

Errors Analysis Resolving Problems Story Based on Watson's Error Category a Student in the 4th Class of Elementary School

Irma Evriyanti¹ Yuniawatika^{1,*} Suhel Madyono¹

¹*Elementary School Teacher Education, Faculty of Education, Universitas Negeri Malang*

**Corresponding author. E-mail: yuniawatika.fip@um.ac.id*

ABSTRACT

The research objective was to analyze the errors of the fourth grade students of Kepanjenkidul Blitar Subdistrict in solving the number material story problems using the Watson error category. The research design used a descriptive qualitative research method. Types of data are written test results and interviews. Watson's error categories include, incorrect data, incorrect procedures, missing data, missing conclusions, response level conflicts, indirect manipulation, skill hierarchy problems, and the other seven categories. The results showed that the errors of grade 4th students in Kepanjenkidul District Blitar mostly occurred in the indirect manipulation category.

Keywords: *Analysis, Story Problems, Numbers, Errors, Watson Category*

1. INTRODUCTION

Many students think that mathematics is a difficult subject to learn. This statement is supported by Farida [1] who stated that mathematics is a very scary subject until now it has not changed. Even though mathematics is one of the subjects that can be used to solve problems in everyday life. This statement is in accordance with Laily [2] which states that mathematics is one of the subjects that can be used to develop communication skills using symbols, numbers, and reasoning to solve problems.

Mathematics is important to be taught starting from elementary level to collage (PT) because it has a close relationship with life both now and in the future [3]. This is also supported by Kemendiknas [4] who stated that "Mathematics subjects need to be given to all students starting from Elementary School (SD) to equip students with the ability to think logically, analytically, systematically, critically, and creatively, as well as the ability to work together ". Thus, mathematics is very important for students to learn which will help it in the present and the future.

There are three aspects of mathematics studied at the elementary level, namely numbers, geometry and measurement, and statistics [5]. Among the three, the scope of the aspect of numbers is the material with the broadest coverage. Number material studied at the SD level includes natural numbers, integers, fractions,

exponents, and roots. This statement is in line with Kemendikbud [6] mathematics material, especially numbers that have been studied from grade 1st to grade 4th, including whole numbers, the nature of whole number operations, addition, subtraction, multiplication, division, fraction, equivalent fraction, mixed fraction, decimal, percent, valuation, and rounding.

Numbers are a very important and inseparable part of mathematics. Numbers are also a foundation for studying further mathematical materials. This statement is strengthened by Nursalam and friends [7] number is the spirit of mathematics, each number has a value in the form of a number which is always inherent in every mathematical material.

Based on the results of interviews conducted with 4th grade teachers, it was found that there were still many 4th grade students who had difficulties in mathematics, especially in the form of story questions. This is known to the teacher from the test results or when students work on questions in the form of story questions. This is in line with Wahyuni's opinion in Marlina [8] who stated that one of the difficulties that many students experience in learning mathematics is solving story problems. The difficulty is not only in the interpretation of sentences, but also in the mathematical model. According to Umam opinion [9], the location of the students' errors lies in the steps to solve them, while the types of errors are related to errors in calculating and solving problems. This

statement was supported by Prastiti [10] which suggested that some students still had difficulty solving story problems. according to the opinion of Cahyowati [11] in general, students prefer to work on math problems that have known how to solve them through the examples given, so that if they are faced with a problem that requires an explanation they will find it difficult. This is in line with Hariyani in Aisyah [12] who argued that students only imitated the completion procedure exemplified by the teacher without bothering to interpret the meaning of the problem. This is also supported by the statement of Bergeson in Karnasih [13] that students are faced with solving the problem of story problems with cognitive difficulties if the procedure is required. The difficulties experienced by these students caused concern for the teacher, because story questions were a type of problem that had a fairly high level of difficulty.

One method of analysis that can be used to analyze errors in solving story problems is Watson's error category. The advantage of Watson's error analysis is that the explanation of the error is more specific so that it is easy to use to analyze the mistakes made by students in solving story problems. According to Watson in Nurhikmah [14] the error analysis resolving the story was categorized into 8 error categories, namely (1) inappropriate (id), (2) inappropriate procedure (ip), (3) omitted data (od), (4) omitted conclusion (oc), (5) response level conflict (rlc), (6) undirect manipulation (um), (7) skills hierarchy problem (shp), (8) apart from the seven categories above (ao).

Analysis of errors using the Watson error category has been widely used. Two of them are research conducted by Guswanto and friends [15] showing that the most mistakes made by students were in the skill hierarchy problem of 28.04%, and research conducted by Silitonga [16] found that the most common types of errors were made. students are incorrect data that occurs in all questions with a percentage of 100%.

There are 21 elementary schools in the Kepanjenkidul sub-district, Blitar city, consisting of 17 public elementary schools and 4 private elementary schools. Three elementary schools were selected as research subjects to represent one sub-district. The research subject was chosen by grade 4th students because it is the first level in the high class for Elementary School level, so it is necessary to know the extent of students' understanding of the number material that has been studied.

2. METHOD

The approach used in this research is a qualitative approach with descriptive research methods. This descriptive qualitative research approach was chosen because it is a naturalistic research or research conducted in natural conditions [17].

Statements and documentation during the research process. The selection of research subjects was carried

out by random sampling (simple random sampling) by drawing lots without paying attention to strata [18]. This is done with the aim that there are not too many research objects so that it can be maximized in its implementation, besides that it can also shorten time and save costs, but the results obtained are maximum. Based on the results of the drawing for the selected elementary schools, namely Bendo 2 elementary school, Kauman 1 elementary school, and Kauman 2 elementary school with a total of 93 students.

The data was collected using triangulation techniques, namely written tests, interviews, and documentation. The research instrument used in this study was a test sheet containing math story questions about numbers, an interview guide, and a documentation tool in the form of a camera.

The test questions that have been made must be tested for validity, reliability, level of difficulty, and their difference in order to determine whether or not the test questions are appropriate for use. Validation was carried out by lecturers and 4th grade teachers. After validation and revision, small and large scale trials were carried out.

Based on the results of the validation test, it is known that the questions compiled by the researcher are 8 questions and all questions can be used. The reliability of the question instrument has a coefficient value of 0.776. There are easy and medium difficulty levels. Meanwhile, the difference that the question has is very good. Thus it can be concluded that the test instrument that has been made is suitable for use in research.

Data reduction in this study was carried out by classifying the written test result data into high, medium and low groups, the results of interviews, and the results of documentation in each school. Students are grouped by looking for the class average value and standard deviation. Presentation of data carried out in this study is by presenting data in the form of tables, diagrams and descriptions. [19] The average percentage score of all students in each category per number (IN) is calculated by a formula.

$$IN = \frac{JSM - JSS}{JS \times SMTI} \times 100\%$$

Information:

- JSM : the maximum number of scores for each number obtained by all students in one category
- JSS : the total score obtained by all students in one category per number
- JS : the number of students
- SMTI : maximum score of one category per number

The mean percentage score of all students in each category for all numbers (IS) is calculated by formula.

$$IS = \frac{JSMS - JSSM}{JS \times SMSI} \times 100$$

Information:

- JSMS :the maximum number of scores of one category in all numbers obtained by all students
- JSSM : the sum of the scores obtained by all students in One category for all numbers
- JS : the number of students
- SMSI : maximum score of one category for all numbers

The error percentage categories for each of Watson's error criteria are as follows.

Table 1 Percentage of Errors in Each Category

Percentage	Category
$P \geq 55\%$	Very high
$40\% \leq P < 55\%$	High
$25\% \leq P < 40\%$	High enough
$10\% \leq P < 25\%$	Small
$P < 10\%$	Very small

Source [15]

3. RESEARCH RESULT

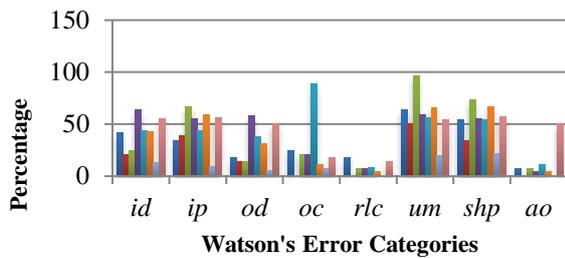


Figure 1 Results of Error Analysis of Bendo 2 Elementary School Students in Number 1-8

Graphic symbol description:

- Number questions 1
- Number questions 2
- Number questions 3
- Number questions 4
- Number questions 5
- Number questions 6
- Number questions 7
- Number questions 8
- id = Incorrect data
- ip = Incorrect Procedure
- od = Lost Data
- oc = Missing Conclusion
- rlc = Conflict Response Level
- um = Indirect Manipulation
- shp = Skill Hierarchy Problem
- ao = Apart from the Seven Categories

The results of the research carried out are presented in the form of special charts and general charts. A special graph shows the percentage of errors made by students in each primary school in solving story questions from number 1 to 8 and the average error made in each

Watson's error category. While the general graph describes the mistakes made by elementary school students in Kepanjen Kidul sub-district in working on story problems in each Watson's category of validity. The results of research at Bendo 2 elementary school are in the graphic below.

Figure 1 shows that the dominant error committed Grade 4th elementary schools in each category Bendo 2 watson errors in each different matter.

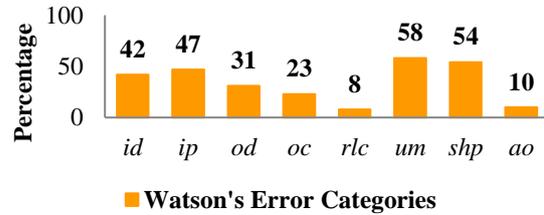


Figure 2 Recapitulation Average Percentage Error of Bendo 2 Elementary School Students

Graphic symbol description:

- id = Incorrect data
- ip = Incorrect Procedure
- od = Lost Data
- oc = Missing Conclusion
- rlc = Conflict Response Level
- um = Indirect Manipulation
- shp = Skill Hierarchy Problem
- ao = Apart from the Seven Categories

Figure 2 shows that the most mistakes made by Bendo 2 Elementary School students in solving story questions were in the indirect manipulation category (um) with a very high category and the smallest mistakes made were in the response level conflict (rlc) category with a very small category.

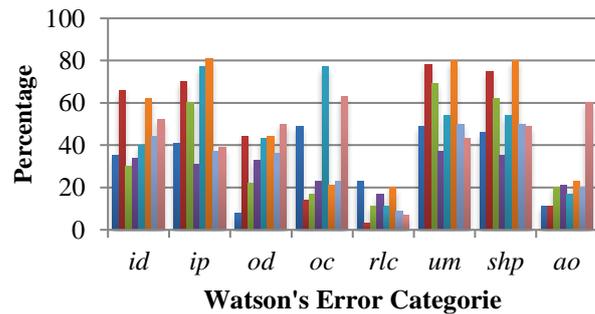


Figure 3 Results of Error Analysis of Kauman 1 Elementary School Students in Number 1-8

Figure 3 shows that the dominant error committed elementary school 4th grade students in solving story in each category watson errors in each different matter.

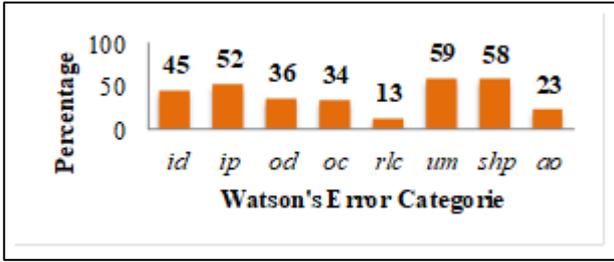


Figure 4 Recapitulation Average Percentage Error of Kauman 1 Elementary School Students

Figure 4 shows that the most errors made by fourth grade students of Kauman 1 elementary school were in the indirect manipulation category (um) with a very high category and the smallest errors were made in the response level conflict (rlc) category with a small category.

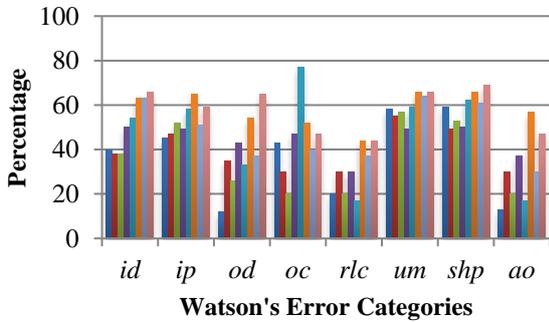


Figure 5 Results of Error Analysis of Kauman 2 Elementary School Students in Number 1-8

Figure 5 shows that the error of dominant primary school students in solving kauman 2 stories in each category watson errors in each different matter.

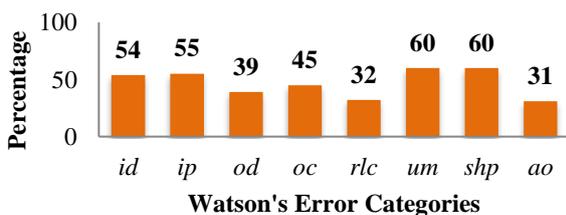


Figure 6 Recapitulation Average Percentage Error of Kauman 2 Elementary School Students

Figure 6 shows the students the most common error contained in the category of indirect manipulation (um) and the problem of hierarchy of skills (shp) with very high category and the fewest mistakes made on a category mistake besides the seven categories of mistakes (ao) with a fairly high category.

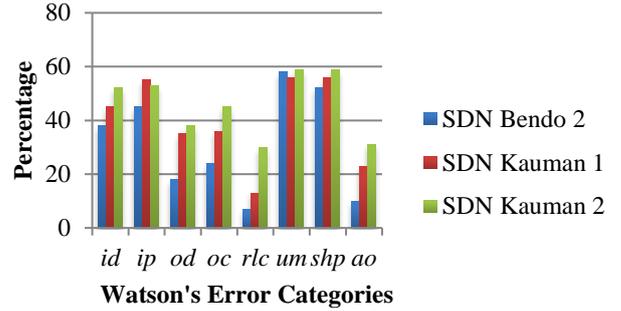


Figure 7 Results of Class 4 Student Error Analysis in Kepanjenkidul District in Each Category

Figure 7 shows the order of the percentage of errors made by students. The most mistakes were made by Kauman 2 elementary school, then Kauman 1 school, and least mistakes were made by the Bendo 2 elementary school.

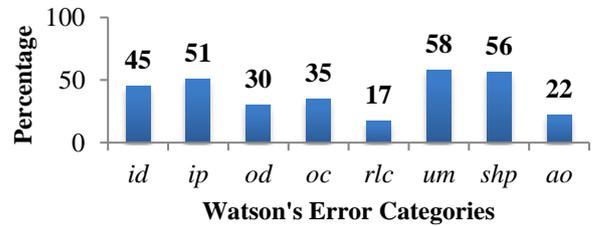


Figure 8 Results of the Analysis of Class 4th Students Average Error in Kepanjenkidul District in Each Category

Figure 8 shows the average percentage of errors made by class 4th students in Kepanjenkidul sub-district in solving story problems. The most mistakes were made on indirect manipulation errors (um) with a very high category and the least errors were made in the response level conflict (rlc) category with a small category.

4. DISCUSSION

The material about numbers is very important material for students to understand because it is the material with the widest coverage among other mathematics materials. In addition, it is also a foundation for students to more easily understand other, more complicated mathematical material.

Based on the research conducted, it is known that most students still have difficulty solving math story problems, especially in understanding the meaning of the questions. This can be seen from the results of the students' answers, most of whom were wrong in writing their mathematical sentences. This finding is reinforced by the opinion of Laliy [2] that the difficulty of students in solving story problems lies in the stage of understanding the questions and transforming them into mathematical symbols. According to Lutvaidah and Ryan [20], the story questions presented in a language that students have mastered well, will make it easier for

students to change into a mathematical model. But in reality, even though the language used is simple, there are still many students who have difficulty.

Based on the results of research conducted at Bendo 2 elementary school, it was found that in question number 4 students made many incorrect data errors (id). The reason students make mistakes is because students are not careful, do not understand the meaning of the questions, and misconceptions. According to Nakhleh [21] difficulties in understanding basic concepts will prevent students from linking basic concepts with other higher and connected concepts. In question number 3 students made many errors in incorrect data procedures (IP), indirect manipulation (um), and problems with skill hierarchy (shp). The cause of students making mistakes in inappropriate data categories is that students are not careful in understanding the meaning of the questions and make mistakes in writing the solving formula. The reason why students made many mistakes in the missing data category (od) and in addition to the seven categories (ao) were not being careful in reading the questions and there was data that had not been included in the completion, so that the final results obtained were not correct. In question number 1 students made many conflict response errors (rlc), the cause was because students did not understand the meaning of the questions and were confused in the process, so students immediately wrote down the final answers.

Based on the results of research conducted at Kauman 1 public school, it was found that when answering question number 2 students made many incorrect data errors. The cause of students making mistakes is not understanding carefully and not understanding the meaning of the questions Partikipong and Nakamura [22] said that in the problem solving process, there are two obstacles that can prevent students from getting the correct answer, namely: (a) problems with understanding concepts that are not appropriate, and (b) errors in mathematical processing consisting of transformation, process skills and drawing the final answer. The cause of students making errors in incorrect data categories (ip), indirect manipulation (um), and skill hierarchy problems (shp), namely not knowing how to solve them, not understanding the concept of ordinary fraction counting operations, and forgetting how to complete fraction count operations with different denominators.

These findings are supported by the findings of Khasanah [23] which states that calculation errors occur because students do not master the prerequisite material, namely unable to perform integer, fraction and decimal counting operations both division, multiplication, addition or subtraction. So that the impact is that a student cannot calculate correctly. In question number 8 students made many mistakes in the missing data category (od) and errors other than seven categories (ao). The cause of students making mistakes is that students are not careful when reading the questions, so that there is data that has not been included in the formula and do not understand the meaning of the questions. According to Widodo [24]

the indicator of errors when making problem-solving plans is that students do not know the adequacy and requirements of a problem and do not use all the information that has been collected from the problem.

The category oc the most errors occurred in number 5, the cause of the students making mistakes, namely the students were not careful when reading the questions, did not understand the meaning of the questions. The most error category rlc occurred in number 1, the cause of students making mistakes, namely students experiencing confusion in choosing between using FPB or KPK to solve questions.

Based on the results of research conducted at Kauman 2 elementary school, it is known that, the categories id, od, rlc, um, shp, and ao mostly occur in number 8, the cause of students making mistakes is that students are not careful and rush when working on questions, and confused what method to use, and did not write down the answer. IP, rlc, and um categories the most errors occurred in number 6, the cause of the students making mistakes, namely the students did not understand the meaning of the questions and did not understand the concept of solving fractions with different denominators. Lestari, and friends [25] explained that one of the errors in solving math story problems consisted of misconceptions. Errors occur when students can determine the operation that must be, but cannot pass the completion procedure. The category oc the most errors occurred in number 5, the cause of the students to make a missing conclusion was due to not being careful in reading the questions, so that the final written answers did not match the questions ordered. This finding is supported by the findings of Aisyah [12] which stated that students did not continue the work process because they were unsure of the initial formula that was written.

Based on the research that has been done, it is known that the mistakes of grade 4th students in the Kepanjenkidul Blitar sub-district are generally categorized as quite high, this means that the students' understanding and ability in solving story problems is still lacking. The results of this study were supported by the results of research conducted by Winarsih and friends [26] which stated that students' frustration in solving data processing problems was generally quite high.

The most mistakes made by students based on Watson's error category were in the indirect manipulation category. including high, reaching 58%. The results of this study are different from the results of research conducted by Winarsih and friends[26], in her research that the errors of students in the um category were low, namely only 16.67%. The least error made by students based on the Watson error category was the rlc error category, which was 17% which was classified as small. Incorrect data category error is still high at 53%. Incorrect procedure category error is still high, namely 52%. Missing data category error is quite high at 36%. Missing conclusion category error is quite high, namely 34%. The category error of the skill hierarchy problem is

still high, reaching 56%. Errors other than the seven categories are classified as small, namely 22%. The causes of errors in general are because students do not understand the meaning of the questions, choose wrong solutions, are not accurate, and do wrong calculations.

Based on the research data, it is known that most of the fourth grade students in Kepanjenkidul sub-district have the ability to understand and apply the concept of solving mathematical problems in the form of story problems which are still relatively low. According to Khasanah [23] someone is said to have good mathematical skills if they can solve math problems correctly.

5. CONCLUSION

The mistakes of students at Bendo 2 elementary school in solving story questions are quite high. The cause of errors is generally because students do not understand the meaning of the questions, are confused about determining the solution formula, and are not careful in calculating. The errors made by fourth grade students of Kauman 1 elementary school in solving story questions based on the Watson category are classified as high, because the 6 categories of the percentage of errors are high to quite high. The cause of errors is generally caused by students not understanding the meaning of the questions and not being careful in the completion process.

The errors made by fourth grade students of Kauman 2 elementary school in solving story questions based on the Watson category are still quite high. The causes of students making mistakes in general were students not answering some questions, not understanding the questions, not knowing how to solve them, and not being careful. Errors in solving story problems based on Watson's error category in fourth grade students in Kepanjenkidul sub-district are generally still high because of the 8 error categories 4 categories, namely incorrect data, inappropriate procedures, indirect manipulation, and hierarchical problems of skills, the percentage is high, namely between 52-60%, the most errors are in the indirect manipulation category which reaches 60%. From the research results it is known that the majority of students still experience confusion in understanding the story problems and determining how to solve them.

REFERENCES

[1] Farida, Nurul. 2015. Analisis Kesalahan Siswa SMP Kelas VIII dalam Menyelesaikan Masalah Soal Cerita Matematika, *Jurnal Pendidikan Matematika FKIP Univ. Muhammadiyah Metro*, 4 (2): 42-52, (Online), (<http://fkip.ummetro.ac.id>)

[2] Laily, Idah Faridah. 2014. Hubungan Kemampuan Membaca Pemahaman dengan Kemampuan Memahami Soal Cerita Matematika Sekolah Dasar,

Jurnal Eduma, 3 (1): 52, (Online), (<http://syekhnurjati.ac.id>),

[3] Yuniawatika. 2011. *Penerapan Pembelajaran Matematika dengan Strategi REACT untuk Meningkatkan Kemampuan Koneksi dan Representatif Matematika Siswa Sekolah Dasar*, 1:105, (Online), (<http://jurnal.upi.edu/file/10-Yuniawatika-edit.pdf>),

[4] Kemendiknas. 2006. *Peraturan Menteri Pendidikan Nasional No. 22 Tahun 2006 tentang Standar Isi*. Jakarta: Kementerian Pendidikan Nasional.

[5] Kemendikbud. 2016. *Salinan Peraturan Menteri Pendidikan dan Kebudayaan No. 21 Tahun 2016 tentang Standar Isi Pendidikan Dasar dan Menengah*. Jakarta: Kementerian Pendidikan dan Kebudayaan.

[6] Kemendikbud. 2016. *Salinan Peraturan Menteri Pendidikan dan Kebudayaan No. 24 lampiran 14 tentang Kompetensi Inti dan Kompetensi Dasar Matematika SD/ MI*. Jakarta: Kementerian Pendidikan dan Kebudayaan.

[7] Nursalam, Anita Purnama Putri, dan Sri Sulasteri. 2014. Pengaruh Penguasaan Materi Prasyarat Terhadap Hasil Belajar Matematika Siswa Kelas VIII SMPN 1 Sinjai Timur, *Jurnal Matematika dan Pembelajaran*, 2 (1): 21, (Online), (<http://journal.uin-alauddin.ac.id>)

[8] Marlina, Leni. 2013. Penerapan Langkah Polya dalam Menyelesaikan Soal Cerita Keliling dan Luas Persegi Panjang, *Jurnal Elektronik Pendidikan Matematika Tadulako*, 1 (1): 43-42, (Online), (<http://jurnal.untad.ac.id>)

[9] Umam, Muhammad Dliwalul. 2014. Analisis Kesalahan Siswa Dalam Menyelesaikan Soal Cerita Matematika Materi Operasi Hitung Pecahan, *Jurnal Ilmiah Pendidikan Matematika*, 3 (3): 131-134, (Online), (<http://jurnalmahasiswa.unesa.ac.id>)

[10] Prastiti, Tri Dyah. 2009. Memperbaiki Kesalahan Pengurangan Bilangan Cacah Melalui Permainan Dadu dan Kartu Bilangan Siswa Kelas III SDN Manggal 601 Surabaya. *Jurnal Penelitian Kependidikan*, 19 (2): 140, (Online)

[11] Cahyowati, Ety Tejo dan Cholis Sa'diyah. 2007. *Penerapan Pembelajaran Matematika Secara Kontekstual dengan Setting Kooperatif SD Laboratorium Universitas Negeri Malang*. *Jurnal Penelitian Kependidikan*, 2: 169-176.

[12] Aisyah, Fitria Nur Kusti, dkk. 2019. Analisis Kesalahan Penyelesaian Soal Cerita Berdasarkan Kriteria Watson, *Jurnal Review Pembelajaran Matematika*, (Online), 4 (1): 11-22, (<http://jurnalftk.uinsby.ac.id/index.php/jrpm>)

[13] Karnasih, Ida. 2015. Analisis Kesalahan Newman pada Soal Cerita Matematis, *Jurnal Paradikma*, 1 (8): 37-51, (Online), (<http://unimed.ac.id>)

[14] Nurhikmah, Siti & Febrian. 2016. Analisis Kesalahan Siswa dalam Menyelesaikan Permasalahan Integral Tak Tentu, *Jurnal Tatsqif*, 14

- (2): 218-237, (Online), (<http://journal.uinmataram.ac.id/>)
- [15] Guswanto, Erwin, dkk. 2018. *Analisis Kesalahan Siswa dalam Menyelesaikan Permasalahan Identitas Trigonometri Berdasarkan Kriteria Watson Ditinjau dari Gaya Belajar*, (Online), (<http://jurnal.unej.ac.id>)
- [16] Silitonga, Nelly & Febrian. 2016. *Penyelesaian Masalah Bangun Datar Siswa Kelas VII: Kesalahan dan Kategorisasinya*, 1 (2): 57-68, (Online), (<http://ojs.umrah.ac.id>)
- [17] Sugiyono. 2013. a. *Metode Penelitian Pendidikan Pendekatan Kuantitatif, Kualitaitaif, dan R & D*. Bandung: Alfabeta
- [18] Sugiyono. 2010. b. *Metode Penelitian Pendidikan Pendekatan Kuantitatif, Kualitaitaif, dan R & D*. Bandung: Alfabeta
- [19] Purwanto, N. 2010. *Prinsip-Prinsip dan Teknik Evaluasi Pengajaran*. Bandung: PT Remaja Rosdakarya
- [20] Lutvaidah, Ukti dan Ryan Hidayat. 2019. Pengaruh Ketelitian Membaca Soal Cerita Terhadap Kemampuan Pemecahan Masalah Matematika, *Jurnal Kajian Pendidikan Matematika*, 4 (2):179-188, (Online), (<http://journal.lppmunindra.ac.id>)
- [21] Nakhleh, Mary B. 1992. Why Student's Don't Learn Chemistry: Chemical Misconceptions, *Journal of Chemical Education*, 69 (3): 191-195, (Online)
- [22] Partikipong N.dan supratik S. 2010. "Analysis of Mathematics Performance of Grade Five Students in Thailand Using Newman Procedure." *Jurnal of International Cooperation in Education* 9(1): 111-112.
- [23] Khasanah, Umami dan Utama. 2015. *Kesulitan Menyelesaikan Soal Cerita Matematika pada Siswa SMP*. Jurnal disajikan pada Prosiding Seminar Nasional Pendidikan Matematika UMS 2015, (Online), (<https://publikasiilmiah.ums.ac.id>)
- [24] Widodo, Sri Adi. 2013. Analisis Kesalahan dalam Pemecahan Masalah Divergen Tipe Membuktikan pada Mahasiswa Matematika, *Jurnal Pendidikan dan Pengajaran*, 2: 106-113, (Online), (<http://ejournal.undiksha.ac.id>)
- [25] Lestari, Nur I., Anton Noornia, dan Wardani Rahayu. 2010. "Analisis Kemampuan Siswa SD dalam Menerjemahkan Soal Cerita ke dalam Model Matematika dan Penyelesaiannya". *Jurnal Matematika, Aplikasi dan Pembelajarannya* 9 (1): 22-34, (Online), (<http://ums.ac.id>)
- [26] Winarsih, Kurnia Ayu, Titik Sugiarti, dan Khutobah. 2015. Analisis Kesalahan Siswa Berdasarkan Kategori Kesalahan Menurut Watson Dalam Menyelesaikan Permasalahan Pengolahan Data Siswa Kelas VI SDN Baletbaru 02 Sukowono Jember Tahun Pelajaran 2014/2015, *Artikel Ilmiah Mahasiswa*, 1 (1): 1-5, (Online), (<http://repository.unej.ac.id>).