



Analysis of the Influence of School Bench Facilities and Peer Interaction on Student Learning Motivation at Public High Schools in Malang City

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Abstract

Schools play a crucial role in achieving quality education per national standards. Classrooms include physical aspects like aesthetics, seating arrangements, and lighting. Comfortable seating enhances learning, increases motivation, and boosts student achievements. Proper management of facilities, such as school benches, is essential for effective learning. Peer interaction also influences learning enthusiasm. Supportive friends boost motivation, while poorly behaved peers can diminish it. This descriptive quantitative study targets high school students in public schools across Malang City. Primary data was collected via Google Forms questionnaires. Stratified random sampling, using the Slovin formula at a 10% error rate, resulted in a sample of 100 respondents from a population of 10,884 students. Data analysis utilized multiple linear regression with IBM SPSS 24 for Windows, incorporating classical assumption tests, t-tests, F-tests, and R^2 tests.

Keywords: school bench facilities; peer interaction; student learning motivation

1. Introduction

Education is a fundamental need required by humans to navigate their lives. This is in accordance with the regulations set forth in Law Number 20 of 2003 concerning the National Education System. Especially in this current era of disruption, education is expected to equip students to become high-achieving, productive individuals who can function as democratic citizens and participate in the ongoing global competition (Nahdiyah, 2022). In other words, education is not merely a process of reading, writing, social interaction, and daily activities, but involves a broader, more planned effort.

One of the common institutions used for the implementation of education is the school. Schools are essential elements within the societal structure that address current situations and serve as a means to achieve quality education that meets national standards. Each school typically has several rooms called classrooms. Classrooms are used as spaces for interactions between teachers and students, and a comfortable classroom environment will positively support this interaction.

According to Purnomo (2005:3), the definition of a classroom presented by Purnomo is that "a classroom is a combination of learning space (physical aspect) and learning atmosphere (emotional aspect)." The physical aspect includes elements such as (1) the room itself, (2) classroom aesthetics, (3) seating arrangements, (4) arrangement of teaching facilities and tools, and (5) lighting and ventilation. Meanwhile, the social-emotional aspect includes: (1) teacher leadership, (2) teacher attitude, (3) verbal communication by the teacher, and (4)

efforts in fostering positive interpersonal relationships. Therefore, effective classroom management is highly beneficial in supporting educational activities.

Classrooms are also places where the learning process occurs. Learning activities are efforts to guide students toward more positive development. The level of improvement in the quality of learning is influenced by several factors, both internal and external, related to the school itself (Nugraha, 2018). According to Sunhaji (2014), learning involves efforts to engage students in the learning process, making the situation an educational event. The interaction between students and their environment can lead to changes in student behavior. When the physical and emotional aspects of the classroom are fulfilled, students' learning motivation will grow. Student motivation in learning plays a significant role in their progress and achievement in specific subjects (Nasharr, 2014:11). When students have a high level of motivation, the likelihood of success in the learning process increases, and thus, they have the potential to achieve high grades.

Infrastructure and facilities play a crucial role in supporting the smoothness of the learning process. Therefore, every institution, especially schools, requires good management of infrastructure and facilities to ensure the smooth running of learning activities (Hajeng Darmastuti, 2014:10). According to Nurhattati Fuad (2016), educational infrastructure and facilities are vital aspects that support the smoothness of the teaching and learning process in schools. The success of programs in schools greatly depends on the condition, management, and optimal utilization of available educational infrastructure and facilities. For instance, school bench facilities, utilized by students on a daily basis during the learning process, also play a significant role in supporting learning activities. Sometimes, when these facilities are inadequate, it can lead to a decrease in learning motivation.

Why school bench facilities should be carefully considered is because learning infrastructure and facilities provide significant benefits for success in the learning process, including school bench facilities. According to Arsyad (2015), the benefits of learning infrastructure and facilities include the following: (1) The use of learning facilities can clarify messages and information, which in turn can enhance the smoothness and results of the learning process. (2) Enhancing children's attention and stimulating their learning motivation, supporting closer interaction between students and their environment, and enabling students to learn independently according to their interests and abilities. (3) Providing similar experiences for students related to events in their environment, which also foster direct interaction with teachers, the community, and the environment, such as through field trips and other activities.

One element that can enhance motivation in the learning process is social interaction with peers. When students interact with supportive peers, they feel motivated to develop their learning interests. On the other hand, if they associate with peers who are less motivated or exhibit poor behavior, the impact can result in a decrease in learning enthusiasm or a lack of motivation to learn.

The urgency of this research is to determine which type of bench is preferred by students to be considered in the procurement of bench facilities by schools. By listening to the opinions of students, factors such as comfort and health can be ensured, thus providing a positive learning environment and motivating students to learn. Not only that, this can increase efficiency, effectiveness, and productivity in the learning process of students. Additionally,

schools can save on budget for bench procurement by selecting high-quality, durable benches that are suitable for students. Regarding the friendship relationships among students, it is important for teachers to consider that the seating arrangement of each student can influence their learning motivation. Thus, allowing students to freely choose their seating arrangements next to their friends can be beneficial.

2. Method

This research applies a quantitative approach using descriptive analysis and multiple regression analysis. The quantitative approach is employed to measure and analyze the variables in this study numerically, allowing for a deeper understanding of the relationships between the investigated variables. Descriptive analysis is used to obtain descriptions of the research data. Multiple regression analysis is utilized to test the relationships among the variables involved in this study. Statistical data testing in this research will be processed using IBM SPSS Statistics version 24 for Windows. The use of this software is aimed at facilitating the data analysis process and ensuring a higher level of research result accuracy.

The details of the variables in this study are as follows: the independent variables are school bench facilities (X1), peer interaction (X2), and the dependent variable is student learning motivation (Y). The research sampling is conducted using the Slovin Formula and Proportionate Stratified Random Sampling technique involving 10 out of 11 Public High Schools in Malang City. The research population consists of 10,883 students, while the sample size is 100 students from Public High Schools in Malang City. Data collection techniques involve using paper questionnaires and digital forms through Google Forms. The data analysis in this research includes descriptive analysis, normality test, linearity test, multicollinearity test, heteroskedasticity test, autocorrelation test, and hypothesis testing including T-test, F-test, regression test, and R-squared test.

3. Results and Discussion

3.1 Result

1. Description of school benches

The variable of school benches is measured from the sub-variables: (a) Visibility, (b) Accessibility, (c) Flexibility, (d) Comfort, and (e) Aesthetics. The questionnaire for this variable consists of 20 statement items, administered to 100 student respondents in Public High Schools across Malang City.

Category	Interval Value	Frequency	Percentage
Very Low	20-34	0	0%
Low	35-49	0	0%
High	50-64	75	75%
Very High	65-80	25	25%
Total		100	100%

The results indicate that respondents who rated school benches in the high category were 75 students (75%), while those in the very high category were 25 students (25%). There were no respondents in the low or very low categories. Based on the mean value obtained of 62.86, falling within the interval of 50-64, it can be concluded that the school benches in Public High Schools across Malang City are categorized as high.

2. Descripton peer interaction

The variable of peer interaction is measured from the sub-variables: (a) Substitute family function, (b) Problem-solving, (c) Emotional and social support, and (d) Learning partnership. The questionnaire for this variable consists of 23 question items, administered to 100 student respondents in Public High Schools across Malang City.

Category	Interval Value	Frequency	Percentage
Very Low	23-39	0	0%
Low	40-56	0	0%
High	57-73	78	78%
Very High	74-92	22	22%
Total		100	100%

The results indicate that respondents who rated peer interaction in the high category were 78 students (78%), while those in the very high category were 22 students (22%). There were no respondents in the low or very low categories. Based on the mean value obtained of 71.83, falling within the interval of 57-73, it can be concluded that peer interaction in Public High Schools across Malang City is categorized as high.

3. Description student learning motivation

The variable of student learning motivation is measured from the sub-variables including: (a) Demonstrating perseverance in completing tasks, (b) Being persistent in overcoming difficulties, (c) Ability to maintain their opinions, and (d) Enjoyment in seeking and solving problems. The questionnaire for this variable consists of 24 statement items, administered to 100 student respondents in Public High Schools across Malang City.

Category	Interval Value	Frequency	Percentage
Very Low	24-41	0	0%
Low	42-59	0	0%
High	60-77	84	84%
Very High	78-96	16	16%
Total		100	100%

The results indicate that respondents who rated student learning motivation in the high category were 84 students (84%), while those in the very high category were 16 students (16%). There were no respondents in the low or very low categories. Based on the mean value

obtained of 74.53, falling within the interval of 60-77, it can be concluded that student learning motivation in Public High Schools across Malang City is categorized as high.

4. Normality test

The normality test is used to examine whether the residuals have a normal distribution or not. A good regression model has residuals that are normally distributed. Normality testing in this research is conducted using SPSS 24 for Windows through the One Sample Kolmogorov-Smirnov test. The decision criterion in this test is if the probability value > 0.05 , then the data distribution is considered normal, while if the probability value < 0.05 , then the data distribution is considered non-normal

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		100
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	3758.26058700
Most Extreme Differences	Absolute	.060
	Positive	.040
	Negative	-.060
Test Statistic		.060
Asymp. Sig. (2-tailed)		.200 ^{c,d}

- a. Test distribution is Normal.
- b. Calculated from data.
- c. Lilliefors Significance Correction.
- d. This is a lower bound of the true significance.

Based on Table the Asymp.Sig. (2-tailed) value is 0.200. Therefore, it can be concluded that the data is normally distributed because $0.200 > 0.05$.

5. Linearity test

The linearity test is used to determine whether there is a significant linear relationship between variables or not. The linearity test in this research is conducted using SPSS 24 for Windows through Analyze-Compare Means-Means. In this test, the decision is made based on the significance value of linearity. If the significance value of linearity is less than 0.05, then the relationship between variables is considered linear. Conversely, if the significance value of linearity is greater than 0.05, then the relationship between variables is considered non-linear.

ANOVA Table

	Sum of Squares	df	Mean Square	F	Sig.
Y * X1 Between Groups (Combined)	219.120	15	14.608	2.184	.013
Linearity	136.495	1	136.495	20.409	.000
Deviation from Linearity	82.625	14	5.902	.882	.580
Within Groups	561.790	84	6.688		
Total	780.910	99			

Based on the value of Sig. Linearity is 0.000. It can be concluded that the variable of school benches (X1) towards student learning motivation (Y) has a linear relationship because the Sig. Linearity value is <0.05.

ANOVA Table

	Sum of Squares	df	Mean Square	F	Sig.
Y * X2 Between Groups (Combined)	169.397	12	14.116	2.008	.033
Linearity	72.942	1	72.942	10.377	.002
Deviation from Linearity	96.456	11	8.769	1.248	.269
Within Groups	611.513	87	7.029		
Total	780.910	99			

Meanwhile, in Table the value of Sig. Linearity is 0.002. It can be concluded that the variable of school benches (X1) towards student learning motivation (Y) has a linear relationship because the Sig. Linearity value is <0.05.

6. Multicollinearity test

Multicollinearity testing aims to determine whether there is a perfect relationship between the independent (predictor) variables in a regression model. A good model should have no multicollinearity. In multicollinearity testing, the decision is based on the tolerance value. If the tolerance value is less than 0.10, multicollinearity exists. Conversely, if the tolerance value is greater than 0.10, there is no multicollinearity.

		Coefficients ^a					Collinearity Statistics	
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Tolerance	VIF
		B	Std. Error	Beta				
1	(Constant)	36476.893	6491.137		5.619	.000		
	X1.Total	.329	.097	.346	3.412	.001	.814	1.229
	X2.Total	.155	.107	.147	1.451	.150	.814	1.229

a. Dependent Variable: Y.TT

In Table it is known that the tolerance values for the school administrative staff competency variable (X1) and the school administrative staff workload variable (X2) are 0.814 > 0.10. Therefore, the decision in this multicollinearity test concludes that there is no multicollinearity in the regression model.

7. Heteroskedasticity test

The heteroscedasticity test aims to determine whether there is a difference in the variance of the residuals across observations. To identify heteroscedasticity, the probability value is used. If the probability value is greater than 0.05, the hypothesis is accepted, indicating that there is no heteroscedasticity in the data. However, if the probability value is less than 0.05, the hypothesis is rejected, indicating the presence of heteroscedasticity in the data.

		Coefficients ^a				
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2202.099	3764.707		.585	.560
	X1.Total	.061	.056	.121	1.085	.280
	X2.Total	-.040	.062	-.072	-.640	.523

a. Dependent Variable: ABS_RES Based on Table 4.15, the Sig. Linearity value for the school bench variable (X1) is 0.280, which is greater than 0.05, indicating that there is no heteroscedasticity. Similarly, the Sig. Linearity value for the peer interaction variable (X2) is 0.523, which is also greater than 0.05, indicating that there is no heteroscedasticity.

8. Autocorrelation test

The autocorrelation test is used to determine whether there is an unusual correlation of residuals between one observation and another. Typically, the autocorrelation test is applied to time series data, so ordinal or interval data do not always require this test. The analysis results can be concluded based on the following criteria.

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.431 ^a	.186	.169	3796.808	1.585

a. Predictors: (Constant), X2.TT, X1.TT b. Dependent Variable: Y.TT The DU (Durbin Watson) value is 1.585, and the DL value is 1.6131 with an N value of 100. It can be observed that the DU value is less than the DL value, indicating the presence of positive autocorrelation.

9. Regression test

After fulfilling all the classical assumption tests, the multiple linear regression analysis was conducted to evaluate the influence of school bench and peer interaction on students' learning motivation. Below are the results of the multiple linear regression data processing in the table.

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	30107.731	6185.036		4.868	.000
	X1	.333	.086	.350	3.867	.000
	X2	.291	.094	.279	3.084	.003

a. Dependent Variable: Y

From Table the results of multiple regression can be obtained as follows:

$$Y = a + b_1X_1 + b_2X_2$$

$$Y = 30107.731 + (0.333X_1) + (0.291X_2)$$

These results can be interpreted as follows:

a. The school bench variable X1 has an influence on students' learning motivation because the significant result of 0.000 is less than 0.05.

b. The peer interaction variable has an influence on students' learning motivation because the significant result of 0.003 is less than 0.05.

c. The constant of 30107.731 means that if both the school bench (X1) and peer interaction (X2) variables are 0, the students' learning motivation variable would be 30107.731. Thus, it implies that there are other variables that may influence students' learning motivation.

d. The regression coefficient of the school bench X1, 0.333, indicates that for every 1% increase in the school bench variable, the value of students' learning motivation variable increases by 0.333, assuming other variables remain constant.

e. The regression coefficient of the peer interaction X2, 0.291, indicates that for every 1% increase in the peer interaction variable, the value of students' learning motivation variable increases by 0.291, assuming other variables remain constant.

10. R-squared test

The coefficient of determination or R-Square aims to determine the extent of the contribution of influence between the independent and dependent variables. The results of the coefficient of determination analysis can be seen in Table.

Model	R	R. Square	Adjusted R. Square	Std. Error of the Estimate
1	.492 ^a	.242	.227	3662.398

a. Predictors: (Constant), X2, X1

Based on Table it can be observed that the R-Square value between the independent and dependent variables is 0.242. It can be concluded that the combined influence of variables X1 and X2 on Y is 24.2%. Thus, these three variables collectively contribute 24.2% of the influence, while 75.8% is explained by independent variables not considered in this study.

11. F-test

The F-test aims to determine whether all the independent variables used in the study have a combined effect on the dependent variable. In the context of this research, a simultaneous hypothesis test is conducted to measure the significant combined effect of the school bench variable (X1) and peer interaction variable (X2) on the learning motivation of students in public high schools across Malang City. The F-test results can be found in Table.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	416357231.400	2	208178615.700	15.520	.000 ^b
	Residual	1301076453.000	97	13413159.310		
	Total	1717433685.000	99			

a. Dependent Variable: Y b. Predictors: (Constant), X2, X1

Based on the data presented in Table an F value of 15.520 with a significance value of 0.000 was found. If the significance value is less than 0.05, it can be concluded that there is a significant combined effect of the school bench variable and peer interaction on the learning motivation of students.

12. T-test

The partial significance test aims to determine the effect of each independent variable on the dependent variable. To understand the strength of the influence of each independent variable on the dependent variable, and to interpret the hypothesis assumptions, the following interpretation is provided.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	30107.731	6185.036		4.868	.000
	X1	.333	.086	.350	3.867	.000
	X2	.291	.094	.279	3.084	.003

a. Dependent Variable: Y

From Table it can be observed that the school bench variable has a coefficient of 0.000, which is less than 0.05. This indicates that the variable has a significant effect on students' learning motivation.

Furthermore, the peer interaction variable has a coefficient of 0.003, also less than 0.05. This indicates that peer interaction also has a significant effect on students' learning motivation.

13. Hypothesis test

Based on hypothesis testing using the results of multiple regression for the first and second hypotheses using the Partial F-test, and the third hypothesis using the Simultaneous F-test, the results for each hypothesis are as follows:

a. First hypothesis: The influence of the school bench variable on students' learning motivation in public high schools across Malang City.

Based on the analysis table using a significance level of 0.05 in SPSS 24, the calculated t-value is 3.867, and the significance value is 0.000, which is smaller than 0.05. Therefore, it can be concluded that there is an influence of the school bench variable on students' learning motivation in public high schools across Malang City. (H1 accepted, H0 rejected)

b. Second hypothesis: The influence of the peer interaction variable on students' learning motivation in public high schools across Malang City.

Based on the analysis table using a significance level of 0.05 in SPSS 24, the calculated t-value is 3.084, and the significance value is 0.003, which is smaller than 0.05. Therefore, it can be concluded that there is an influence of the peer interaction variable on students' learning motivation in public high schools across Malang City. (H1 accepted, H0 rejected)

c. Third hypothesis: The influence of the school bench and peer interaction variables on students' learning motivation in public high schools across Malang City.

Based on the analysis table using a significance level of 0.05 in SPSS 24, the calculated F-value is 15.520, and the significance value is 0.000, which is smaller than 0.05. Therefore, it can be concluded that there is an influence of the school bench and peer interaction variables on students' learning motivation in public high schools across Malang City. (H1 accepted, H0 rejected)

Description of School Benches

The arrangement of school benches in public high schools across Malang City falls into the high category. This indicates that the seating arrangement for students has been well considered. According to Mubarok (2019), proper seating arrangement can eliminate the habit of students sleeping in class or causing disturbances during the learning process, which can hinder the success of other classmates. Therefore, seating arrangements need to be considered to provide comfort for students during the learning process in the classroom.

Based on the descriptive analysis of each sub-variable - Visibility, Accessibility, Flexibility, Comfort, and Aesthetics - they have mean values of 62.86, 12.80, 12.46, 12.49, 12.33, and 12.78, respectively. According to Hasanah et al. (2021), arranging student seating in a format that aims to facilitate students in focusing their vision on the teacher's explanation plays an important role in making students more concentrated during the learning process.

Sudarma (2020) states that students' learning motivation can be influenced by the position of their seating, as observed from their learning process. The chosen seating position, whether it's in the front, back, side, or middle, can affect students based on their personal considerations. Therefore, seating arrangements should position each student optimally, providing them with learning motivation to achieve maximum performance.

Description of Peer Interaction

Peer interaction in public high schools across Malang City falls into the high category. This indicates that peer interaction among students in public high schools across Malang City is in a good category. According to Santi & Khan (2019), peer interactions are often found in friendships formed by individuals in the school environment from childhood to adolescence. Having friends during the

learning process or during playtime has a positive impact on a child's future development. Therefore, the presence of friends both inside and outside the school environment needs to be considered to have a positive impact on students.

Based on the descriptive analysis of each sub-variable - Substitute Family Function, Problem-Solving, Emotional and Social Support, and Learning Partnership - they have mean values of 71.83. For the substitute family function sub-variable, it has a mean value of 18.82, problem-solving has a mean value of 18.64, emotional support has a mean value of 12.33, and learning partnership has a mean value of 18.93. According to Angraeni & Rudiarta (2022), peer interactions have an influence on students' emotional intelligence and automatically also play a role in influencing someone's learning motivation. Therefore, the presence of friends

encountered daily has an impact on students to be more enthusiastic in facing their days during the learning process.

According to Asmara et al. (2023), students may feel more comfortable during the learning process and will ask their peers about material they do not understand because sometimes they are reluctant to ask directly to the teacher due to fear. According to Angraeni & Rudiarta (2022), the presence of peer interactions plays a role in the growth and development of students, thus intensive supervision is needed regarding with whom a student always interacts. Because prominent personal habits within a group have an impact on other individuals. Therefore, regular supervision of students by parents or teachers is needed so that student interactions can have a positive impact rather than the opposite.

Description of Students' Learning Motivation

The learning motivation of students in public high schools across Malang City falls into the high category. This indicates that students' learning motivation in public high schools across Malang City is classified as good. Education is a basic need provided to students, preparing them to become independent individuals who can develop themselves optimally (Arifin, 2019). Sadirman (2016) states that motivation can manifest as diligence in completing tasks, perseverance in facing difficulties, having an interest in addressing problems, preferring to work alone, and feeling bored with routine or mechanical tasks.

Based on the descriptive analysis of each sub-variable - Showing diligence in completing tasks, Being resilient in overcoming difficulties, able to defend their opinions, Enjoying seeking and solving problems - they have mean values of 74.53. For the sub-variable of showing diligence in completing tasks, it has a mean value of 15.60, for being resilient in overcoming difficulties, it has a mean value of 18.63, for being able to defend their opinions, it has a mean value of 18.59, and for enjoying seeking and solving problems, it has a mean value of 18.64. According to Laras & Rifai (2019), learning motivation plays an important role in the learning process because when doing something, one must have motivation from within themselves. It is important for oneself that every task undertaken must have motivation to complete it, so that the learning process can be more enjoyable and easier to carry out.

According to Ningtias & Surjanti (2021), students with high motivation when studying together and self-study have high academic achievement, whereas when students with low learning motivation and lack of self-study have low academic achievement. Creativity is a skill that students must have. Especially in the current era, where developments occur very rapidly (Bafadal, I., Juharyanto, 2020). It can be concluded that every student must have high motivation to achieve their desired academic achievement, so it is important for them to always maintain their motivation during every learning process both in school and outside of school.

Influence of Classroom Seating Arrangement on Students' Learning Motivation

Based on the hypothesis testing results using partial analysis with a significance level of 0.05 in SPSS 24, a significant value of 0.000 was obtained, which is smaller than 0.05. Therefore, it is stated that there is a direct positive and significant influence between classroom seating arrangement (X1) and students' learning motivation (Y) in public high schools across Malang City. From this statement, it

can be concluded that if the classroom seating arrangement is improved, students' learning motivation will also increase.

Supporting research findings include Mubarok (2019), where students feel motivated to actively participate in learning because the teacher's attention is more focused on each student, making them feel more noticed. Additionally, teachers also benefit from seating arrangements that can enhance students' learning focus, thus facilitating the delivery of material and strengthening interaction between teachers and students. This research shows that effective seating arrangements can provide comfort and motivation for students in learning. Furthermore, students' learning focus is easier to achieve, and interaction between students and teachers is more intense and manageable.

Influence of Peer Interaction on Students' Learning Motivation

Based on the analysis table using partial analysis with a significance level of 0.05 in SPSS 24, a significant value of 0.003 was obtained, which is smaller than 0.05. Therefore, it is stated that there is a direct positive and significant influence between peer interaction (X2) and students' learning motivation (Y) in public high schools across Malang City. From this statement, it can be concluded that if peer interaction is enhanced, students' learning motivation will also increase.

Other supporting research includes Taufan (2019), where peer interaction has a positive and significant influence on students' learning interest in Vocational High School N 3 Sungai Penuh, Kerinci Regency. This means that the better students' peer interactions, the higher their learning interest, and vice versa. According to Fitriyah & Sunanto (2023), interaction with peers plays a significant role in students' learning motivation. Peers can provide reinforcement in both positive and negative forms. If interaction leads to positive things such as cooperation, discussion, and sharing, it can make students' learning motivation high, making them more enthusiastic and diligent in learning. In conclusion, peer interaction has a significant influence on students' interest and learning motivation. Positive relationships, such as cooperation, discussion, and sharing, can boost students' enthusiasm and activity in learning.

Influence of Classroom Seating Arrangement and Peer Interaction on Students' Learning Motivation

Based on the simultaneous analysis table using a significance level of 0.05 in SPSS 24, a significant value of 0.000 was obtained, which is smaller than 0.05. Therefore, it is stated that there is a direct positive and significant influence between classroom seating arrangement (X1) and peer interaction (X2) with students' learning motivation (Y) in public high schools across Malang City. From this statement, it can be concluded that if both classroom seating arrangement and peer interaction are improved, students' learning motivation will also increase.

Other supporting research by Rahman & Saliman (2021) indicates that interaction with peers has the potential to increase students' motivation and learning outcomes. This can be achieved by increasing the frequency of interaction, such as frequently holding study discussions together and extending study time, to achieve desired learning outcomes. According to Soemantri (2017), appropriate seating arrangements can significantly foster students' learning motivation. This influence applies not only to the research sample but also

to the entire population. However, everything that supports can also become an obstacle if not maximized from various aspects (Andiarini et al., 2018). Therefore, every aspect that can enhance students' learning motivation must be considered. In conclusion, both peer interaction and good seating arrangements have the potential to significantly foster students' motivation and learning outcomes. This positive influence applies broadly, not only to the research sample but also to the general student population.

4. Conclusion

The seating arrangement at Public High Schools in Malang City is categorized as high. Effective seating arrangements will be achieved if schools can consider all components that make students comfortable during their learning activities. Peer interaction at Public High Schools in Malang City is also rated as high. Peer interaction can provide motivation for students to stay enthusiastic during

the learning process. Student learning motivation at Public High Schools in Malang City is categorized as high as well. Once students have acquired learning motivation, they can easily achieve academic success, highlighting the crucial role of learning motivation in the success of the learning process.

There is a direct, positive, and significant influence between school benches and student learning motivation at Public High Schools in Malang City. Therefore, improving the arrangement of school benches will also increase student learning motivation. There is a direct, positive, and significant influence between peer interaction and student learning motivation at Public High Schools in Malang City. Therefore, if peer interaction is given attention, student learning motivation will also improve. There is a direct, positive, and significant influence between school benches, peer interaction, and student learning motivation at Public High Schools in Malang City. Enhancing the arrangement of school benches and peer interaction will lead to greater student learning motivation.

Based on the conclusions of the research, the researcher proposes the following recommendations:

1. The principals of Public High Schools in Malang City are encouraged to maintain the seating arrangements in each classroom to provide comfort for students, thus making the learning process more effective and enjoyable.
2. Teachers in Public High Schools in Malang City are advised to recognize the positive impact of peer presence during the learning process. Teachers can provide opportunities for students to interact with their peers, exchange ideas, and serve as sources of encouragement.
3. Other researchers are encouraged to further develop the findings of this research by incorporating additional variables that may influence student learning motivation.
4. The Chair of the Department of Educational Administration at the Faculty of Education, University of Malang, is encouraged to utilize this research as a reference material and provide knowledge for students of the Educational Administration Department.

References

- Akbar, M. (2020). Efektivitas Layanan Bimbingan Kelompok dengan Teknik Problem Solving untuk Meningkatkan Motivasi Belajar Peserta didik Di Sekolah Menengah Atas Negeri 2 Tapung Kampar. UNIVERSITAS ISLAM NEGERI SULTAN SYARIF KASIM RIAU. <http://repository.uin-suska.ac.id/27693/>
- Al-Kansa, B. B., Agustini, S., & Pertiwi, P. I. (2023). Pengaruh Penataan Tempat Duduk Terhadap Keefektifan Belajar Peserta didik Sekolah Dasar. *Jurnal Pendidikan dan Konseling (JPDK)*, 5(1), 683-687.
- Amanda, L., Yanuar, F., & Devianto, D. (2019). Uji Validitas dan Reliabilitas Tingkat Partisipasi Politik Masyarakat Kota Padang. *Jurnal Matematika UNAND*, 8(1). <https://doi.org/10.25077/jmu.8.1.179-188.2019>
- Andiarini, S. E., Arifin, I., & Nurabadi, A. (2018). Implementasi program penguatan pendidikan karakter melalui kegiatan pembiasaan dalam peningkatan mutu sekolah. *Jurnal Administrasi Dan Manajemen Pendidikan*, 1(2), 238-244.
- Arifin, I. (2019). Kepemimpinan Religio-Humanistik Bidang Pendidikan pada Era Revolusi Industri 4.0 dan Society 5.0.
- Arsyad. (2015). Psikologi Kependidikan. Bandung: PT. Remaja Rosdakarya.
- Bafadal, I., Juharyanto, J., Nurabadi, A., & Gunawan, I. (2020). Debat Moral Sebagai Upaya Meningkatkan Integritas Kepala Sekolah. *JAMP: Jurnal Administrasi dan Manajemen Pendidikan*, 3(3), 272-282.
- Bafadal, I., Nurabadi, A., Gunawan, I., Juharyanto, J., Ariyanti, N. S., Adha, M. A., ... & Burham, A. S. I. (2021, December). Moral-based learning leadership process in excellent school. In *International Conference on Information Technology and Education (ICITE 2021)* (pp. 272-277). Atlantis Press.
- Bafadal, I., Nurabadi, A., Juharyanto, J., & Gunawan, I. (2023). Penguatan Kepemimpinan Kepala Sekolah Menuju Sekolah Unggul. *Abdimas Pedagogi: Jurnal Ilmiah Pengabdian kepada Masyarakat*, 6(2), 115-121.
- Balaka, M. Y. (2022). Metode penelitian Kuantitatif. *Metodologi Penelitian Pendidikan Kualitatif*, 1.
- Barnawi & Arifin, M. (2012). *Manajemen Sarana dan Prasarana*. Jogjakarta: Arruzz Media.
- Darmastuti, H. (2014) *Manajemen Sarana dan Prasana dalam upaya peningakatan kualitas pembelajaran* *Jurnal Inspirasi Manajemen Pendidikan* Volume 3
- Dewi, S. U. (2019). Pengaruh Lingkungan Teman Sebaya Terhadap Motivasi Belajar Santri Mdt At-Taqwa Kp. Ranca Ayu Desa Maroko Kabupaten Garut. *THORIQTUNA: Jurnal Pendidikan Islam*, 2(1), 13-32.
- Efendi, F., Ni'Mah, A. R., Hadisuyatmana, S., Kuswanto, H., Lindayani, L., & Berliana, S. M. (2019). Determinants of facility-based childbirth in Indonesia. *Scientific World Journal*. <https://doi.org/10.1155/2019/9694602>
- Emda, A. (2018). Kedudukan motivasi belajar peserta didik dalam pembelajaran. *Lantanida journal*, 5(2), 172-182.
- Febriyantoro, B., Hasana, H. T. H., & Marwahyudi, M. (2021). *Desain Kursi Gampsek (Gampil Lan Sekeco) Konsep Portable Folding untuk Acara Talk Show (Doctoral dissertation, Universitas Sahid Surakarta)*.
- Hakim, R. Al, Mustika, I., & Yuliani, W. (2021). Validitas dan Reliabilitas Angket Motivasi Berprestasi. *Fokus(Kajian Bimbingan dan Konseling dalam Pendidikan)*, 4(4).
- Hosnan, M. (2014). *Pendekatan Sainifik dan Kontekstual dalam Pembelajaran Abad 21*. Bogor: Ghalia Indonesia.
- Ikawati, A. (2018). Pengelolaan Sarana dan Prasarana Pembelajaran Produktif di SMKN 3 Makassar. In *Eprints Universitas Negeri Makassar* (pp. 1-16). <http://eprints.unm.ac.id/6305/>
- John W Santrock. (2009). *Psikologi Pendidikan*. Jakarta: Salemba Humanika.
- Kompri. (2016). *Motivasi Pembelajaran Perspektif Guru dan Peserta didik*. Bandung: PT Rosda Karya.
- Kukuh, N., Pinton, M., & Mustafa, S. (2021). Belajar Konstruktivisme dan Implikasinya dalam Pendidikan dan Pembelajaran. *GHAITSA : Islamic Education Journal*, 1(2), 49-57. <https://www.siducat.org/index.php/ghaitsa/article/view/188/155>
- Maisaro, A., Wiyono, B. B., & Arifin, I. (2018). Manajemen program penguatan pendidikan karakter di sekolah dasar. *JAMP: Jurnal Administrasi dan Manajemen Pendidikan*, 1(3), 302-312.

- Mushlikh, B., Juharyanto, J., & Nurabadi, A. (2024). Diarsy (Digital Archive System) Pengembangan Microsoft Excel Sebagai Sistem Pengelolaan Arsip Digital Di Sdn Merjosari 4 Malang. *Proceedings Series of Educational Studies*.
- Nahdiyah, U., Arifin, I., & Juharyanto, J. (2022). Pendidikan profil pelajar pancasila ditinjau dari konsep kurikulum merdeka. *Semnas Manajemen Strategik Pengembangan Profil Pelajar Pancasila pada PAUD dan Pendidikan Dasar*, 1(1).
- Nugraha, M. (2018). Manajemen kelas dalam meningkatkan proses pembelajaran. *Tarbawi: Jurnal Keilmuan Manajemen Pendidikan*, 4(01), 27-44.
- Nurrohmah, W. A., & Liskustyawati, H. (2018). Pengaruh Strategi Contextual Teaching And Learning Terhadap Hasil Belajar Lompat Jauh Gaya Melenting. *PHEDHERAL*, 15(2), 56. <https://doi.org/10.20961/phduns.v15i2.50991>
- Peraturan Pemerintah No 19 Tahun 2005 Bab VII Pasal 42
- Permendiknas Nomor 24 Tahun 2007 tentang Standar Sarana dan Prasarana untuk SD/MI, SMP/MTs, SMA/MA. [Versi Elektronik].
- Pratama, F., Firman, F., & Neviyarni, N. (2019). Pengaruh motivasi belajar peserta didik terhadap hasil belajar ipa di sekolah dasar. *Edukatif: jurnal ilmu pendidikan*, 1(3), 280-286.
- Priadana, S. (2021). *Metode Penelitian Kuantitatif*. Pascal Books
- Putra. (2020, February 9). Sarana Dan Prasarana: Pengertian, Perbedaan & Contohnya (Kantor, Sekolah DLL). Salamadian. <https://salamadian.com/pengertian-sarana-dan-prasarana/>
- Rahmawati, R. (2016). Faktor-Faktor Yang Mempengaruhi Motivasi Belajar Peserta didik Kelas X SMA N 1 Piyungan Pada Mata Pelajaran Ekonomi Tahun Ajaran 2015/2016. *Jurnal Pendidikan dan Ekonomi*, 5(4), 326-336.
- Renggo, Y. R. (2022). Populasi Dan Sampel Kuantitatif. *MEDIA SAINS INDONESIA*, 1(4).
- Sabarini, S. S. (2019). Efek Teaching Games For Understanding Model Terhadap Responsibility Anak Sekolah Dasar. *PHEDHERAL*, 16(1), 1. <https://doi.org/10.20961/phduns.v16i1.50993>
- Sahir, S. H. (2021). *Metodologi Penelitian*. Dalam KBM Indonesia (Nomor May 2016).
- Sanjaya, Wina. (2010). *Kurikulum dan pembelajaran, Teori dan praktek Pengembangan Kurikulum KTSP*. Jakarta: Kencana.
- Sari, R. A., & Swara, S. E. (2014). Analisis penggunaan bangku sekolah ukuran fixed dan adjustable untuk anak sekolah dasar. *JEMIS (Journal of Engineering & Management in Industrial System)*, 2(1).
- Slamet Santosa. (2006). *Dinamika Kelompok*. Jakarta: PT. Bumi Aksara
- Slameto. (1991). *Belajar dan Faktor yang Mempengaruhinya*. Jakarta: Bumi Aksara.
- Smadata. (n.d.). Sarana Dan Prasarana. Selamat Datang di SMADATA. <https://smanegeri2tanggul.sch.id/sarana-dan-prasarana/>
- Sugiyono. (2021). Sugiyono, Metode Penelitian Pendidikan; Pendekatan Kuantitatif dan R&D. Dalam *Jurnal Al-Hikmah (Vol. 1, Nomor 1)*.
- Sugiyono. 2010. *Metode Penelitian Bisnis (Pendekatan Kuantitatif, Kualitatif, dan R&D)*. Bandung: Alfabeta.
- Sumarsono, R. B., Imron, A., Wiyono, B. B., & Arifin, I. (2019). Strategi kepala sekolah dalam mengoptimalkan partisipasi orangtua untuk meningkatkan kualitas sekolah. *JMSP (Jurnal Manajemen Dan Supervisi Pendidikan)*, 4(1), 7-13.
- Sunhaji, S. (2014). Konsep manajemen kelas dan implikasinya dalam pembelajaran. *Jurnal Kependidikan*, 2(2), 30-46.
- Supriani, Y., Ulfah, U., & Arifudin, O. (2020). Upaya Meningkatkan Motivasi Peserta Didik Dalam Pembelajaran. *Jurnal Al-Amar: Ekonomi Syariah, Perbankan Syariah, Agama Islam, Manajemen Dan Pendidikan*, 1(1), 1-10.
- Suprihatin, S. (2015). Upaya guru dalam meningkatkan motivasi belajar peserta didik. *Jurnal Pendidikan Ekonomi UM Metro*, 3(1), 73-82.
- Sutisna, N. W., & Effane, A. (2022). Fungsi Manajemen Sarana dan Prasarana. *KARIMAH TAUHID*, 1(2), 226-233.

- Syatriani, D. (2020). Rumus Slovin. *Dwi Syatriani*, 5(3).
- Wayan, 2010. Keterbatasan Penelitian, (Online). (<http://wayanweb.wordpress.com/ptk/pendahuluan/159-20>), diakses
- Winarno, Wing Wahyu. 2011. Analisis Ekonometrika dan Statistika dengan Eviews, Edisi ketiga. Yogyakarta: Unit Penerbit dan Percetakan (UPP STIM YPKN).
- Winarsih, Varia. (2009) Psikologi Pendidikan. Medan: Latansa Pers.
- Wiyani, Novan. 2013. Manajemen Kelas: Teori dan Aplikasi Untuk menciptakan Kelas yang Kondusif. Jogjakarta: Ar-Ruzz Media
- Zakiyawati, S. W., & Trihantoyo, S. (2021). Urgensi Sarana dan Prasarana dalam Meningkatkan Prestasi Belajar Pada Jenjang Sekolah Menengah Kejuruan. *Inspirasi Manajemen Pendidikan*, 9(1), 73. <https://ejournal.unesa.ac.id/index.php/inspirasi-manajemen-pendidikan/article/view/38660>.