RESEARCH ARTICLE

Description Ability Literacy Science Numeracy in Class VIII Students at SMP IT Wahdah Islamiyah Makassar

Rifda Nur Hikmahwati Arif[1,] Rifda Mardian Arif[2,] & Salma Samputri[1]

[1]Science Education Study Program, Faculty Mathematics and Science Knowledge Alam, Makassar State University, Indonesia

[2]Primary School Teacher Education Study Program, Faculty Education Sciences, Gorontalo State University, Indonesia

Abstract: This research is a descriptive research with survey method. The purpose of this study was to determine the level of Numeration Literacy Ability of grade VIII students at SMP IT Wahdah Islamiyah Makassar. The population of this study was all grade VIII students at SMP IT Wahdah Islamiyah Makassar consisting of 3 classes with a total of 89 students. The sample was selected by saturated sampling technique so that the determination of the sample when all members of the population were used as samples and the number of research samples was 89 students. The research instruments are in the form of numeracy literacy ability test question instruments totaling 15 questions and critical thinking skills test questions totaling 15 questions. The data collection technique is by giving tests directly. The data were analyzed by descriptive statistical analysis techniques. Based on the results of the analysis, it can be concluded that 1) The level of numeracy literacy ability of students has an average value of 30.34 fsn is in the low category. 2) The level of critical thinking ability of students has an average score of 39.78 and is in the low category.

Keywords: numeracy literacy skills, critical thinking skills

*Corresponding author: Rifda Nur Hikmahwati Arif, Makassar State University, Makassar, Indonesia

Email: rifdanha@um.ac.id

1. Introduction

Education is something very thing needed by everyone individual. There is education will help every individual in develop potency in self they For increase quality their life have. One of policy helpful government in effort increase quality education in Indonesia is with carry out evaluation learning for participant educate. Form evaluation given is apply Assessment Minimum Competency (AKM) which measures ability literacy considered numeration as ability fundamentals needed by all participant educate. Literacy numeracy is understanding and skills For apply related numbers and symbols with mathematics basis to get it solve problem from diverse context life daily and reviewing internal data diverse form for example graphs, tables, charts, etc., next implement results study the For suspect and interesting conclusion (Ministry of Education and Culture, 2023).
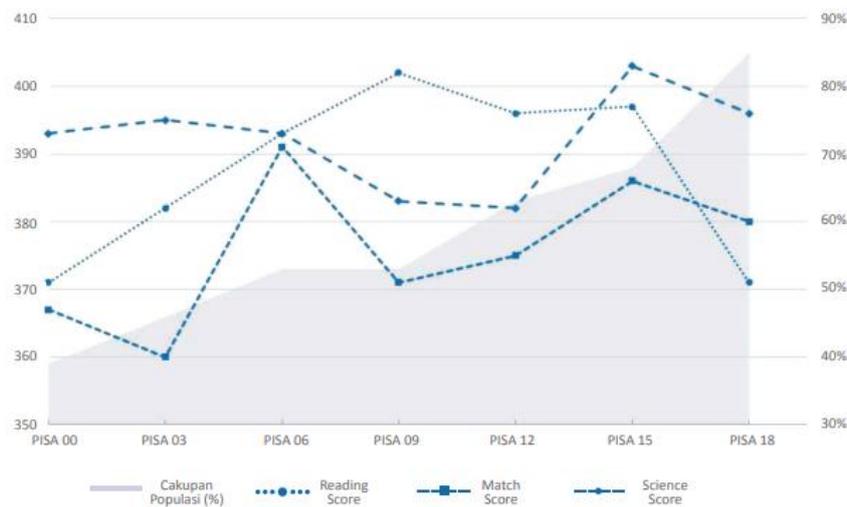
Figure 1. PISA graph

Ability literacy numeracy can give independence in solution problem so that ability This considered as ability basic must owned by participants educate. However, based on chart on This is known that ability literacy numeracy participant educate tend Still classified low. Based on the 2018 PISA results released by the OECD show that the average score ability literacy numeracy participant students in Indonesia reached 379 with the average score is 487 and Indonesia is in in ranked 74th out of 79 participating countries test.

2. Literature review

Literacy numeracy is knowledge and skills For capable acquire, interpret, use and communicate various numbers and symbols mathematics For solve problem practical in various context life daily ; can analyze information presented in various formats (diagrams, tables, charts, etc.) for take decision (Zulkarnain, et al. 2023: 17).

Literacy more appropriate interpreted as understand textand respond to it in a way right, whereas numeracy is interpreted as ability apply concepts numeric in life daily. Literacy and numeracy is safety best to backwardness for development a country, because almost all layer public need literacy and numeracy. In life everyday, to be entrepreneur, start-up effort, problem health, even life nationality, everyone that need calculations and reading. For example for understand information about economics and politics. Therefore that's reinforcement Skills reading and arithmetic very important in field this (Darwanto, 2021).

According to Sani (2021) that ability literacy numeracy participant educate can be measured with use AKM test. As for the AKM indicator in determine ability literacy numeracy participant educate as shown on Table 1.

Measurement literacy numeracy can give valuable information for identify level understanding participant educate who will influence results Study participant educate. Literacy numeracy is ability somebody understand count and use numbers, for get information and complete problem in life daily. Usually literacy numeracy This often We see you at the market, where trader will count amount price goods purchased by buyers for get results end (Yudiana, et al. 2024: 12).

Ability literacy numeracy is something very thing need owned by participants educate. However based on results observations made obtained information that on the participants educate class VIII at SMP IT Wahdah Islamiyah Makassar no Once done measurement ability literacy numeracy.

Table 1. AKM Literacy Indicators Numeracy

No	Component	Indicator
1	Content	Number
		Measurement and geometry
		Data and uncertainty
		algebra
2	Cognitive Level	Understanding
		Application
		reasoning
3	Context	Personal
		Social culture
		scientific

Based on description above so will done study with title " Description Ability Literacy Science Numeracy for Class VIII Students at SMP IT Wahdah Islamiyah Makassar ". Study this aim for know level ability literacy numeracy participant educate class VIII at SMP IT Wahdah Islamiyah Makassar.

3. Research Methods and Materials

Study this use study descriptive that is research that describes ability literacy numeracy participant educate class VIII at SMP IT Wahdah Islamiyah Makassar each indicator. Population in study this is all over participant educate class VIII at SMP IT Wahdah Islamiyah Makassar The 2023/2024 class numbered 89 participants educate. Retrieval technique sample chosen use technique sample fed up that is when all over member population made as sample (Tarjo, 2019:57)

Measurement ability literacy numeracy that is with use Instrument form test literacy numeracy with total 15 questions choice double which one includes 3 indicators literacy numeracy aspect content (social cultural, personal and scientific), level cognitive (knowledge, application and reasoning), and context (numbers, algebra, data and uncertainty, geometry and measurement).

Ability value literacy numeracy is results achieved by participants educate form later score changed become mark. Determination score in general based on the weight given For every item question. Test ability literacy numeracy shaped choice doubles, totaling 15 each question. Every item question has 4 options answer. As for the answer Correct score 1, wrong answer or No filled / emptied value 0. As for the formula change score become mark as following :

$$N = \frac{R}{SM} \times 100$$

(Riduwan, 2015)

Information:

N = Value
R = Raw Score
SM = Ideal Maximum Score
100 = Number still

As for categorization mark ability literacy numeration and categorization each indicator can seen in the table 2.

Table 2. Value Categories Literacy Numeracy

Mark	Criteria
80 < x ≤ 100	Very high
60 < x ≤ 80	Tall
40 < x ≤ 60	Currently
20 < x ≤ 40	Low
0 < x ≤ 20	Very low

(Source : Khoirunnisa & Adirakasiwi, 2023)

4. Results and Discussion

Analysis ability literacy numeracy participant educate class VIII at SMP IT Wahdah Islamiyah has done with amount participant educate as many as 89. Capability Data literacy numeracy participant educate obtained from results test choice double, totaling 15 questions covering 3 aspects that is context, cognitive level and context.

Table 3. Analysis Results Descriptive Ability Literacy Numeracy

No	Statistics	Literacy Numeracy	Think Critical
1.	Amount Respondent	89	89
3.	Minimum Value	7	7
4.	Maximum Value	80	67
5.	Average Value	30.34	39.78
6.	Standard Deviation	16.48	16.28
7.	Variance	271.72	265.11

Based on Table 5 then can is known that ability literacy numeracy participant educate class VIII SMP IT Wahdah Islamiyah Makasaar, totaling 89 participants educate own average value of 30.34, the minimum value is 7, value maximum is 80. Standard deviation is 16.48 with variance is 271.71. As for standards deviation is 16.28 with variance is 265.11.

Table 4. Ability Level Literacy Numeracy Learners

No	Variable	Average Value	Category
1.	Ability Literacy Numeracy	30.34	Low

Based on Table 6 then is known that the average value ability literacy numeracy participant educate which is 30.34 so are in the category low. Test results literacy numeracy participant educate Class VIII at SMP IT Wahdah Islamiyah Makassar was also obtained information related achievement value for each indicators and can seen in table 5.

Based on Table 5 show that of 89 participants ability literacy numeracy still is at in category low. In aspect context consists of 3 indicators namely personal, social cultural and scientific. On indicators social culture consists of 4 questions with highest average value namely 33.71. Next, indicators scientific consists of 4 questions with average value amounting to 30.62. Personal indicators consist of: 7 questions with lowest average value namely 28.41. Third indicators on aspects context still are in the category low.

At the cognitive level aspect consists of 3 indicators that is knowledge, application and reasoning. On indicators reasoning consists of 3 questions and has mark highest namely 35.58. Next, indicators knowledge consists of 3 questions own the average value is 33.71. Meanwhile, indicators application consists of 9 questions and has lowest average value namely 27.5. In aspect cognitive third indicator still are in the category low.

Table 5. Ability Values Literacy Numeracy Students in Each Indicator

No	Aspect	Indicator	Number of Questions	Average Value	Category
1	Context	Personal	7	28.41	Low
		Socio -cultural	4	33.71	Low
		Scientific	4	30.62	Low
2	Cognitive Level	Knowledge	3	33.71	Low
		Application	9	27.59	Low
		Application	3	35.58	Low
3	Content	Number	5	33.26	Low
		Algebra	2	20.8	Low
		Geometry and measurement	4	26.12	Low
		Data and Uncertainty	4	35.96	Low

Aspect content has 4 indicators that is numbers, algebra, geometry and measurement, and data and uncertainty. Data and uncertainty indicators consists of 4 questions with highest average value namely 35.96. Indicator number consists of 5 questions with the average value is 33.26. Indicator geometry and measurement consists of 4 questions with the average value is 26.12. As for indicators algebra consists of 2 questions with lowest average value namely 20.79. In aspect content in fourth indicator this participant educate Still are in the category low. Description achievement in each aspect ability literacy numeracy participant educate class VIII at Wahdah Islamiyah IT Middle School in Makassar histogram shape can be seen in Figure 2.
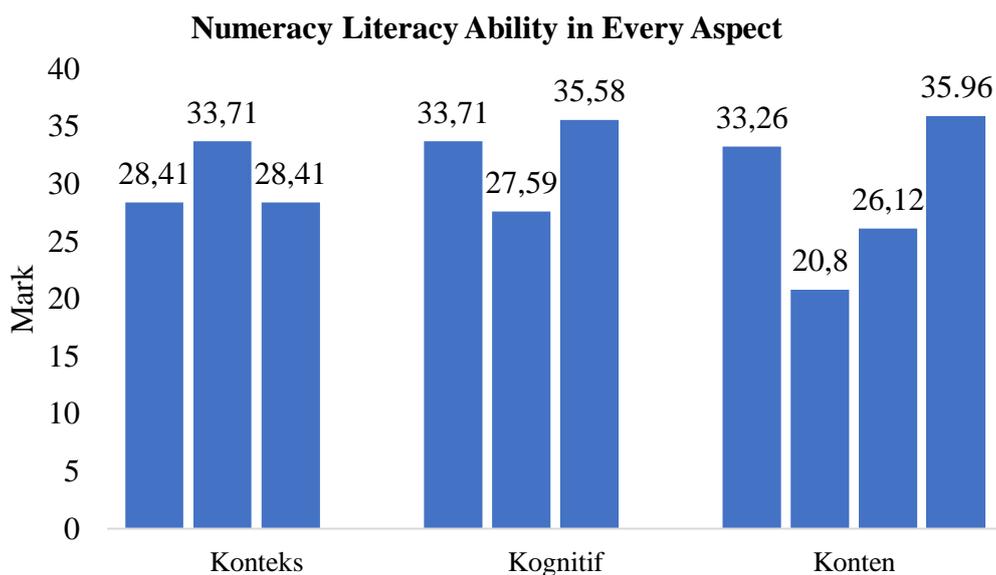

Numeracy Literacy Ability in Every Aspect

Figure 2. Capability Histogram Literacy Numeration in Each Aspect

Based on Figure 2. and the histogram above show that of 3 indicators Ability Literacy and Numeracy participant educate Still is at in category low. The highest score is in aspect content. Description ability literacy and numeracy participant educate in think critical class VIII at SMP IT Wahdah Islamiyah Makassar still are in the category low with average value of 30.34.

5. Conclusion

Based on results analysis and discussion then you know that ability participant educate class VIII at Wahdah Islamiyah IT Middle School in Makassar finish question literacy numeracy Still are in the category low with average value of 30.34. So it's needed evaluation learning that can be done increase ability literacy numeracy participant educate.

References

Aiyub., Suryadi, D., Fatimah., dkk. 2021. Investigation of Watson-Glaser critical thinking skills of junior high school students in solving mathematical problems. *Journal of Physics*. Vol 1(I) : 112-129.

Ate, D., & Lede, Y, K. 2022. Analisis Kemampuan Siswa Kelas VIII dalam Menyelesaikan Soal Literasi Numerasi. *Jurnal Pendidikan Matematika*. Vol 6 (II) : 472-483.

Danaryanti, A., & Lestari, T, A. 2017. Analisis Kemampuan Berpikir Kritis Dalam Matematika Mengacu Pada Watson-Glaser Critical Thinking Appraisal Pada Siswa Kelas VIII Smp Negeri Di Banjarmasin Tengah Tahun Pelajaran 2016/2017. *Jurnal Pendidikan Matematika*. Vol 5 (II) : 116-126

Darwanto, D., & Putri, A. M. (2021). Penguatan literasi, numerasi, dan adaptasi teknologi pada pembelajaran di sekolah:(sebuah Upaya Menghadapi Era Digital dan Disrupsi). *Eksponen*, 11(2), 25-35.

Indah, D, A., & Fauzan, A. 2019. Analisis Kemampuan Berpikir Kritis Matematis Peserta Didik Kelas VIII SMP Negeri 3 Payakumbuh Menggunakan Watson-Glaser Critical Thinking Appraisal. *Jurnal Edukasi dan Penelitian Matematika*. Vol 8 (3) :124-129.

Kemendikbud.go.id. (2023, 20 Maret). Apa itu Literasi dan Numerasi?. https://ditpsd.kemdikbud.go.id/artikel/detail/apa-itu-literasi-dan-numerasi

Khoirunnisa, S., & Adirakasiwi. 2023. Kemampuan Literasi Numerasi Pada Era Merderka Belajar. *Jurnal Pembelajaran Matematika Inovatif*. Vol. 6 (III) : 925-936.

Sani, A, R. (2021). Pembelajaran Berorientasi AKM. Jakarta : Bumi Aksara.

Rosmalinda, N., Syahbana, A., & Nopriyanti, D, T. 2O21. ANALISIS KEMAMPUAN BERPIKIR KRITIS SISWA SMP DALAM MENYELESAIKAN SOAL-SOAL TIPE PISA. Jurnal Pendidikan Matematika dan Matematika. Vol 5 (I) : 483-496.

Riduwan. (2015). Dasar-Dasar Statistika. Bandung: Alfabeta.

Tarjo. 2019. M*etode Penelitian Sistem 3x Baca*. Sleman: penerbit deepublish.

Zulkarnain., Yennizar, N., Librianty, H. D., Dkk. 2023. Gerak Literasi Sekolah. Yogyakarta : Deepublish

Yudiana, K., Pebriani, P. W., Riani, P. E. V., dkk. (2024). Gemar Membaca dengan E-Book dan Quizizz untuk meningkatkan Literasi. Bandung : Nilacarka