

# The Effect of Parental Attention and Learning Motivation on Learning Outcomes of Elementary School Students

Tri S. Susiani, Laeli R. Amalia, Moh Salimi, Muna Fauziah, and Ratna Hidayah

## ABSTRACT

This research goals to find out the effect of parental attention on learning outcomes, learning motivation on learning outcomes, and parental attention and learning motivation on learning outcomes. This quantitative research used the correlation research method. The number of study samples was 260 students. The samples were taken by probability sampling technique with cluster random sampling type. Questionnaire and test techniques were employed in data collection. Meanwhile, SPSS version 25 was utilized to analyze the data. The output revealed that (1) there was an effect of parental attention on mathematics learning outcomes, with a t-count value of  $8.228 \geq t\text{-table of } 1.969$ , an r-count value of  $0.485 > r\text{-table of } 0.121$  and an effective contribution of 21.6%, (2) There was an effect of learning motivation on mathematics learning outcomes, with a t-count value of  $3.715 \geq t\text{-table of } 1.969$ , an r-count value of  $0.288 > r\text{-table of } 0.121$  and an effective contribution of 5.8%. In addition, (3) There was an effect of parental attention and learning motivation on mathematics learning outcomes, with an F-count value of  $48.556 > F\text{-table of } 3.031$ , an r-count value of  $0.524 > r\text{-table of } 0.121$  and an effective contribution of 27.4%.

**Keywords:** Learning Motivation, Learning Outcomes, Mathematics, Parental Attention.

**Published Online:** September 19, 2022

**ISSN:** 2736-5522

**DOI:** 10.24018/ejsocial.2022.2.5.304

**T. S. Susiani\***

Faculty of Teacher Training and Education, Universitas Sebelas Maret, Surakarta, Indonesia.

(e-mail: trisaptuti@staff.uns.ac.id)

**L. R. Amalia**

Faculty of Teacher Training and Education, Universitas Sebelas Maret, Surakarta, Indonesia.

(e-mail: elyamalia15@gmail.com)

**M. Salimi**

Faculty of Teacher Training and Education, Universitas Sebelas Maret, Surakarta, Indonesia.

(e-mail: salimi@staff.uns.ac.id)

**M. Fauziah**

Institut Agama Islam Nahdlatul Ulama Kebumen, Indonesia.

(e-mail: fauziah@iainu-kebumen.ac.id)

**R. Hidayah**

Faculty of Teacher Training and Education, Universitas Sebelas Maret, Surakarta, Indonesia.

(e-mail: ratnahidayah@staff.uns.ac.id)

\*Corresponding Author

## I. INTRODUCTION

Education is the primary pillar in developing quality human resources in facing future challenges. Education is also a need for every human being as a basis for opening windows of knowledge so that abilities, talents, and potentials are developed within them. Education can be interpreted as interactions between different groups to take advantage of the effectiveness of education at all levels, including solving basic education problems (Masuda & Yamauchi, 2020). The educational process will go through learning, both in and outside the classroom. During the learning process, students learn various lesson content. One of them is learning mathematics.

Mathematics has an essential component of human life every day. Every human being uses the basics of mathematics or others in everyday life. In learning, mathematics is used to teach students so that students are accustomed to solving problems and coach critical, creative, and logical thinking. Learning mathematics also provides truth according to logical reasons because one can solve problems with mathematics (Chotimah *et al.*, 2018; Li & Schoenfeld, 2019).

Unfortunately, many phenomena about mathematics learning uncover that it still has not been maximized. Based on the 2015 Trends in International Mathematics and Science Study (TIMSS), Indonesian students were ranked 45th out of 50 countries (Mardi, 2018). The low TIMSS results align with the survey outcome of the Program for International Student Assessment (OECD, 2019). This Fact was revealed that the mathematics mastery ability of Indonesian students was not good enough. Indonesia was placed 73rd out of 79 PISA participating countries. These results are also consistent with the observations made by the researchers in several elementary schools, showing that the mathematics mastery score only reached 57% or only 16 of 38 students who met the minimum mastery criteria (KKM) of 70.

Many elements impact the phenomenon of low student learning outcomes in mathematics. Two factors influence it, i.e., internal and external factors (Safaruddin *et al.*, 2020). In addition, the success or failure of a person in learning is due to several factors impacting it. According to Wahono *et al.* (2020), student learning motivation has been element affecting learning outcomes. Learning motivation is a person's encouragement that arises from within or is influenced by certain conditions. In line with that, learning motivation is an urgent matter that needs to be considered to make a conducive class situation and encourage students to maximize their achievements (Menggo, 2018). Students with high motivation can be reflected in the attitude of students, who are happy when participating in learning, are more prepared and focused, and have full concentration in the learning process. According to Genc and Aydin (2017), motivation affects children's language acquisition and contributes to learning. In other words, motivation contributes to the success of children's language acquisition (Anjomshoa & Sadighi, 2015).

However, another reality did not go well. Many phenomena in the field show that students' learning motivation was not good. Observation results revealed that students often remained silent when the teacher explained the material. Expressions from students also informed that they had to wait for orders from their parents to study at home. It indicates that learning motivation needs to be increased, given the importance of learning motivation for students to achieve maximum learning outcomes. Furthermore, this motivation can grow from outside influences, such as family.

One of the other factors influencing student learning outcomes that come from outside the individual is the family, especially parental attention. Parental attention is important in supporting children's growth and development, especially in children's education. According to Sehe *et al.* (2022), parental attention is all treatment given by parents to facilitate children in learning. The parental direction will also lead to high learning motivation, affecting the child's achievement (Bedell *et al.*, 2011). It agrees with the opinion of Salac and Florida (2022) that parental involvement has a major influence on students' academic achievement and behavior at home, school, and the community. In addition, the treatment that motivates children to study harder can optimize children's cognitive development and can be done by providing guidance and attention (Hasson *et al.*, 2018). To optimize this, parents and children must have a good relationship. It should also involve parental attention to encourage children's learning activities (Becker *et al.*, 2010). In this case, parental attention can be manifested in educating, guiding, and directing their children to devote themselves. Noticeably, efforts to educate children are an inseparable part of the duties of parents. This obligation must go hand in hand with balancing children's growth and development (Glover, 2013). Therefore, parental attention is needed to foster student enthusiasm.

Several similar studies have been conducted by previous researchers. Chen *et al.* (2018) have investigated the relationship between parents and children on children's reading abilities. From their research, it was found that the parent-children relationship played a mediating role in maximizing reading ability. Other research has also been highlighted by Anthony and Ogg (2019) on evidence of parental attention for education, which had a positive influence on children's academic success. Their research highlighted children at an early age through a longitudinal study. In addition, Engin (2020) examined elementary school students' achievement and motivation based on parental attention, teacher motivation, teacher confidence, and leadership approach. She researched fourth-grade students and classroom teachers using descriptive research. From three similar researchers, it has been revealed that several things have in common. However, not all of them are the same, and if checked, the location of this study differs from previous researchers. If previously conducted in developed countries, such as China, this research was conducted in Indonesia, a developing country. Thus, the parenting pattern or level of ability of students in Indonesia may differ from other countries in general. For this reason, it is interesting to review, and further research can be carried out to compare parental attention in Indonesia with developed countries.

Based on the description, this research goals to (1) find out the effect of parental attention on mathematics learning outcomes, (2) find out the effect of learning motivation on mathematics learning outcomes, and (3) find out the effect of parental attention and learning motivation on mathematics learning outcomes in fourth-grade students of public elementary schools throughout Gebang Sub-district, Purworejo Regency.

## II. MATERIAL AND METHODS

This correlational research used a quantitative approach, while the analysis employed regression analysis. Correlational research investigates whether there is a connection inter-research variables (Creswell, 2013). In this study, 596 students became the population, while the sample was 260 students spread over 12 public elementary schools. The samples were selected randomly using a probability sampling technique of cluster-random sampling. The Statistical Product and Service Solution (SPSS) version 25 application used in statistical calculation. Then, questionnaire and test techniques were employed to collect research data. Questionnaires were used to collect parental attention and learning motivation data, whereas tests were utilized to collect data on students' mathematics learning outcomes. In this study, data analysis was carried

out by conducting prerequisite tests. The process carried out included normality, linearity, and multicollinearity tests. After all the prerequisites were met, the research data were analyzed using correlation and regression tests.

### III. RESULTS

The research was conducted by giving a parental attention questionnaire, a learning motivation questionnaire, and a mathematics test to fourth graders in elementary schools who were the research samples. The data were then analyzed descriptively utilizing the SPSS version 25 application. Table 1 is the result of the research data distribution obtained.

From Table I, it is known that the distribution of results for each variable had different interval and frequency variations. The difference between the three variables was in the least and highest values of the intervals. On the first variable, the minimum value was 44, and the maximum value was 97. The parental attention variable's highest value was 98 and the least value was 54. Meanwhile, the lowest interval value for the learning motivation variable was 46, and the highest was 93.

Based on Table II, it was necessary to test the hypotheses. To test the hypotheses, the data need to meet the data prerequisite test. The data prerequisite test in this research has been fulfilled: the data were normally distributed, the data were linear, and there was no multicollinearity between X variables.

That outcomes was interpreted that the residual value was normally distributed. Therefore, it shall be concluded that the significance value of these variables was greater than 0.05, so the data came from a normally distributed population. After calculating the normality, a linearity test was performed to find out the connection between all variables. Table III serves the linearity test outcome.

From Table III, the linearity test outcome achieved the value of sig. deviation from linearity between mathematics learning outcomes and parental attention of 0.740, and the value of sig. deviation from linearity between mathematics learning outcomes and learning motivation was 0.275. The two variables had a linear connection because of the value of sig. deviation from linearity was  $\geq 0.05$ . Then, the upcoming step was to calculate the multicollinearity test, as presented in Table IV.

Based on Table IV, the toleration value was 0.962, and the variance inflation factor value was 1.039. It denotes that the toleration value was  $> 0.10$  and the variance inflation factor value was  $< 10.0$ . In other words,  $H_0$  was accepted, so it can be said that there were no symptoms of multicollinearity. After the data analysis prerequisite tests were met, the hypothesis testing was implemented with multiple regression analysis.

TABLE I: DISTRIBUTION OF RESEARCH DATA

No.	Mathematics Learning Outcomes		Parental Attention		Learning Motivation	
	Interval	Frequency	Interval	Frequency	Interval	Frequency
1	44-49	3	54-58	4	46-51	4
2	50-55	6	59-63	5	52-57	12
3	56-61	27	64-68	23	58-63	41
4	62-67	48	69-73	49	64-69	81
5	68-73	80	74-78	87	70-75	68
6	74-79	66	79-83	58	76-81	42
7	80-85	25	84-88	17	82-87	9
8	86-91	3	89-93	15	88-93	3
9	92-97	2	94-98	2	-	-
	Total	260	Total	260	Total	260

TABLE II: NORMALITY TEST OUTCOMES

One-Sample Kolmogorov-Smirnov Test		
	Unstandardized Residual	
N	260	
Normal Parameters <sup>a,b</sup>	Mean	0.000000
	Std. Deviation	7.38767407
Most Extreme Differences	Absolute	0.055
	Positive	0.055
	Negative	-0.031
Test Statistic		0.055
Asymp. Sig. (2-tailed)		0.054 <sup>c</sup>

a. Test distribution is normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

TABLE III: LINEARITY TEST OUTCOMES

ANOVA Table					
		df	Mean Square	F	Sig.
Mathematics Learning Outcomes *		29	48.028	0.815	0.740
Parental Attention	Deviation from				
Mathematics Learning Outcomes *	Linearity	34	77.891	1.147	0.275
Learning Motivation					

TABLE IV: MULTICOLLINEARITY TEST OUTCOMES

Independent Variables		Collinearity Statistics	
		Toleration	Variance Inflation Factor
(Constant)		–	–
1	Parental Attention	0.962	1.039
	Learning Motivation	0.962	1.039

TABLE V: MULTIPLE REGRESSION ANALYSIS OUTCOMES

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	13.510	5.860	–	2.306	0.022
	Parental Attention	0.535	0.065	0.446	8.228	0.000
	Learning Motivation	0.226	0.061	0.201	3.715	0.000

The form of the multiple linear regression equation was achieved.

$$Y = 13.510 + 0.535X_1 + 0.226X_2 \quad (1)$$

Next, the outcome of regression equation will be explained that the constant was positive, meaning that it was in the same direction. Thus, if variable X (parental attention and learning motivation) increases, variable Y (students' mathematics learning outcomes) will also increase. Conversely, if parental attention and learning motivation decrease, students' mathematics learning outcomes also decrease. In addition, the constant value of 13.510 means that if the parental attention (X<sub>1</sub>) and learning motivation (X<sub>2</sub>) have a value of 0, the fourth-grade students' mathematics learning outcomes (Y) are 13.510.

The first hypothesis test, based on Table V, showed that the parental attention variable (X<sub>1</sub>) with N = 260 and  $\alpha$  5% obtained a t-count value of  $8.228 \geq t$ -table of 1.969 and a sig. value of  $0.000 \leq 0.05$ . Hence, it shall be resumed that H<sub>0</sub> was declined, whereas H<sub>a</sub> was approved so that the parental attention variable (X<sub>1</sub>) significantly and positively affected the fourth-grade students' mathematics learning outcomes (Y).

Based on Table V, the second hypothesis test displayed that the learning motivation variable (X<sub>2</sub>) with N = 260 and  $\alpha$  5% yielded a t-count value of  $3.715 \geq t$ -table of 1.969 and a sig. value of  $0.000 \leq 0.05$ . Therefore, it shall be resumed that H<sub>0</sub> was declined, whereas H<sub>a</sub> was approved. It signifies a significant positive impact of learning motivation (X<sub>2</sub>) on fourth-grade students' mathematics learning outcomes (Y).

From the Table VI, it was found that the sig. value was 0.000, and the F-count value was 48.556. Meanwhile, the F-table value with N = 260 and  $\alpha$  5% was 3.031. Thus, it shall be visible that the F-count value of 48.556 was  $>$  F-table of 3.031, and the significance value of 0.000 was  $<$  0.05. Thus, it shall be resumed that H<sub>0</sub> was declined, whereas H<sub>a</sub> was approved, indicating existence influence of the parental attention variable (X<sub>1</sub>) and learning motivation (X<sub>2</sub>) jointly on mathematics learning outcomes variable (Y).

TABLE VI: F-TEST OUTCOMES

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5341.384	2	2670.692	48.556	0.000b
	Residual	14135.632	257	55.002	–	–
	Total	19477.015	259	–	–	–

TABLE VII: CORRELATION TEST OUTCOMES

Model	R	R Square	Change Statistics				
			R Square Change	F Change	df <sub>1</sub>	df <sub>2</sub>	Sig. F Change
1	0.524a	0.274	0.274	48.556	2	257	0.000

a. Predictors: (Constant), Learning Motivation, Parental Attention.

TABLE VIII. PARTIAL CORRELATION COEFFICIENT

Coefficients <sup>a</sup>		
Model		Pearson Correlation
1	Parental Attention	0.485
	Learning Motivation	0.288

After calculating the F-test, it was obligatory to calculate the correlation test. Meanwhile, the outcome are presented in Table VII.

Based on the correlation test carried out, it is known that the value of sig. f change was  $0.000 < 0.05$  and  $r\text{-count} = 0.524$  was  $> r\text{-table}$  ( $df = 260$ ) = 0.121, rejecting  $H_0$ . In other words, there was the correlation between the parental attention and learning motivation variables jointly on fourth-grade students' mathematics learning outcomes. In addition, the correlation coefficient of 0.524 indicated a moderate relationship (range of coefficient interval 0.40-0.59). Also, the value of the coefficient of determination ( $R^2$ ) was 0.274, which is 27.4% when converted into percent.

From the Table VIII, the analysis outcomes revealed that the correlation between parental attention and mathematics learning outcomes obtained  $r\text{-count} = 0.485 > r\text{-table}$  ( $df = 260$ ) = 0.121. Thus,  $H_{01}$  was rejected, which means there was the correlation between the variables of parental attention and mathematics learning outcomes. Also, the correlation coefficient of 0.485 indicates a moderate relationship (coefficient interval of 0.40-0.59) between parental attention and mathematics learning outcomes.

From the Table VIII, the analysis results also presented that the correlation between learning motivation and mathematics learning outcomes had a value of  $r\text{-count} = 0.288 > r\text{-table}$  ( $df = 260$ ) = 0.121, so  $H_{02}$  was rejected. It matters that there was the correlation between the variables of learning motivation and mathematics learning outcomes. In addition, the correlation coefficient of 0.288 denotes a low relationship (interval coefficient of 0.20-0.39) between learning motivation and mathematics learning outcomes.

The magnitude of the influence of parental attention and learning motivation on mathematics learning outcomes was then calculated using effective contribution analysis. Before calculating the effective contribution, it was necessary to calculate the value of the coefficient of determination ( $R^2$ ) and the relative contribution (SR) first. The coefficient of determination in this study used the following formula:

$$KP = R^2 \times 100\% \quad (2)$$

Description:

KP = Coefficient of determination in percent

$R^2$  = Coefficient of determination

$$KP = R^2 \times 100\% \quad (3)$$

$$KP = (0.524)^2 \times 100\%$$

$$KP = 0.274 \times 100\%$$

$$KP = 27.4\%$$

From the outcomes above, the coefficient of determination in percent was 27.4%, with a coefficient of determination of 0.274. After knowing the value of the coefficient of determination ( $R^2$ ), the next analysis was to find the relative contribution.

Tables V and VI show that the JK reg value was 5341.384, the b value was 0.535, and the c value was 0.226. The calculation result of  $\sum x_1y$  was 7870.923, and  $\sum x_2y$  was 5007.031. From these data, the relative contribution (SR) and effective contribution (SE) shall be calculated as follows.

Relative Contribution

$$SR_{X1} = \frac{b(\sum x_1y)}{JK_{reg}} \times 100\% \quad (4)$$

$$SR_{X1} = \frac{0.535(7870.923)}{5341.384} \times 100\%$$

$$SR_{X1} = 78.8\%$$

$$SR_{X2} = \frac{c(\sum x_2y)}{JK_{reg}} \times 100\% \quad (5)$$

$$SR_{X2} = \frac{0.226(5007.031)}{5341.384} \times 100\%$$

$$SR_{X2} = 21.2\%$$

Effective Contribution

$$SE_{X1} = SR(X_1) \times R^2 \quad (6)$$

$$SE_{X1} = 78.8\% \times 0.274$$

$$SE_{X1} = 21.6\%$$

$$SE_{X2} = SR(X_2) \times R^2 \quad (7)$$

$$SE_{X2} = 21.2\% \times 0.274$$

$$SE_{X2} = 5.8\%$$

From the results, it shall be concluded that the contribution of parental attention to mathematics learning outcomes was 21.6%, while other factors influenced 78.4%. In addition, the contribution of learning motivation to mathematics learning outcomes was 5.8%, whereas other factors influenced 94.2%. Furthermore, the total contribution of the variables of parental attention and learning motivation to the mathematics learning outcomes of fourth-grade elementary school students in Gebang Sub-district, Purworejo Regency, in the 2021/2022 academic year was 27.4%, while 72.6% of learning outcomes were affected by other factors.

#### IV. DISCUSSIONS

##### A. *The Effect of Parental Attention on Mathematics Learning Outcomes*

The research findings suggest that parental attention affects mathematics learning outcomes; the better parental attention is given, the higher the mathematics learning outcomes. Following the opinion expressed by McDaniel (2019), parental attention affects the children's process of overcoming difficulties and children's habits when interacting socially. Maximum attention can arise because of parents' encouragement, desire, and personal experience. Therefore, there is a need for great attention from parents at home and school.

The outcomes of this research align with the study conducted by Fijar *et al.* (2019), showing that parental attention significantly influenced student learning outcomes. Marlina's (2022) research also produced similar findings, revealing that good parental attention was directly proportional to children's learning outcomes. Their involvement in determining student achievement is helpful and successful as much as 4.5%. It is consistent with other findings, which declared that the connection between parents and children was positively correlated (Ma *et al.*, 2016). In this case, parents are one of the keys to children's success, which is also influenced by the role of the environment. In addition, similar studies have proven that support or attention from a person's social environment greatly impacts the person's behavior, such as his or her psychological well-being (Diyana & Jatnika, 2022).

Based on the description above, the outcomes of this research correspond to theories and promoted by relevant studies. Thus, it can be resumed that there was a significant positive effect of parental attention on the mathematics learning outcomes of fourth-grade elementary school students in Gebang Sub-district, Purworejo Regency, in the 2021/2022 academic year.

##### B. *The Effect of Learning Motivation on Mathematics Learning Outcomes*

Based on research and calculations, learning motivation influenced mathematics learning outcomes. Motivation has been a factor that determines student achievement and is a driving factor in working and learning for someone to achieve the desired goal (Glover, 2013). This study is per research conducted by Razak (2016), whose research results showed an impact of learning motivation on students' achievement in mathematics. In addition, Murdiyasa and Karomah's (2020) research concluded that student learning motivation impacted elementary school students' mathematics learning outcomes.

In addition, the research results by Bahri and Corebima (2015) stated that learning motivation and metacognitive abilities affected students' cognitive learning outcomes. It is similar with the findings of Nugraha *et al.* (2021), which explained that motivation was positively correlated with students' mathematics learning outcomes. It denotes that motivation plays a vital role in the learning process, and motivation is also crucial in the learning activity to encourage and facilitate student learning process in achieving the expected learning goals. With the many aligning studies, it turns out that other research results conducted by Alhadi and Saputra (2017) also uncovered that learning motivation was significantly related to the learning outcomes of middle-level students in Yogyakarta. Also, motivation influenced student learning outcomes and learning independence at the school (Eriyanto *et al.*, 2021). There is motivation to support businesses in providing situations, conditions, and comfort in carrying out learning as expected.

Based on the description above, it can be resumed that there was a significant positive effect of learning motivation on the mathematics learning outcomes for elementary school students in Gebang Sub-district, Purworejo Regency, in the 2021/2022 academic year.

##### C. *The Effect of Parental Attention and Learning Motivation on Mathematics Learning Outcomes*

Based on the research and calculations described above, parental attention and learning motivation significantly and positively affected mathematics learning outcomes in fourth-grade elementary school students in Gebang Sub-district, Purworejo Regency. This study's results align with research conducted by Nurhayati and Purwanto (2021), showing a certain influence between parental attention, emotional intelligence, and learning motivation on students' mathematics learning achievement. Another study by Cheung and Kwan (2021) concluded that parental involvement and children's motivational strength are vital and can predict children's ability to learn mathematics.

Similar with the study highlighted by Fitria *et al.* (2021), motivation and learning independence during a pandemic contributed to student achievement in learning mathematics. Usman and Mushan (2021) also concluded the same thing that the role of parents, student motivation, and school facilities had positive results on the learning outcomes of middle level students. Similar to the findings of Dityawati and Wuryadi (2019), they found that student motivation, teacher skill, parental attention, and school facilities affected students' understanding while studying learning materials.

Therefore, it shall be resumed that if learning motivation and parental attention are given maximally, student learning outcomes will also be optimal. On the contrary, the lower the learning motivation and the lack of parental attention given to students, the lower the learning outcomes achieved by students. This study's results corroborate existing theories and are promoted by relevant research. Therefore, it shall be resumed that there was a significant positive effect of parental attention and learning motivation jointly on the mathematics learning outcomes of fourth-grade elementary school students in the Gebang Sub-district, Purworejo Regency, in the 2021/2022 academic year.

## V. CONCLUSIONS

From the results and discussion, it shall be resumed that parental attention had an effect on students' mathematics learning outcomes, learning motivation had an effect on students' mathematics learning outcomes, and parental attention and learning motivation had an effect on the mathematics learning outcomes of fourth-grade elementary school students in Gebang Sub-district, Purworejo Regency. From these findings, the researchers recommend that further research be conducted comparing the effect of attention and learning motivation of students in developing and developed countries on student achievement at further levels.

## ACKNOWLEDGMENT

The researcher would like to thank Sebelas Maret University as the facilitator of this research activity.

## CONFLICT OF INTEREST

The authors do not have any conflict of interest.

## REFERENCES

- Alhadi, S., & Saputra, W. N. E. (2017). The Relationship between Learning Motivation and Learning Outcome of Junior High School Students in Yogyakarta. *Advances in Social Science, Education and Humanities Research (ASSEHR)*, 66, 138–141.
- Anjomshoa, L., & Sadighi, F. (2015). The importance of motivation in second language acquisition. *International Journal on Studies in English Language and Literature*, 3(2), 126–137.
- Anthony, C. J., & Ogg, J. (2019). Parent involvement, approaches to learning, and student achievement: Examining longitudinal mediation. *School Psychology*, 34(4), 376–385. <https://doi.org/10.1037/spq0000282>.
- Bahri, A., & Corebima, A. D. (2015). The contribution of learning motivation and metacognitive skill on cognitive learning outcome of students within different learning. *Journal of Baltic Science Education*, 14(4), 487–500.
- Becker, M., McElvany, N., & Kortenbruck, M. (2010). Intrinsic and extrinsic reading motivation as predictors of reading literacy: A longitudinal study. *Journal of Educational Psychology*, 102(4), 773–785. <https://psycnet.apa.org/buy/2010-21222-001>.
- Bedell, G. M., Khetani, M. A., Cousins, M. A., Coster, W. J., & Law, M. C. (2011). Parent perspectives to inform development of measures of children's participation and environment. *Archives of Physical Medicine and Rehabilitation*, 92(5), 765–773. <https://doi.org/10.1016/j.apmr.2010.12.029>.
- Chen, Q., Kong, Y., Gao, W., & Mo, L. (2018). Effects of Socioeconomic Status, Parent – Child Relationship, and Learning Motivation on Reading Ability. *Frontiers in Psychology*, 9(July), 1–12. <https://doi.org/10.3389/fpsyg.2018.01297>.
- Cheung, S. K., & Kwan, J. L. Y. (2021). Early Childhood Research Quarterly Parents' perceived goals for early mathematics learning and their relations with children's motivation to learn mathematics &. *Early Childhood Research Quarterly*, 56, 90–102. <https://doi.org/10.1016/j.ecresq.2021.03.003>.
- Chotimah, S., Bernard, M., & Wulandari, S. (2018). Contextual approach using VBA learning media to improve students' mathematical displacement and disposition ability. *IOP Conf. Series: Journal of Physics: Conf. Series*, 948(1), 1–11. <https://doi.org/10.1088/1742-6596/948/1/012025>.
- Creswell, J. W. (2013). *Research design: Qualitative, quantitative and mixed methods* (p. 273). Sage Publication.
- Dityawati, M. S., & Wuryadi. (2019). The Influence of Learning Motivation, Ability of Teachers to Teach, Parental Attention and Learning Facilities in Understanding Material of Regulatory System in Senior High School. *IOP Conf. Series: Journal of Physics: Conf. Series*, 1233(1), 1–9. <https://doi.org/10.1088/1742-6596/1233/1/012003>.
- Diyana, K. P., & Jatnika, R. (2022). Meta-Analysis Studies: The Relationship between Social Support and Psychological Well-Being among Adolescents in Indonesia. *European Journal of Humanities and Social Sciences*, 2(1), 64–71.
- Engin, G. (2020). An Examination of Primary School Students' Academic Achievements and Motivation In Terms of Parents' Attitudes, Teacher Motivation, Teacher Self-efficacy and Leadership Approach. *International Journal of Progressive Education*, 16(1), 257–276. <https://doi.org/10.29329/ijpe.2020.228.18>.
- Eriyanto, M. G., Roesminingsih, M. V., & Soeherman, I. K. (2021). The Effect of Learning Motivation on Learning Independence and Learning Outcomes of Students in the Package C Equivalence Program. *IJORER : International Journal of Recent Educational Research*, 2(4), 455–467. <https://doi.org/10.46245/ijorer.v2i4.122> ABSTRACT.

- Fijar, N. Y., Muchtar, B., & Idris. (2019). The Effect of Parental Attention, Home Study Facilities and Learning Motivation on Students Learning Outcome (Research : Social Science Subject in District Sungayang High School Tanah Datar Regency). *JAIPTEKIN | Jurnal Aplikasi IPTEK Indonesia*, 3(2), 98–103. <https://doi.org/10.24036/4.22120>.
- Fitria, A., Najihah, B., Paris, M. A., & Atsnan, M. F. (2021). Motivation, self-regulated learning, and their effects on learning outcomes of derivative materials during the Covid-19 pandemic. *Jurnal Riset Pendidikan Matematika*, 8(2), 153–166. <https://doi.org/10.21831/jrpm.v8i2.42184>.
- Genç, Z. S., & Aydin, F. (2017). An analysis of learners' motivation and attitudes toward learning English language at tertiary level in Turkish EFL context. *English Language Teaching Journal*, 10(4), 35–44. <https://doi.org/10.5539/elt.v10n4p35>.
- Glover, I. (2013). Play As You Learn: Gamification as a Technique for Motivating Learners. In J. Herrington, A. Couros & V. Irvine (Eds.). *Proceedings of EdMedia 2013--World Conference on Educational Media and Technology*, 1999–2008.
- Hasson, U., Egidio, G., Marelli, M., & Willems, R. M. (2018). Grounding the neurobiology of language in first principles: The necessity of non-language-centric explanations for language comprehension. *Cognition*, 180, 135–157. <https://doi.org/10.1016/j.cognition.2018.06.018>.
- Li, Y., & Schoenfeld, A. H. (2019). Problematising teaching and learning mathematics as “given” in STEM education. *International Journal of STEM Education*, 6(1), 44. <https://doi.org/10.1186/s40594-019-0197-9>.
- Ma, X., Shen, J., Krenn, H. Y., Hu, S., & Yuan, J. (2016). A meta-analysis of the relationship between learning outcomes and parental involvement during early childhood education and early elementary education. *Educational Psychology Review*, 28(4), 771–801.
- Mardi. (2018). Analysing Science Test Items and Higher Order Thinking Skills of Fifth Graders. *Bioedukasi*, XVI(1), 1–5.
- Masuda, K., & Yamauchi, C. (2020). How does female education reduce adolescent pregnancy and improve child health?: Evidence from Uganda's universal primary education for fully treated cohorts. *The Journal of Development Studies*, 56(1), 63–86. <https://doi.org/10.1080/00220388.2018.1546844>.
- McDaniel, B. T. (2019). Parent distraction with phones, reasons for use, and impacts on parenting and child outcomes: A review of the emerging research/doi.org/. *Human Behavior and Emerging Technologies*, 1(2), 72–80. <https://doi.org/10.1002/hbe2.139>
- Menggo, S. (2018). English learning motivation and speaking ability. *JPAI (Journal of Psychology and Instruction)*, 2(2), 64–69. <https://ejournal.undiksha.ac.id/index.php/JoPal%0AJPAI>.
- Murtiyasa, B., & Karomah, I. I. Al. (2020). The Impact of Learning Strategy of Problem Solving and Discovery towards Learning Outcomes Reviewed from Student Learning Motivation. *Universal Journal of Educational Research*, 8(9), 4105–4112. <https://doi.org/10.13189/ujer.2020.080936>.
- Nugraha, D. Y., Nugraha, D., & Widyastuti. (2021). The Correlation between Learning Motivation and Learning Outcomes on Mathematics Subjects in XII Science Class Senior High School 4 Bone. *Anatolian Journal of Education*, 6(1), 157–166. <https://doi.org/10.29333/aje.2021.6113a>.
- Nurhayati, F. E., & Purwanto, S. E. (2021). Analysis of the mathematics learning motivation of class xi IPA students during the covid-19 pandemic. *Edumatica: Jurnal Pendidikan Matematika*, 11(01), 93–98. <https://doi.org/10.22437>.
- OECD. (2019). *Programme for International Student Assessment (PISA) Results from PISA 2018*. OECD.
- Razak, F. (2016). The Effect of Cooperative Learning on Mathematics Learning Outcomes Viewed from Students' Learning Motivation. *Journal of Research and Advances in Mathematics Education*, 1(1), 49–55. <http://journals.ums.ac.id/index.php/jramathedu>.
- Safaruddin, S., Ibrahim, N., Juhaeni, J., Harmilawati, H., & Qadrianti, L. (2020). The Effect of Project-Based Learning Assisted by Electronic Media on Learning Motivation and Science Process Skills. *Journal of Innovation in Educational and Cultural Research*, 1(1), 22–29. <https://doi.org/10.46843/jiecr.v1i1.5>.
- Salac, L. M., & Florida, J. U. (2022). Epstein Model of Parental Involvement and Academic Performance of Learners. *European Online Journal of Natural and Social Sciences*, 11(2), 379–386.
- Sehe, Thaba, A., & Baharuddin, M. R. (2022). Influence of Parental Attention, Self-Concept, and independent learning on Students' Learning Achievement in the Indonesian Language Subjects. *Eurasian Journal of Educational Research*, 97(19), 103–131. <https://doi.org/10.14689/ejer.2022.97.06>.
- Usman, O., & Mushan, P. P. El. (2021). *The effect of learning motivation, the role of parents, and learning facilities on mathematics learning outcomes*. 1–23. <https://doi.org/10.2139/ssrn.4128404>.
- Wahono, B., Lin, P., & Chang, C. (2020). Evidence of STEM enactment effectiveness in Asian student learning outcomes. *International Journal of STEM Education*, 7(36), 1–18. <https://doi.org/10.1186/s40594-020-00236-1>.



**Tri Saptuti Susiani** lives in Kebumen and was born in Purworejo, November 21, 1959. Tri Saptuti Susiani completed her undergraduate education at the Semarang State University, Indonesia, in 1984 with a major in education. Then, he continued his postgraduate education, Yogyakarta State University, Indonesia in 2004 in the field of technology and vocational education.

Currently, he is working as a Lecturer at Sebelas Maret University, Surakarta, Indonesia in the primary school teacher education study program. He has done a lot of research and community service. The last research entitled "Development of Student Workbooks in Thematic Learning in Elementary Schools" in 2022 was funded by Sebelas Maret University. He also engages in community service activities. Some of his service titles include "Training for Writing Scientific Papers for Publications for Principals and Elementary School Teachers in Bonorowo District, Kebumen Regency"; "Assisting the Implementation of Scientific Approaches to Develop Pedagogic Competencies of Elementary School Teachers in Kebumen District"; and "Profile of Student Ecoliteracy Ability at Adiwiyata School".

Tri Saptuti Susiani, has several publications published in 2021. Some of the titles are "Training in making interactive learning media based on macromedia flash in Indonesian language learning for elementary school teachers in Petanahan District" which was published in the Empowerment Community Journal and the article title "Impacts Implementation of the School Literacy Movement on Students' Attitudes at SD N 1 Pandowan" published in Education, Research Journals and Educational Articles.