

The Effect of Character and Emotional Intelligence on the Mathematics Learning Result of Tenth Grade Senior High School Students in Palopo City

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Abstract

This is a correlational ex-post-facto study which aimed to know the effect of emotional intelligence on the result of mathematic learning of X grade senior high school students in Palopo City. The population of this study was all X grade students in all Senior High Schools in Palopo, the academic year 2018-2019. The sampling was carried out using Cluster Random Sampling technique. Students at 10th grade at Senior High School 6 Palopo, Senior High School 5 Palopo, and Senior High School 4 Palopo with the total number of 164 were selected as samples. Data were collected using three different questionnaires. The first one was to collect data about characters; the second one was to get data about emotional intelligence, while the other was to gather data about learning result. The inferential analysis indicated that character and emotional intelligence positively affected the learning result of mathematic subjects of X Grade Senior High School Students in Palopo City.

Keywords: *Character, Emotional Intelligence, Mathematic Learning Result*

1. Background

Indonesia is a big nation. Therefore, it has very big potency to more development in the future. A big asset owned by this country is in the educational sector. Susanti (2013) mentioned that education is a pillar which sustains the civilization which is referred as nation. The existence of a nation is highly determined by the characters of its citizens. A nation with good character can support it to be dignified and respected by other countries all over the world. According to Ilma (2015), education is the most important component to build a personality. Therefore, a human resource must possess an excellent character which is characterized by strong mentality like trust, sincerity, honesty, bravery, assertiveness, obstinacy, and adamant on their principle. The character building of human resource is very important, and it is the core asset to prepare Indonesia to face the regional and global challenges. It is in line with (Wijaya, Sudjimat, & Nyoto, 2016) stating that education is an effort to improve humans' welfare which also determines the success in building a nation. In other words, education is an aspect which is highly considered in building Indonesia to be a more advanced country.

The improvement of the education quality cannot be separated from the characters of human resources. Ilma (2015) mentioned that the human resource is a very important asset in building a nation to be better and more advanced. However, to achieve that condition, our human resource must have good characters. A strong human resource is indicated by mental

characters they possess which are different from others e.g. trust, sincerity, honesty, bravery, assertiveness, obstinacy, and adamant on their principle, and other positive characteristics.

According to (Setiawan, 2013), character is a way to think and act which becomes the special characteristics of each individual to live and corporate, either in family, in community, or in national scope. (Machin, 2014) mentioned that character is also usually referred to as morality.

In this study, the indicators of character were adopted from character components mentioned by (Setiawan, 2013) namely: Devotion, Honesty, Discipline, Democratic, Fair, Responsible, Love the Motherland, Focusing on Strength, Mutual Cooperation, Respect, and Willing to Sacrifice.

Besides the character building, emotional intelligence also holds an important role. As it was mentioned by Goleman in (Fitriastuti, 2013), the emotional intelligence accounts for 80% of human success. Furthermore, (Fitriastuti, 2013) stated that the term of emotional intelligence first came from social intelligence concept suggested by Thorndike (1920). He divided the intelligence into three categories, including abstract intelligence (the ability to understand and manipulate verbal and mathematics symbols), concrete intelligence (the ability to understand and manipulate the object), and social intelligence (the ability to interact with other people). This is in line with the study conducted by (Mohzan, Hassan, & Halil, 2013) concluding that students with high emotional intelligence will lead them to achieve better academic performance.

2. Methods

Research Design

This study employed ex-post facto design with causalities approach. It is to identify the causal relationship between the variables. In this case, the researchers investigated the causal relationship and test the hypothesis which had been determined before which was: there is a relationship between characters and emotional intelligence and the students' learning result in Mathematics subject.

Research Site and Time

This study was carried out in the 10th-grade classrooms in the State Senior High Schools in Palopo city, the second semester, in the academic year of 2018/2019 from February to June 2019.

Research Variables and Their Operational Definitions

This study involved both dependent and independent variables. The independent variables were students' characters and their emotional intelligence, while the dependent variable was their Mathematics learning result. Based on the literature review, the definitions of each variable are as follows:

a) Character

It is the way to think and the way to act which become the special characteristics of each learner in the school environment and is referred to as moral.

b) Emotional Intelligence

It refers to the ability to understand and manipulate verbal and mathematic symbols, manipulate objects and interact with other people.

c) Result of Mathematics Learning

The learning result investigated in this study was the students' completion or mastery level of mathematics after learning activities which were indicated by scores they obtained in the test. It was measured using an evaluation tool called the learning result test.

Research Population and Samples

Population in this study was all 10th-grade students of Senior High Schools in Palopo city, second semester, the academic year of 2018/2019. The total number was 164.

Regression Model

The regression model in this study used two independent variables (Students' character (X_1) and their Emotional Intelligence (X_2)) and one dependent variable (Students' Mathematics Learning Result (X_3)) with the formula: $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \varepsilon$

3. Results and Discussion

Descriptive statistics

Students' character

Based on the categorization criteria, we found the distribution frequency of 10-grade students' characters at Senior High Schools in Palopo city as presented in 1.1.

Table 1. Score Distribution of 10th-grade students' character

No	Scores	Frequency	Percentage (%)	Categories
1	$78 \leq KS < 156$	20	12.2	Low
2	$156 \leq KS < 195$	34	20.73	Quite low
3	$195 \leq KS < 234$	84	51.22	Quite high
4	$234 \leq KS \leq 312$	26	15.85	High
Total		164	100	
Average		197.62		Quite high

Source: Primary Data of Students' Character

Table 1. shows that the numbers of students with low and high characters were nearly the same (20 students or 12.2% and 26 students or 15.85% respectively). The majority of them which were just above 50% had the quite high character. The rests were in the quite low category (34 students or 20.73 %). Therefore, as it can be seen in the table, in the average, they had a quite high character.

Emotional Intelligence

Based on the categorization criteria, the frequency distribution of students' emotional intelligence score at the 10th-grade classes at Senior High Schools in Palopo City is as presented in Table 2.

Table 2. Score Distribution of 10th Grade Students' Emotional Intelligence

No	Scores	Frequencies	Percentages (%)	Categories
1	$0 \leq KE < 40$	14	8.54	Very low
2	$40 \leq KE < 55$	19	11.58	Low
3	$55 \leq KE < 75$	91	55.49	Medium
4	$75 \leq KE < 90$	34	20.73	High
5	$90 \leq KE \leq 100$	6	3.66	Very High
Total		164	100	
Average		65.21		Medium

Table 1.2 shows that students with very low and low levels of emotional intelligence were only 8.54% (14 students) and 11.58% (19 students) respectively. Two folds of students' number in each of this category were in the high category (20.73 % or 34 students). Most students, which were more than a half (55.49 % or 91 students) had the medium emotional intelligence level.

Students' Mathematics Learning Result

Based on the categorization criteria, we obtained the score frequency distribution of students' mathematics learning result who studied in the tenth-grade class of senior high schools in Palopo City as presented in Table 3.

Table 3. Score Distribution of X Graded Students' Mathematics Learning Results

No	Scores	Frequencies	Percentages (%)	Categories
1	$0 \leq HB < 40$	15	9.15	Very low
2	$40 \leq HB < 55$	12	7.32	Low
3	$55 \leq HB < 75$	37	22.56	Medium
4	$75 \leq HB < 90$	78	47.56	High
5	$90 \leq HB \leq 100$	22	13.41	Very High
Total		164	100	
Average		70.63		Medium

In table 3, it can be seen that students in the very low and low categories were only 15 (9.15%) and 12 (7.32%) respectively. The number of students in the very high category was slightly higher which was 13.41 % or 22 students. There was one fifth (22.56% or 37 students) of total students in the medium category. The highest percentage yet just below half of total students (47.56 or 78 students) was in the high category.

Inferential Statistics

Based on the test carried out using SPSS, we obtained data as presented in table 1.4.

Table 4. Test Result

Coefficients^a						
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	-15.575	1.826		-8.528	.000
	Character	.313	.034	.700	9.235	.000
	Emotional Intelligence	.365	.101	.274	3.608	.000

a. Dependent Variable: HB

Based on table 1.4, the calculation result showed that constant-coefficient result was (-15.575) with sig. score lower than alpha (5% or 0.05). Therefore, it can be concluded that the constant coefficient was statistically significant. Related to the character coefficient, it is indicated that the sig. score is lower than alpha (5% or 0.05). So, the character coefficient was also statistically significant. Lastly, the coefficient of emotional intelligence also had sig. score lower than alpha (5% or 0.05). It means that it was also statistically significant. The regression equation of students learning result prediction is:

$$Y = -15.575 + 0,313X_1 + 0,365X_2$$

Annotation:

Y is the score of Students' Mathematics Learning Result Score.

X₁ is the score of Students' Character

X₂ is the score of Students' Emotional Intelligence

Descriptively, the study shows that in general, students had characters in the quite high category, emotional intelligence in the medium category and mathematics learning result in the medium category. This proves that Senior High School students in Palopo city were not in the low category of those three variables. And inferentially, character and emotional intelligence positively affect the mathematics learning results of students at the 10th grade of Senior High Schools in Palopo city. It means, the higher the character and emotional intelligence students had, the higher the mathematics learning score they got. It is supported by (Ilma, 2015) stating that the character building of human resource is a vital component and it the very important determinant in building the new Indonesia. Also, according to Goleman (Fitriastuti, 2013), emotional intelligence is an important factor determining someone's success.

4. Conclusion

Based on the discussion above, it can be concluded that in average, tenth-grade students at Senior High School in Palopo City had character in the quite high category. In average, tenth-grade students at Senior High School in Palopo City had emotional intelligence in the medium category. In average, tenth-grade students at Senior High School in Palopo City had Mathematics learning result in the medium category.

Character and emotional intelligence had a positive effect on mathematics learning results of tenth-grade students at Senior High School in Palopo. It means, the higher the character and emotional intelligence student had the higher the mathematic learning result they achieved.

5. Citation and References

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