

The Effect of Pancasila Student Profile on the Numerical Literacy Ability of Junior High School Students

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Abstract. This study aims to see how the influence of the profile of Pancasila students in seventh grade junior high school students on numeracy literacy skills related to mathematical literacy. The samples in this study were students from SMP Negeri 2 and SMP Negeri 4 Cirebon City class VII totaling 56 students. The type of research used is a quantitative methodology. Data analysis in this study used descriptive statistics and inferential statistics with Pearson correlation analysis. This study uses the independent variable, namely the ability of numeracy literacy and the dependent variable, namely the character profile of Pancasila students. For data collection using questionnaires and test questions. The questionnaire contains 18 statements with 6 indicators of the Pancasila student profile and 6 test questions with 3 indicators of numeracy literacy. The results of this study indicate that the ability of numeracy literacy has a positive effect on the character profile of Pancasila students

Key words: character profile of Pancasila students; correlation; numeracy

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INTRODUCTION

Literacy is an individual's ability to utilize all the potential and abilities possessed by the individual. Literacy aims to create individuals who can use the skills they already have in their lives (Napoli and Purpura, 2018). There are six classifications of literacy obtained, namely: 1) language literacy; 2) numeracy literacy; 3) scientific literacy; 4) financial literacy; and 6) cultural literacy and citizenship (Ekowati *et al.*, 2019; Anderha and Maskar, 2021). In this study, researchers will focus on numeracy literacy. Numerical literacy is the ability to solve problems, explain processes and analyze information related to numeracy (Anderha and Maskar, 2021; Fauzi *et al.*, 2021). Numeration can be defined as the ability to apply a number concept and numeracy skills in everyday life and interpret quantitative information that surrounds the individual. An individual is said to have numeracy literacy skills if and only if: 1) knows the concepts in basic arithmetic operations (addition, subtraction, multiplication, and division); 2) can apply the concept of numeracy confidently and effectively; 3) can know correctly how to share the skills possessed to solve problems (Mahmud and Pratiwi, 2019).

Numerical literacy skills are needed in all aspects of life, both in the school, family, and community environment. The indicators of numeracy literacy in schools consist of the PISA

score of mathematical literacy, the TIMSS score of mathematical literacy, the average UKG score for Mathematics Teachers, and the average Mathematics National Examination score. (Anderha and Maskar, 2021). Then, there is also an indicator of numeracy literacy in the family environment, namely the number of numeracy literacy reading materials owned by each family (Fauzi *et al.*, 2021; Rusnaini *et al.*, 2021; Faiz and Kurniawaty, 2022). In social life, numeracy skills are needed. The information obtained from social life is displayed in many numerical and graphic forms (Mahmud and Pratiwi, 2019). In interpreting the information obtained, people must understand the basic concepts in numeracy in order to make the right decision. Information in numerical and graphic forms is an application of mathematics in everyday life that is expected to be mastered in society (Mahmud and Pratiwi, 2019; Fauzi *et al.*, 2021). In this case, numeracy literacy skills require students to recognize and understand the role of mathematics in the world, have the placement and capacity to use mathematical knowledge and skills in solving real-life problems.

Law Number 20 of 2003 concerning the National Education System states that every Indonesian citizen has the same rights in obtaining quality education (Puspindik, 2013). In

improving the quality of national education, the Central Government stipulates national policies and national education standards, namely the minimum provisions related to the Education System throughout the territory of the Unitary State of the Republic of Indonesia. To optimize the quality of education and promote culture, the Ministry of Education and Culture supports the President's vision and mission in creating an Advanced Indonesia that is sovereign, independent, and has personality through the birth of Pancasila Students who think critically, creatively, independently, fearing God Almighty, have noble character, working together, and global diversity (Kemendikbudristek, 2020). Pancasila Student Profile is one of the efforts in growing the quality of education in Indonesia which prioritizes character building (Rusnaini et al., 2021; Irawati et al., 2022; Rachmawati et al., 2022). Strengthening the Pancasila Student Profile focuses on inculcating character as well as skills in everyday life in developing individual students through school culture, intracurricular and extracurricular learning. School culture is the school climate, policies in schools, patterns of interaction, and communication as well as norms applied in schools (Ekowati et al., 2019). Intracurricular includes lesson content, activities or experiences of students in learning (Rachmawati et al., 2022). Extracurricular activities are activities to increase the interests and talents of students (Rachmawati et al., 2022).

For students at the basic education level, it is focused on improving the literacy and numeracy competencies of students to go to further education levels (Kemendikbudristek, 2022). One of the literacy referred to in this Permendikbudristek is numeracy literacy where the intended numeracy literacy is mathematical literacy. The numeracy literacy of students is not only the task of Language Teachers and Mathematics Teachers (Sujadi, 2022). All teachers have a responsibility to provide literacy and numeracy reinforcement in the learning process carried out. Through a learning system that provides literacy and numeracy strengthening, it will support the birth of students who think critically, creatively, independently, have faith, fear God Almighty, have noble character, work together, and have global diversity which are strong competencies possessed for the profile of Pancasila students (Irawati et al., 2022; Rachmawati et al., 2022). This study aims to see how the influence

of the profile of Pancasila students in seventh grade junior high school students on numeracy literacy skills related to mathematical literacy

METHODS

The research method used in this research is quantitative research. The samples in this study were seventh grade junior high school students from SMP Negeri 2 and SMP Negeri 4 in the city of Cirebon. The sample taken is 56 respondents. Data collection techniques were carried out using a Pancasila student profile questionnaire and a numeracy literacy test. This data collection was carried out in stages, namely the provision of a Pancasila student profile questionnaire with a total of 18 statements given, followed by a numeracy literacy test with 6 questions. For the questionnaire and test, there are indicators that will be tested in this study. For the Pancasila student profile questionnaire, the indicators used are: 1) Faith and piety to God Almighty; 2) Global diversity; 3) work together; 4) Independent; 5) Critical reasoning; and 6) Creative. The first indicator focuses on religious morals, personal morals, morals to humans, morals to nature, and state morals. The second indicator focuses on recognizing and appreciating culture, intercultural communication skills in interacting with others, as well as reflection and responsibility for the experience of diversity. The third indicator focuses on collaboration, caring, and sharing. The fourth indicator focuses on self-awareness and the situation at hand and self-regulation. The fifth indicator focuses on obtaining and processing information and ideas, analyzing and evaluating reasoning, reflecting on thoughts and thought processes, and making decisions. This last indicator focuses on generating original ideas. Furthermore, the indicators used in the test are: 1) Using a variety of numbers and symbols related to basic mathematics to solve problems in various contexts of everyday life; 2) Analyze the information displayed in various forms (graphs, tables, charts, etc.); and 3) Using the interpretation of the analysis results in tabular form to predict and make decisions.

Furthermore, the data that the researcher has taken is processed according to the data collection that has been taken. This questionnaire data is processed and inputted manually into excel with two types of questionnaire statements, namely positive statements and negative statements. For test data, it is processed and inputted manually into excel with weighting questions

based on the completion steps taken by students starting from the problem analysis stage to the final conclusion for the answer.

Data analysis technique

The data analysis carried out in this study was related to the results of filling out the Pancasila student profile questionnaire and the numeracy literacy test. The data analysis technique in this study is descriptive statistical analysis and inferential statistical analysis

1. Descriptive statistical analysis techniques

This analysis technique aims to provide an overview of the data that has been obtained from the average value, standard deviation, variance, maximum value, minimum value, etc. descriptively. This analytical technique serves as a tester of a hypothesis (Ghozali, 2018). Next, make a bar table of each indicator of the Pancasila

student profile and numeracy literacy ability.

2. Inferential statistical analysis techniques

This analysis is used to test a hypothesis in the study. The hypothesis that the researchers made are:

H_0 : There is an influence between numeracy literacy skills on the character profile of Pancasila students.

H_1 : There is no influence between numeracy literacy skills on the character profile of Pancasila students.

To perform the analysis of correlation coefficients using the help of SPSS 26.0 data processing applications using the Pearson correlation test. The indicators used for the Pearson correlation coefficient (Sawarno, 2010) are as follows:

Table1.Correlation Coefficient Indicator

Coefficient	Relationship Strength
0.00	No connection
0.01-0.09	Relationships are meaningless
0.10-0.29	Weak relationship
0.30-0.49	Medium relationship
0.50-0.69	Strong relationship
0.70-0.89	Very strong relationship
>0.90	Close to perfect relationship

RESULTS AND DISCUSSION

Descriptive Statistical Analysis

Pancasila Student Profile Questionnaire

Results

Based on the results of this questionnaire data obtained the following data:

Table2.Results of Descriptive Analysis of Pancasila Student Profile Characters

Descriptive Statistics						
	N Statistics	Minimum Statistics	Maximum Statistics	mean Statistics	Std. Error	Std. Deviation Statistics
P2P Characters	56	71	92	84.75	,497	3,719
Valid N (listwise)	56					

Of the 56 students who filled out the Pancasila student profile questionnaire, the minimum score obtained consisted of 1 student and the maximum score consisted of 1 student. The average of this questionnaire is 84.75. So that students who have the character profile of Pancasila students above

the average number of 30 students.

Numerical Literacy Ability Test Results

Based on the results of this ability test, the following data were obtained:

Table 3. Results of Descriptive Analysis of Numerical Literacy Ability

	Descriptive Statistics				
	N	Minimum	Maximum	mean	Std. Deviation
Numerical Literacy Results	56	12.50	87.50	56.5848	22.31043
Valid N (listwise)	56				

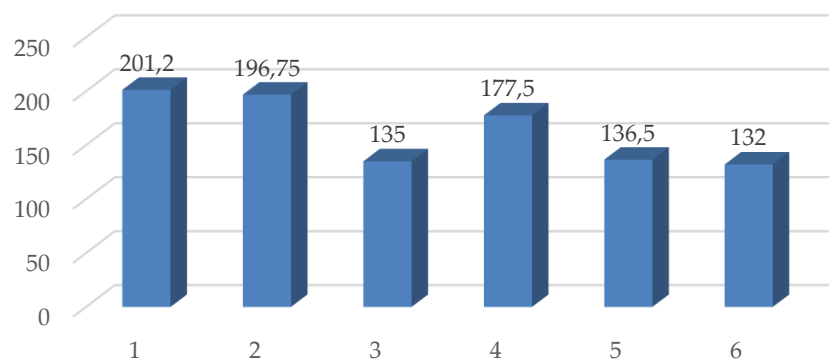
Of the 56 students who filled out the literacy and numeracy test, the minimum score obtained consisted of 4 students and the maximum score consisted of 4 students. The average of this questionnaire is 56.5848. So that students who have numeric literacy characters above the average number of 32 students.

Comparison of Questionnaire Results and Ability Tests

The results obtained from the descriptive test

showed that the results of the questionnaire stated that grade VII students who had the character profile of Pancasila students above the average were worth 84.75 from the maximum score of the questionnaire, which was 100. So it can be stated as a percentage of 54% of these seventh grade junior high school students who scored. on the character profile of Pancasila students 84.75.

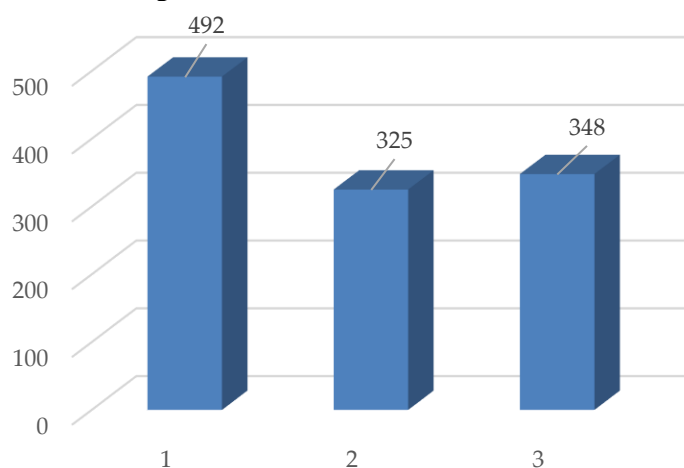
The following is an indicator level of the character profile of Pancasila students in grade VII SMP students.

**Figure 1.** Character Indicators of Pancasila Student Profile

Based on Figure 1, the highest indicator is indicator 1 which is faith and piety to God Almighty. Furthermore, the lowest indicator is indicator 6 which is creative which focuses on producing original works.

Based on the descriptive test, it shows that the test results for class VII who have numeracy literacy skills above the average value are

56.5848 from the maximum test score of 100. So it can be stated in percentage terms that 57% of junior high school students in class VII have a score on numeracy literacy ability of 56.5848. The following is the level of indicators of numeracy literacy skills in grade VII SMP students.

**Figure 2.** Numerical Literacy Ability Indicator

Based on Figure 2, the highest indicator is indicator 1 which is the use of various numbers and symbols related to basic mathematics to solve problems in various contexts of everyday life. Furthermore, the lowest indicator is indicator 2

which analyzes the information displayed in various forms (graphs, tables, charts, etc.).

The following are the results of numeracy literacy skills and character profiles of Pancasila students from 56 students of class VII SMP.

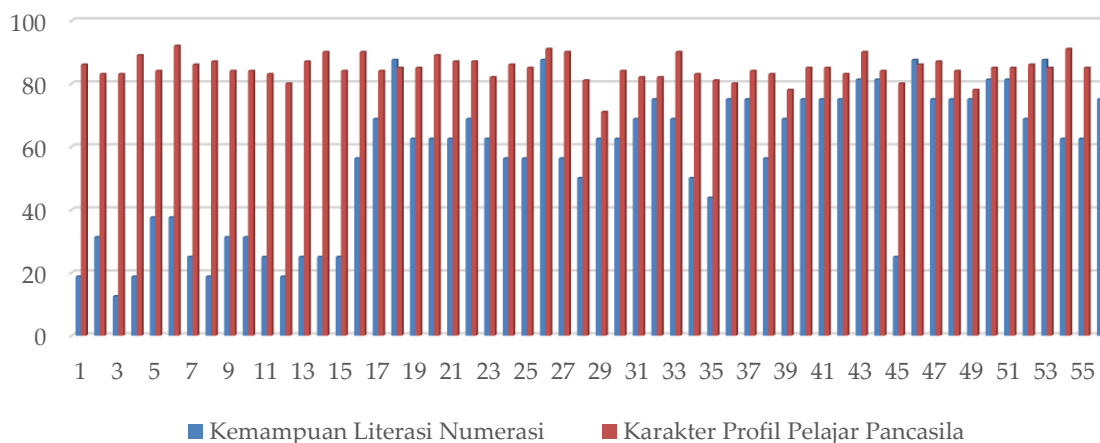


Figure 2. Results of Numerical Literacy Ability and Character Profile of Pancasila Students for Grade VII students

Based on Figure 3, it is found that the hypothesis is that if the results of numeracy literacy abilities and character profiles of Pancasila students. The relationship of these hypotheses has a direct relationship between numeracy literacy skills and the character profile of Pancasila students for seventh grade junior high school students. So based on the diagram, the relationship between the two is a positive correlation between numeracy literacy skills and the character profile of Pancasila students.

Inferential Statistical Analysis

Correlation Analysis

Before processing the data for correlation

analysis to obtain results for the purposes of this study, the researchers made an alternative hypothesis (H_a) and the null hypothesis as follows: (H_0)

H_0 : There is no correlation between numeracy literacy ability and the character profile of Pancasila students.

H_1 : There is a correlation between numeracy literacy skills and the character profile of Pancasila students.

The following are the results of data processing for the correlation test of numeracy literacy abilities and character profiles of Pancasila students for grade VII SMP students.

Table 4. Correlation of Numerical Literacy Ability and Character Profile of Pancasila Students

Correlations		Numerical Results	Literacy P2P Characters
Numerical Literacy Results	Pearson Correlation	1	.47
	Sig. (2-tailed)		.04
P2P Characters	N	56	56
	Pearson Correlation	.47	1
	Sig. (2-tailed)	.04	
	N	56	56

Based on table 4, the Pearson coefficient value is 0.47 with a significance value of 0.04, because the value of sig. 0.05 then rejected, meaning that there is a relationship with a moderate level of correlation. The sign of the correlation coefficient produced is positive, the positive result of the

correlation analysis shows a unidirectional relationship between numeracy literacy abilities and the character profile of Pancasila students. This means that the higher the numeracy literacy ability, the higher the character profile of Pancasila students, and vice versa.

CONCLUSION

Numerical literacy ability is the ability to develop skills in using mathematics in aspects of life, where aspects of life that surround students are school, home, and social life. This numeracy literacy contains knowledge, skills, and attitudes. At every level of education, the government has determined the competency standards for graduates. This numeracy literacy is a learning outcome that prioritizes knowledge which is reviewed annually and used as a data source for the annual evaluation. The ability of students to understand, apply, and evaluate various types of text contexts in solving problems, and the ability of students to develop skills in thinking using concepts, stages, and facts to solve problems in everyday life. To think critically and creatively in solving problems in making decisions. For this reason, the importance of the role of teachers who must make innovations in creative learning and build learning motivation for students to: 1) have faith and fear God Almighty; 2) Global diversity; 3) work together; 4) Independent; 5) Critical reasoning; and 6) Creative. If the teacher is able to provide a learning innovation, the numeracy literacy ability of the students will increase and students will be formed who have the character of the Pancasila student profile.

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REFERENCES

- Anderha, R. R. and Maskar, S. (2021) 'Pengaruh Kemampuan Numerasi Dalam Menyelesaikan Masalah Matematika Terhadap Prestasi Belajar Mahasiswa Pendidikan Matematika', *Jurnal Ilmiah Matematika Realistik*, 2(1), pp. 1–10.
- Ekowati, D. W. et al. (2019) 'Literasi Numerasi di SD Muhammadiyah', *ELSE (Elementary School Education Journal): Jurnal Pendidikan dan Pembelajaran Sekolah Dasar*, 3(1), p. 93. doi: 10.30651/else.v3i1.2541.
- Fauzi, A. and Kurniawaty, I. (2022) 'Urgensi Pendidikan Nilai di Era Globalisasi', *Jurnal Basicedu*, 6(3), pp. 3222–3229. doi: 10.31004/basicedu.v6i3.2581.
- Fauzi, F. G. et al. (2021) 'Analisis literasi numerasi siswa kelas VIII di SMP Petri Jaya Jakarta Timur pada konten aljabar', *Himpunan: Jurnal Ilmiah Mahasiswa Pendidikan Matematika*, 1(2), pp. 83–91.
- Irawati, D. et al. (2022) 'Profil Pelajar Pancasila Sebagai Upaya Mewujudkan Karakter Bangsa', *EDUMASPUL: Jurnal Pendidikan*, 6(1), pp. 1224–1238. doi: <https://doi.org/10.33487/edumaspul.v6i1.3622>.
- Kemendikbudristek (2020) 'Peraturan Menteri Pendidikan Dan Kebudayaan Republik Indonesia Nomor 22 Tahun 2020 Tentang Rencana Strategis Kementerian Pendidikan Dan Kebudayaan Tahun 2015-2019', in *Kementerian Pendidikan dan Kebudayaan*, p. 174.
- Kemendikbudristek (2022) 'Peraturan Menteri Pendidikan Dan Kebudayaan Riset dan Teknologi Republik Indonesia Nomor 5 Tahun 2022 Tentang Standar Kompetensi Lulusan pada Pendidikan Anak Usia Dini, Jenjang Pendidikan Dasar, dan Jenjang Pendidikan Menengah', in *Kementerian Pendidikan dan Kebudayaan*.
- Mahmud, M. R. and Pratiwi, I. M. (2019) 'Literasi Numerasi Siswa Dalam Pemecahan Masalah Tidak Terstruktur', *KALAMATIKA Jurnal Pendidikan Matematika*, 4(1), pp. 69–88. doi: 10.22236/KALAMATIKA.vol4no1.2019pp69-88.
- Napoli, A. R. and Purpura, D. J. (2018) 'The Home Literacy and Numeracy Environment in Preschool: Cross-Domain Relations of Parent–Child Practices and Child Outcomes', *Journal of Experimental Child Psychology*, 166, pp. 581–603. doi: 10.1016/j.jecp.2017.10.002.
- Puspendik, P. (2013) 'Peraturan Menteri Pendidikan Dan Kebudayaan Republik Indonesia Undang-Undang Republik Indonesia Nomor 20 Tahun 2003', in *Kementerian Pendidikan dan Kebudayaan*. Bandung, p. 280.
- Rachmawati, N. et al. (2022) 'Projek Penguatan Profil Pelajar Pancasila dalam Impelementasi Kurikulum Prototipe di Sekolah Penggerak Jenjang Sekolah Dasar', *Jurnal Basicedu*, 6(3), pp. 3613–3625. doi:

- 10.31004/basicedu.v6i3.2714.
- Rusnaini, R. *et al.* (2021) 'Intensifikasi Profil Pelajar Pancasila dan Implikasinya Terhadap Ketahanan Pribadi Siswa', *Jurnal Ketahanan Nasional*, 27(2), p. 230. doi: 10.22146/jkn.67613.
- Sujadi, I. (2022) 'Inovasi Pembelajaran Matematika yang Memperkuat Literasi dan Numerasi untuk Mendukung Profil Pelajar Pancasila', *Prosiding Mahasaraswati Seminar Nasional Pendidikan Matematika*, 22(22), pp. 1–13.