

Learning media serves to optimize the learning process by fostering student interest and active engagement. Its utilization facilitates systematic material delivery, condenses complex information, and simplifies abstract concepts into concrete ones (Ahdar, 2018). One media that can be utilized in learning activities as well as constructive play is *Trageda. Trageda*, an acronym for *Truk Ajaib Geometri Datar* (Magic Truck of Flat Geometry), is a mathematics learning media developed by the researcher by adapting the concept of tangram media. This teaching aid is designed to facilitate students' understanding of 2D geometric shape concepts through manipulative activities, direct observation, and shape exploration. Through a blend of play, exploration, and problem-solving elements, *Trageda* renders learning more concrete, contextual, and interactive.

Although students' mathematical connection ability has been widely studied and the *Missouri Mathematics Project* model has proven effective in enhancing conceptual understanding, limitations remain in integrating this model with local wisdom-based learning media or concrete visualization such as Trageda. Previous studies generally applied *Missouri Mathematics Project* conventionally or utilized standard digital media, leaving specific visual interactions designed to bridge abstract mathematical ideas rarely explored. The novelty of this study lies in the synergistic integration of the *Missouri Mathematics Project* model with Trageda, wherein the structured steps of *Missouri Mathematics Project* are fully supported by Trageda's contextual visualization to optimize every aspect of students' mathematical connection ability.

Based on the description above, the *Missouri Mathematics Project* learning model assisted by *Trageda* is deemed appropriate to implement as a solution to the problems identified in the preliminary study. Through systematic instructional steps, continuous practice, and the support of concrete media, this model is expected to optimally enhance the mathematical connection ability of fifth-grade elementary school students. The objective of this study focuses on two main points: to examine whether there is an effect and to measure the level of effectiveness of implementing the Missouri Mathematics Project learning model assisted by *Trageda* media on the mathematical connection ability of fifth-grade students at SDTQ Sahabat Keluarga.

Method (منهج)

Research Design

This study employed a quantitative approach with a *pre-experimental* design, specifically utilizing the *one-group pretest-posttest design.* In this design, a single group of participants was measured prior to the intervention (*pretest*), exposed to the treatment, which consisted of mathematics learning using the *Missouri Mathematics Project* model assisted by *Trageda* and

subsequently measured after the intervention (*posttest*). This design was implemented to evaluate changes in students' mathematical connection abilities before and after receiving the treatment.

Participant Characteristics & Sampling Procedure

The target population for this study comprised fifth-grade students at SDTQ Sahabat Keluarga, located in East Ungaran District, Semarang Regency, totaling 11 students. Due to the small population size, a saturated sampling technique (*total sampling*) was employed, in which all members of the population were selected as the study sample (Sugiyono, 2017).

Experimental Manipulations & Apparatus

The experimental intervention incorporated an innovative instructional aid called *Trageda* (*Truk Ajaib Geometri Datar* / Magic Truck of Flat Geometry). Constructed from wooden materials, *Trageda* is designed as an interactive model truck equipped with a magnetic bed serving as a geometric exploration board. The apparatus includes:

- Detachable magnetic 2D geometric shapes and a flexible set of tangram pieces.
- Vibrant colors and child-safe materials optimized for elementary students.
- Integrated challenge cards and formula cards.



Figure 1. Trageda

Trageda functions as a multifunctional tool to facilitate learning across various topics, including shape identification, properties of 2D shapes, symmetry, perimeter, area, and shape composition, aimed at strengthening students' mathematical connection abilities and spatial reasoning.

Research Procedure

The implementation of this study followed a structured procedure involving several key stages:

1. Consent and Orientation
   The researcher requested research permission and informed consent from the school and students, followed by a clear explanation of the research objectives.
2. Instrument Trial
   Respondents completed the trial test of the research instruments to evaluate item validity and reliability.
3. *Pretest* Administration
   Respondents completed the pretest to measure their baseline (initial) mathematical connection ability prior to any treatment.
4. Intervention Implementation
   The researcher conducted the learning process using the *Missouri Mathematics Project* model assisted by *Trageda* across three treatment sessions. During the implementation, the researcher's teaching process was directly observed and evaluated by practitioner teachers at the school using observation sheets.

5. *Posttest* Administration
   Respondents completed the posttest to evaluate their final mathematical connection ability after the implementation of the treatment model.
6. Questionnaire Completion
   Respondents filled out the research questionnaires to gather supplementary evaluation data.
7. Data Collection
   The researcher collected all completed pretest, posttest, and questionnaire sheets from the students for subsequent quantitative analysis.

Data Collection & Measurement Procedures

Data were collected using multiple instruments, including observation, questionnaires, and diagnostic testing (consisting of *pretest* and *posttest* measures to evaluate mathematical connection abilities).

Instrument Validity and Reliability

- Instrument Validity
  The research instruments, comprising lesson modules, *Trageda*, mathematical connection test items, questionnaires, and observation sheets, underwent two stages of validation:
  1. Expert Validation: Evaluated by two mathematics education lecturers and an elementary school practitioner using a 1–5 *Likert scale*. The instruments achieved average validation scores ranging from 4.29 to 4.74, placing them in the "very valid" category.
  2. Empirical Item Validity: The mathematical connection test items were empirically tested on respondents and analyzed using SPSS via *Corrected Item-Total Correlation*. With r_{table} = 0.514 at a 5% significance level, all items were confirmed valid ($r_{count} > r_{table}$), with correlation coefficients (r_{count}) ranging from 0.531 to 0.917, categorized as adequate to very high.

- Instrument Reliability
  The reliability of the test instrument was evaluated using *Cronbach's Alpha* via SPSS. The analysis yielded a *Cronbach's Alpha* coefficient of 0.918 (exceeding the 0.70 threshold), indicating a "very high" level of internal consistency and confirming that the instrument is stable and reliable for data collection.

Data Analysis

Data analysis was conducted using both parametric tests and gain scores:

1. Prerequisite Testing: A normality test was conducted prior to hypothesis testing to check data distribution.
2. Hypothesis Testing: A *Paired Sample T-Test* was executed to determine whether there was a statistically significant difference between students' *pretest* and *posttest* scores.
3. Effectiveness Evaluation: A *Normalized Gain* (*N-Gain*) Test was calculated to measure the degree of effectiveness of the MMP model assisted by *Trageda* media.

Result (نتائج)

An analysis prerequisite test in the form of a normality test was performed to ensure that the data met the assumptions of parametric analysis. The results of the normality test for the pretest and posttest using the Shapiro-Wilk test via the SPSS program are presented as follows:

Table 1. Results of Normality Test

Experiment	*Shapiro-Wilk*	Description

	Statistic	df	Sig.	
Prestest Results	0,950	11	0,648	Normal
Postest Results	0,901	11	0,192	Normal

A descriptive analysis was conducted to determine the improvement between pretest and posttest scores using the SPSS program.

Table 2. Statistical Test Results for *Pretest* and *Posttest*

Paired Samples Statistics					
		Mean	**N**	**Std. Deviation**	**Std. Error Mean**
Pair 1	Prestest	51.55	11	12.565	3.788
	Postest	81.73	11	11.118	3.352

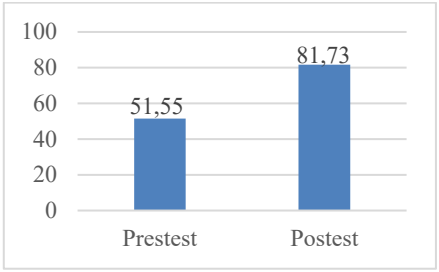

Figure 2. Mean Scores of *Pretest dan Posttest*

A *Paired Sample T-Test* was performed using SPSS software was conducted to determine whether the improvement was statistically significant.

Table 3. Results of *Paired Samples T-test*

Paired Samples Test									
		Paired Differences					**t**	**df**	**Sig. (2-tailed)**
		Mean	**Std. Deviation**	**Std. Error Mean**	**95% Confidence Interval of the Difference**				
					Lower	**Upper**			
Pair 1	Prestest - Postest	-30.182	11.626	3.505	-37.992	-22.371	-8.610	10	.000

The *Paired Samples T-Test* revealed a mean difference of -30.182 between *pretest* and *posttest* scores. The negative sign indicates that posttest scores were significantly higher than pretest scores, demonstrating a 30.182, point average improvement in students' mathematical connection ability following the *Missouri Mathematics Project* implementation assisted by *Trageda*.

Subsequently, a *Normalized Gain* (*N-Gain*) test was conducted using the SPSS program to determine the effectiveness of the treatment.

Table 4. Results of *N-Gain* Test

Descriptive Statistics					
	N	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
NGain_Score	11	.31	.92	.6266	.19633
NGain_ percent	11	31.48	92.00	62.6558	19.63309
Valid N (listwise)	11				

Tabel 5. *N-Gain* Score Categories (Ismiati, 2023)

Skor	**Kriteria**
N-Gain > 0,7	High
0,3 < N-Gain ≤ 0,7	Moderate/ Medium

N-Gain ≤ 0,3	Low

Referring to the *N-Gain* score criteria proposed by Ismiati (2023), the mean *N-Gain* score of 0.6266 falls into the moderate category.

Discussion (مناقشة)

The analysis prerequisite testing using the Shapiro-Wilk normality test indicated that the pretest and posttest data were normally distributed, thereby confirming that the data fulfilled the assumptions of parametric analysis. In line with Sugiyono (2019), the normality test serves to verify that the variables under study meet the criteria for normality, ensuring that decision-making derived from parametric statistics rests on a valid foundation. Based on the descriptive statistical analysis in Table 2, students' mean scores increased by 30.182 points following the implementation of the *Missouri Mathematics Project* learning model assisted by *Trageda* media. To determine whether this increase was statistically significant, a hypothesis test using a *Paired Samples T-test* was performed (Table 3). The analysis revealed a mean paired difference of -30.182, where the negative value indicates that posttest scores were substantially higher than pretest scores. These findings confirm that the *Missouri Mathematics Project* learning model assisted by *Trageda* media significantly enhances students' mathematical connection abilities.

Decision-making for this hypothesis test was based on the 2-tailed significance value. The analysis yielded a significance value of 0.000, which is below the threshold of 0.05 ($p < 0.05$), accompanied by a calculated *t-value* ($t = 8.610$) exceeding the critical *t-table* ($t = 2.228$). Consequently, the null hypothesis (H_0) was rejected and the alternative hypothesis (H_a) was accepted, confirming a statistically significant difference in students' mathematical connection abilities before and after the intervention. This demonstrates that the score gain was driven by the media-assisted instructional model rather than random chance. Furthermore, this empirical success is reinforced by observational data on instructional fidelity, where teacher implementation of the MMP model assisted by *Trageda* media achieved an average score of 94.2%, categorized as "very good". This high level of fidelity indicates that all planned phases of the *Missouri Mathematics Project* syntax were executed fully and systematically.

The results of this study align with the findings of Audina et al. (2024),which demonstrated the effect of the *Missouri Mathematics Project* learning model on students' mathematical connection abilities using a different medium, namely *GeoGebra*. Similarly, research by Berutu et al. (2022) revealed that implementing the *Missouri Mathematics Project* model assisted by instructional aids significantly affected students' mathematical problem-solving abilities compared to conventional instruction. Furthermore, Yusantika et al. (2023) demonstrated in their study that there is a significant difference in students' mathematical creative thinking abilities between those taught using the *Missouri Mathematics Project* model and those taught using direct instruction.

Subsequently, a *Normalized Gain* (*N-Gain*) analysis was conducted to determine the effectiveness of the *Missouri Mathematics Project* learning model assisted by *Trageda* media. The analysis yielded an average *N-Gain* score of 0.6266, falling into the "Moderate" category based on Ismiati's (2023) criteria. Individual *N-Gain* scores ranged from 0.3100 (moderate) to 0.9200 (high) with a standard deviation of 0.19633, reflecting variations in student progress influenced by prior mathematical knowledge, motivation, and engagement with the manipulative media. Although the intervention was limited to three sessions, these results confirm that the treatment meaningfully enhanced students' ability to establish mathematical connections.

Beyond these cognitive gains, student progress was further reflected in the affective domain, as demonstrated by self-report questionnaire data. Specifically, students' self-assessed mathematical connection scores rose substantially from 55.3% pre-intervention to 90.3% post-

intervention. Furthermore, student perception questionnaires indicated a 91.7% approval rating ("very good" category). This percentage indicates that the majority of students responded positively to the *Missouri Mathematics Project* learning model assisted by *Trageda*, finding it engaging, accessible, and conducive to active participation. This aligns with Sudjana and Rivai (2017), who note that instructional media enhance student motivation, clarify conceptual understanding, and diversify learning experiences. Specifically, the *Trageda* enabled students to visualize geometric properties concretely, facilitating their ability to grasp relationships among two-dimensional shapes, discover mathematical concepts, and connect them to daily life experiences. These findings are consistent with Piaget's constructivist learning theory (Winarni, 2024), which emphasizes that knowledge is actively constructed by students through direct, real-world experiences.

This improvement in mathematical connection abilities is closely tied to the characteristics of the *Missouri Mathematics Project* model, which features a systematic instructional syntax comprising review, development, controlled practice, seatwork, and assignment phases. This aligns with Farida (2022) and Pratiwi et al. (2019), who note that the *Missouri Mathematics Project* model is designed to enhance conceptual understanding and problem-solving skills through structured practice in both group and individual settings. The model's emphasis on repeated practice, material review, collaborative discussion, and active student engagement provides learners with opportunities to develop reasoning, communication, and the ability to connect various mathematical concepts. Consequently, integrating the *Missouri Mathematics Project* model with *Trageda* media in this study supported the enhancement of students' mathematical connections through structured, active, and meaningful learning. Furthermore, research by Rahman and Nasryah (2020) demonstrates that the *Missouri Mathematics Project* learning model is effective in improving students' mathematics learning outcomes. The consistency of these findings indicates that applying the *Missouri Mathematics Project* model combined with instructional media effectively elevates the quality of the learning process while optimizing students' mathematical capabilities.

While these findings offer encouraging insights, certain methodological contexts of this study warrant consideration. Given the practical field conditions and specific institutional settings, the research was conducted using a pre-experimental one-group pretest-posttest design involving 11 fifth-grade students at SDTQ Sahabat Keluarga. The small sample size and single-group setup naturally suggest that these outcomes reflect the specific classroom environment rather than broad generalizations. Consequently, the observed improvements serve as valuable preliminary indicators of the model's potential. To further build upon these initial findings, future studies utilizing quasi-experimental or true experimental designs with larger cohorts and control groups are encouraged.

Conclusion (خاتمة)

The implementation of the *Missouri Mathematics Project* learning model assisted by *Trageda* demonstrated a statistically significant difference in improving the mathematical connection abilities of fifth-grade students at SDTQ Sahabat Keluarga. A *Paired Samples t-test* confirmed a statistically significant difference ($t = 8.610 > t_{\text{tabel}} = 2.228$, $p = 0.000 < 0.05$) with mean student scores increasing by 30.18 points from 51.55 on the *pretest* to 81.73 on the *posttest*. Furthermore, the intervention demonstrated moderate effectiveness, as evidenced by an average *Normalized Gain* (*N-Gain*) score of 0.6266. These quantitative findings are strongly supported by gains in self-reported mathematical connection scores, alongside high ratings in both student perception and instructional execution fidelity, both categorized as "very good".

In conclusion, within the specific context of fifth-grade students at SDTQ Sahabat Keluarga, the integration of the *Missouri Mathematics Project* model with *Trageda* concrete manipulatives

provides a structured and supportive learning environment. As indicated by the triangulation of test results, student questionnaires, and classroom observations, this approach offers a meaningful contribution to fostering students' mathematical connection abilities at the primary school level.

Acknowledgment (شكر وتقدير)

The researcher would like to express sincere gratitude to the entire academic community of Ngudi Waluyo University, particularly the Primary School Teacher Education (PGSD) Study Program, for their extraordinary support and guidance. Appreciation is also extended to the school community of SDTQ Sahabat Keluarga for granting permission and accommodating this research, as well as to all parties who have contributed to the completion of this study.

Bibliography (مراجع)

Ahdar. (2018). Pengembangan Media Pembelajaran Powerpoint Padu Musik Terhadap Antusiasme Siswa Dalam Pembelajaran Ilmu Sosial. *Jurnal Dinamika Penelitian: Media Komunikasi Sosial Keagamaan*, *18*(November), 287–302.

Andini, P., Siregar, R. S., Saragih, S. R. D., & Harahap, S. S. (2024). Analisis Kemampuan Koneksi Matematis Siswa SMP pada Materi Peluang. *Jurnal Basicedu*, *8*(4), 3064–3074. https://journal.uii.ac.id/ajie/article/view/971

Apipah, S., & Kartono. (2017). Analisis Kemampuan Koneksi Matematis Berdasarkan Gaya Belajar Siswa pada Model Pembelajaran Vak dengan Self Assessment. *UJMER: Unnes Journal of Mathematics Education Research* , *6*(2), 148–156. http://journal.unnes.ac.id/sju/index.php/ujmer

Astriani, N., Dhana, M. B. Al, Tarigan, L. Z. B., & Putri, N. A. (2025). Students ' Mathematical Connection Ability By Using The Realistic Mathematics Approach. *Al – Irsyad: Journal of Mathematics Education*, *4*(2), 121–130.

Audina, R. N., Zubaidah, & Sayu, S. (2024). Pengaruh Model Pembelajaran Missouri Mathematics Project Berbantuan Geogebra Materi Kubus Dan Balok Terhadap Kemampuan Koneksi Matematis. *Journal Of Social Science Research*, *4*(2), 4998–5010.

Baiti, J. N., Rosyidah, N. H., Isma, T. N. A., & Nafisah, S. (2024). Pendidikan dan Lingkungan Sosial, Pendidikan dan Kebudayaan, Pendidikan Sebagai Agen Perubahan. *Mutiara : Jurnal Penelitian Dan Karya Ilmiah*, *2*(6), 132–145. https://doi.org/10.59059/mutiara.v2i6.1821

Berutu, R., Saputra, E., & Aklimawati. (2022). Pengaruh Model Pembelajaran Missouri Mathematics Project (MMP) Berbantuan Alat Peraga Terhadap Kemampuan Pemecahan Masalah Matematis Siswa Di Kelas XI SMA Negeri 1 Gunung Meriah. *Jurnal Pendidikan Matematika Malikussaleh*, *2*(1), 181–190.

Daulay, M. B., Risnawita, R., Aniswita, A., & Rahmi, U. (2024). Analisis Penggunaan Model Pembelajaran Missouri Mathematics Project (MMP) pada Pembelajaran Matematika dalam Meningkatkan Hasil Belajar. *J-CEKI : Jurnal Cendekia Ilmiah*, *3*(5), 4922–4930. https://ulilalbabinstitute.id/index.php/J-CEKI/article/view/4721

Ervinasari, B., & Astuti, A. (2023). Model Missouri Mathematics Project (MMP) terhadap Kemampuan Pemahaman Konsep Matematika Siswa. *Journal of Education Research*, *4*(4), 1958–1967. https://doi.org/10.37985/jer.v4i4.634

Farida, I. (2022). *Model Missouri Mathematics Project*. Mikro Media Teknologi.

Ismiati, N. (2023). Efektivitas Model STREAM Dalam Pembelajaran Matematika Kelas IV MI Futuhiyyah Doro Pekalongan. *Jurnal Ilmiah Ipa Dan Matematika*, *1*(3), 115–121. https://jurnalcendekia.id/index.php/jiim/

Kurniawan, M. I., & Algi, A. U. P. (2023). Kemampuan koneksi matematis siswa sekolah dasar ditinjau dari self-concept. *Pendas: Jurnal Ilmiah Pendidikan Dasar*, *9*(1), 1–12. https://doi.org/10.23969/jp.v9i1.12553

National Council of Teachers of Mathematics. (2000). *National Council of Teachers of Mathematics*.

Nurmala, Usman, M., & M, M. D. (2025). Pembelajaran in Action : Apakah Efektif Meningkatkan Kemampuan Koneksi Matematis Siswa? *Jurnal Math-UMB.EDU*, *12*(2), 135–141.

https://doi.org/10.36085/mathumbedu.v12i2.7526

Pratiwi, N. P. K. A., Astawa, I. W. P., & Mahayukti, G. A. (2019). Missouri Mathematics Project (MMP), Pemahaman Konsep Matematika, dan Kepercayaan Diri Siswa. *Jurnal Elemen*, *5*(2), 178–189. https://doi.org/10.29408/jel.v5i2.1317

Prihandhika, A., Aiyub, A., Suryadi, D., & Prabawanto, S. (2022). Efektivitas Model Missouri Mathematics Project terhadap Kemampuan Koneksi Matematis dalam Pembelajaran Turunan. *JNPM (Jurnal Nasional Pendidikan Matematika)*, *6*(3), 551–564. https://doi.org/10.33603/jnpm.v6i3.7073

Rahman, A. A., & Nasryah, C. E. (2020). Efektivitas Model Pembelajaran Missouri Mathematics Project untuk Meningkatkan Hasil Belajar Siswa SMA. *Mosharafa: Jurnal Pendidikan Matematika*, *9*(2), 335–346. https://doi.org/10.31980/mosharafa.v9i2.650

Sari, E. K., & Rizqi, H. Y. (2025). Penerapan Model Problem Based Learning Berbasis Media Geohouse terhadap Koneksi Matematis Siswa Kelas V SD. *Pendas : Jurnal Ilmiah Pendidikan Dasar*, *10*(Nomor 04), 243–257.

Sudjana, N., & Rivai, A. (2017). *Media Pengajaran*. Sinar Baru Algensindo.

Sugiyono. (2017). *Metode Penelitian Kualitatif, Kuantitatif dan R&D*. Alfabeta CV.

Sugiyono, P. D. (2019). *Metode Penelitian Pendidikan (Kuantitatif, Kualitatif, Kombinasi, R&D dan Penelitian Pendidikan)*. Metode Penelitian Pendidikan, 67(2019), 18.

Trisnowali, A. (2018). Komparasi Hasil Belajar Matematika Antara Model (Mmp) Dengan Model Pengajaran Langsung Siswa Kelas Vii Smp. *HISTOGRAM: Jurnal Pendidikan Matematika*, *1*(2), 90–104. https://doi.org/10.31100/histogram.v1i2.27

Upara, N., Mastuti, A. G., & Juhaevah, F. (2024). Kemampuan Koneksi Matematis Siswa Berdasarkan Literasi Numerasi dalam Meyelesaikan Masalah Aljabar. *Jurnal of Mathematics Learning Innovation*, *v3(n1)*(xx), 70–89.

Winarni. (2024). Implikasi Teori Belajar Konstruktivisme Pada Pembelajaran Matematika di SD Negeri Galengdowo 1. *Prosiding Seminar Nasional Hasil Riset Dan Pengabdian*.

Yolanda, A., Sihotang, M., Zebua, J. A., Hutasoit, M., & Sinaga, Y. L. (2024). Strategi Pembelajaran Kontekstual untuk Meningkatkan Pemahaman Konsep Siswa Sekolah Dasar. *Pragmatik : Jurnal Rumpun Ilmu Bahasa Dan Pendidikan*, *2*(3), 301–308. https://doi.org/10.61132/pragmatik.v2i3.941

Yusantika, Y., Nuraida, I., & Amam, A. (2023). Kemampuan Berpikir Kreatif Matematis Dengan Model Pembelajaran Missouri Mathematics Project (MMP). *J-KIP (Jurnal Keguruan Dan Ilmu Pendidikan)*, *4*(3), 700–705. https://doi.org/10.25157/j-kip.v4i3.11778