UJME 12 (3) 2023: 280-290
UNNES JOURNAL OF MATHEMATICS EDUCATION
https://journal.unnes.ac.id/sju/index.php/ujme/
ISSN: 2252-6927 (print); 2460-5840 (online)

Mathematical Connection Ability Viewed from Self Efficacy in CONINCON Learning Model with Ethnomathematics Nuances

Rizza Fahira Valenia[a,*], Zaenuri[a]

[a] *Mathematics Department, Universitas Negeri Semarang, Sekaran Campus, Gunungpati, Semarang, 50229, Indonesia*

* *E-mail address: rfvalenia14@students.unnes.ac.id*

ARTICLE INFO

Article history:
Received 23 August 2023
Received in revised form 9 November 2023
Accepted 30 November 2023

Keywords:
Mathematical Connection Ability; Self Efficacy; CONINCON Learning Model; Ethnomathematics

Abstract

This study aims to (1) find out whether the proportion of students with mathematical connection abilities ≥ minimum criteria of mastery learning in CONINCON learning model with ethnomathematics nuances was more than the learning completeness limit, namely 75%; (2) find out whether students' mathematical connection abilities through CONINCON learning model with ethnomathematics nuances were better than students' connection abilities with Problem Based Learning model; (3) find out whether students' self efficacy influences mathematical connection abilities; (4) describe mathematical connection abilities through CONINCON learning model with ethnomathematics nuances viewed from students' self efficacy. The method used was a mixed method with a sequential explanatory design. In this research, 6 research subjects were taken based on the category of self efficacy in experimental group. Research results show that (1) proportion of students with mathematical connection abilities ≥ minimum criteria of mastery learning in CONINCON learning model with ethnomathematics nuances was more than the learning completeness limit, namely 75%; (2) students' mathematical connection abilities in CONINCON learning model with ethnomathematics nuances were better than students' connection abilities in Problem Based Learning model; (3) students' self efficacy has a significant influence on mathematical connection abilities of 68.7%; (4) description of students' mathematical connection abilities with categories : (a) high category of self efficacy are able to fullfill all indicators of mathematical connection abilities; (b) medium category of self efficacy can fulfill two indicators and less able to fullfill two indicators; (c) low category of self efficacy only fulfill an indicator.

1. Introduction

Mathematics is built from the connection of various elements such as ideas, facts, concepts, principles, and procedures or operations (Baiduri et al., 2020). The concepts in learning mathematics are interconnected with one another. Therefore, when students learn a concept, students need to learn other concepts (Kenedi et al., 2019). One of the characteristics of mathematics is the interrelationship between one topic and another. Apart from that, mathematics also has a relationship with other sciences outside of mathematics and also problems related to everyday life (Isfayani et al., 2018). Therefore, the interrelationships in mathematics are important for students to understand.

One of the abilities that students must have in learning mathematics is the ability to make mathematical connections. Mathematical connection ability is the ability to connect between mathematical topics, connect mathematical topics with other sciences, and connect mathematical topics with real life (Nugraheni & Junaedi, 2019). In accordance with the 2013 curriculum in the regulation of the minister of education and culture number 22 of 2016 that the implementation of learning must be student-centered to discover for

To cite this article:
Valenia, R. F., & Zaenuri, Z. (2023). Mathematical Connection Ability Viewed from Self Efficacy in CONINCON Learning Model with Ethnomathematics Nuances. *Unnes Journal of Mathematics Education*, *12*(3), 280-290. doi: 10.15294/ujme.v12i3.78958

themselves by linking material between mathematical concepts, other subjects and everyday life. 2013 curriculum in the regulation of the minister of education and culture number 21 of 2016 explains that mathematical connection ability is one of the student competencies in learning mathematics at the SMP/MTs level, including: (1) having confidence in the power and usefulness of mathematics, as well as a critical attitude that is formed through student learning experiences; (2) have the ability to link mathematical ideas clearly and effectively; (3) utilizing mathematical concepts to solve mathematical problems and problems related to everyday life.

Based on the results of the 2018 PISA (The Program for International Student Assessment) survey relating to mathematics, it shows that Indonesia is ranked 74th out of 79 countries. Indonesia is below the international average score with a score obtained by Indonesia of 379. Meanwhile, the international average score is 489 (PISA, 2018). This shows that students' mathematical connection ability is still low. The PISA test measures the mathematical literacy of 15 years old to formulate, use, and interpret mathematics in various contexts to describe, predict, and explain phenomena, recognizing the role that mathematics plays in real problems. One of the PISA tests measures mathematical connection ability (OECD, 2022).

In addition, based on the results of research on the mathematical connections of junior high school students conducted by Nugraha (2018) it shows that students' mathematical connections are still relatively low. Meanwhile, based on research conducted by Nurafni & Pujiastuti (2019) it shows that overall students' mathematical connection abilities obtain an average of 65% which is included in the sufficient category. Meanwhile, according to Hasbi et al. (2019), students' mathematical connection skills in various schools in Indonesia are still relatively low and moderate. Whereas according to Kartika et al. (2019), the ability to make mathematical connections is important for concretizing the mathematical material that students learn. Students who have good connections can solve math problems better (Baiduri et al., 2020). Mathematical connection abilities have an important role in solving mathematical problems which include mathematical problems in everyday life and those related to other subjects (Iswara et al., 2021). Baiduri, Putri, & Alfani (2020) state that students must be guided and encouraged in learning mathematics to develop the habit of seeking connections and asking about connections.

The low ability of mathematical connections is also experienced by students in one of the public junior high schools in Pekalongan Regency. Based on the results of observations at SMP Negeri 1 Kesesi, students' mathematical connection abilities were classified as low seen from the way students worked on the questions given. One of the questions is as follows :

> A room in the Gadang traditional house is in the form of cuboid with length of 4 m, width of 3 m and a height of 5 m. The inner walls will be painted at a cost of Rp. 50.000 per m^2. How much does it cost to paint the room?

Most of the students in solving the problem directly entered the information contained in the problem into the formula of surface area of a cuboid. This can be seen in Figure 1.

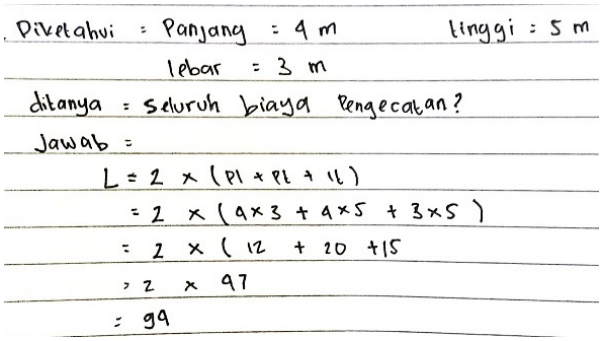
Diketahui : Panjang = 4 m Tinggi = 5 m
Lebar = 3 m
ditanya = seluruh biaya Pengecatan?
Jawab =
L = 2 x (Pl + Pl + ll)
= 2 x (4x3 + 4x5 + 3x5)
= 2 x (12 + 20 + 15
= 2 x 47
= 94

Figure 1. Student work results

Based on Figure 1, it can be seen that when students solve these problems, students cannot relate topics in mathematics which relate material in certain topics to other topics and students cannot relate mathematics to the problems of everyday life. In answering the question, students directly enter the length, width, and

height known in the problem into the formula for the surface area of cuboid without paying attention to the question that only the surface area of the wall is sought, so the area of the base and roof is not calculated.

Based on the results of interviews conducted with one of the mathematics teachers at SMP Negeri 1 Kesesi, the low ability of students' mathematical connections was suspected because in the learning process some teachers only explained the basic concepts, students were not used to solving problems related to everyday life. Meanwhile, based on the results of interviews conducted with students, students were able to write down information that was known and asked, but after that students experienced confusion in determining the next step in solving questions and students were also unsure of their answers.

There are still many students who think that mathematics is a difficult subject, even though mathematics has benefits for other fields of study as well as for everyday life. Students' belief in their ability to face a challenge is often referred to as self efficacy. Self efficacy is one of the factors that influence mathematical connection abilities (Mukhtari et al., 2019). According to Isfayani et al. (2018), self efficacy in mathematics is an individual's or student's belief in his own ability to organize and carry out mathematics learning activities to achieve a certain goal by predicting how much effort is needed to achieve that goal contained in the dimensions of magnitude, level, and strength. Fitasari et al. (2019) stated that the greater the self efficacy in learning mathematics, the greater the learning outcomes obtained by students. Students with low self efficacy tend not to want to try to learn because they believe that learning cannot help them solve problems. Meanwhile, students with high self efficacy tend to like challenges.

Mathematical connection abilities can help students connect between mathematical concepts so that students do not study them separately (Maulida et al., 2022). Teachers must be able to carry out learning that can facilitate students in learning that can hone mathematical connection skills. According to Fadilah et al. (2021) teachers can choose a constructive learning model. Students learn to construct their own knowledge and find connections, both internal connections (between concepts and between mathematical topics) and external concepts (relations with topics outside of mathematics). One of the constructive learning models is the CONINCON learning model. The CONINCON learning model has 5 phases namely the constructive orientation phase, the construct phase, the integrative phase, the contextual phase, and the reflective phase (Maulida et al., 2022). CONINCON stands for Constructivistic (CON), Integrative (IN), and contextual (CON). According to Saminanto in (Maulida et al., 2022), CONINCON learning model is a learning model that is based on 3 approaches namely constructive, integrative, and contextual approaches.

Simamora et al. (2018) suggest that mathematics teachers strive for quality learning materials and integrate local culture in learning mathematics. This results in efforts to combine students' experiences in mathematics that are beneficial to increase cultural relevance and are also effective in helping educate students. Therefore, there is a need for cultural content in mathematics learning that bridges between school mathematics and mathematics in everyday life based on local culture or the peculiarities of the area. One way is to combine the learning model with ethnomathematics, as in CONINCON learning model with ethnomathematics nuances.

In CONINCON learning model with ethnomathematics nuances, the teacher relates the mathematics material being taught to the culture of Pekalongan, so that the knowledge gained by students is not only about mathematical material, but students can also know the characteristics of Pekalongan more broadly. Active participation is a place for students to develop mathematical connection abilities in terms of self efficacy, so that the process of receiving or understanding subject matter comes from the results of active interactions between students themselves. Thus, the CONINCON learning model with ethnomathematics nuances is expected to improve mathematical connection abilities in terms of student self efficacy. Therefore, researchers carry out mathematics learning with the CONINCON model with ethnomathematics nuances to be able to improve mathematical connection abilities in terms of student self efficacy.

Based on the background that has been described, this study aims to : (1) find out whether the proportion of students with mathematical connection abilities $\geq$ minimum criteria of mastery learning in CONINCON learning model with ethnomathematics nuances is more than the learning completeness limit, namely 75%; (2) find out students' mathematical connection abilities in CONINCON learning model with ethnomathematics nuances is better than students' connection abilities in Problem Based Learning model; (3) find out whether students' self efficacy influences mathematical connection abilities; (4) describe mathematical connection abilities through CONINCON learning model with ethnomathematics nuances viewed by students' self efficacy.

2. Methods

This reserach used mixed method research that combine quantitative and qualitative reserach method. The research design was used a sequential explanatory design. In this research design, the first stage of the research was carried out using quantitative methods and the second stage was carried out using qualitative methods. The quantitative research design in this study used quasi-experimental designs. The form of research design chosen was the post test only control group design.

Table 1. Posttest only control group design

Group	Treatment	Posttest
Experimental Group	X	O_1
Control Group	Y	O_2

Information :

X : CONINCON Learning Model with Ethnomathematics Nuance

Y : Problem Based Learning

O_1 : Posttest of Mathematical Connection Ability in Experimental Group

O_2 : Posttest of Mathematical Connection Ability in Control Group

The research was conducted at SMP Negeri 1 Kesesi, Pekalongan Regency, Central Java 51162. The population in this study were all grade VIII students of SMP Negeri 1 Kesesi for 2022/2023 academic year, consisting of 265 students. The sample was taken using cluster random sampling technique. This study took students from two classes as research samples, namely students in class VIII C and VIII F. Students in class VIII C as the control group who were given learning using Problem Based Learning and students in class VIII F as the experimental group that were given learning using CONINCON learning model with ethnomathematics nuances.

The determination of research subjects was taken using a purposive sampling technique by considering the test scores of mathematical connection abilities and the results of the self efficacy questionnaire classification in the experimental group students. This study chosen 6 students in the experimental group as research subjects. Two students with high self efficacy, two students with medium self efficacy, and two students with low self efficacy were selected.

Data collection techniques used to obtain research data included documentation, tests, questionnaires, and interviews regarding mathematical connection abilities viewed by self efficacy of SMP Negeri 1 Kesesi students in offline learning in the material class of two-variable linear equation systems. Data analysis in this study was in the form of preliminary data analysis of students' mathematical connection abilities, quantitative data analysis of mathematical connection ability test results, and qualitative data analysis. Preliminary data analyzed were data on midterm assessment scores for class VIII C and VIII F of SMP Negeri 1 Kesesi for the 2022/2023 academic year. Preliminary data analysis in this study included normality tests, homogeneity tests, and similarity tests of two means with the help of IBM SPSS Statistics 25 software. Quantitative data analysis in this study is in the form of hypothesis testing. There are 3 hypothesis tested, included : (1) Test hypothesis 1, namely whether the proportion of students with mathematical connection abilities $\geq$ minimum criteria of mastery learning in CONINCON learning model with ethnomathematics nuances is more than the learning completeness limit, namely 75%. The test used is one-sample average test and right-sided proportion test; (2) Testing hypothesis 2 is used to determine whether students' mathematical connection abilities in CONINCON learning model with ethnomathematics nuances is better than students' mathematical connection abilities in problem based learning. The test used is two-mean difference test and two-proportion difference test; (3) Testing hypothesis 3 is used to determine whether there is a significant effect of self efficacy on students' mathematical connection abilities using a simple linear regression statistical test.

Qualitative data analysis in this study was in the form of self efficacy questionnaire data analysis and analysis of interview results. Qualitative data analysis in this study includes data reduction, data display,

and drawing conclusions. The results of the mathematical connection ability interview can be used to triangulate the results of the mathematical connection ability test so that the level of mathematical connection ability can be described in terms of student self efficacy.

3. Results & Discussions

3.1. Initial Data Analysis

Initial data analysis was used for one of the references of sample selection by normality tests, homogenity tests and similarity of the two average tests. The initial data analyzed was the midterm exam score data of class VIII C and VIII F. After testing for normality, homogeneity, and similarity of the two averages in the two classes, the data obtained from a normal distribution, has the same variance (homogeneous), and there was no difference between the two classes.

3.2. Proportion of Students with Mathematical Connection Abilities ≥ Minimum Criteria of Mastery Learning in CONINCON Learning Model with Ethnomathematics Nuances Is More Than Learning Completeness Limit, Namely 75%

Analysis of the results of the mathematical connection ability test begins with carrying out the normality test and homogeneity test. Based on the results of data analysis on tests of students' mathematical connection abilities, it shows that the test scores of students' mathematical connection abilities with the CONINCON learning model with ethnomathematics nuances at SMP N 1 Kesesi are normally distributed and homogeneous. Then, tested the average of one sample and the classical completeness test. The results showed that students' mathematical connection abilities in the matter of a system of two-variable linear equations in CONINCON learning model with ethnomathematics nuances at SMP N 1 Kesesi were completed both individually and classically. In the mathematical connection ability test, the average value of the experimental group was 80.44 with the lowest value being 60 and the highest value being 95.

The average test results for one sample obtained $t_{count} = 6.761 \geq t_{table} = 1.696$ so it can be concluded that the average result the test of students' mathematical connection abilities with the CONINCON learning model with ethnomathematics nuances is more than 72. Furthermore, for the classical completeness test the result is $z_{count} = 2.093 \geq z_{(0.5-\alpha)} = 1.645$. These results indicate that the proportion of students who complete the class using the CONINCON learning model with ethnomathematics nuances is more than 0.745. Based on the results of the mathematical connection ability test in the ethno-mathematics nuanced CONINCON learning model at SMP N 1 Kesesi, there were 29 students out of 32 students or 90.6% who had achieved individual mastery. Based on the results of the one-sample average test and the classical mastery test, it can be said that the application of the CONINCON learning model with ethnomathematics nuances at SMP N 1 Kesesi on the subject matter of two-variable linear equation systems can help students achieve learning mastery. This can be achieved because the syntax of the CONINCON learning model is related to mathematical connection abilities.

This is supported by the research of Reksadini et al. (2022) which states that the syntax of the CONINCON learning model is related to indicators of mathematical connection ability. The first phase is the construct orientation phase in the form of apperception activities regarding the prerequisite material. If students master the prerequisite material, students can construct their own new knowledge learned and can find out the benefits of the knowledge learned in other fields and in everyday life. The second phase is the construct phase. The construct phase corresponds to an indicator of mathematical connection ability, namely connections between topics in mathematics (Maulida et al., 2019). The third phase is the integrative phase. This phase corresponds to an indicator of the ability of mathematical connections, namely mathematical connections with fields other than mathematics. The fourth phase is the contextual phase. In this phase students associate the material studied with everyday life. The fifth phase is the reflection or feedback phase to determine student mastery of material related to indicators of mathematical connection ability. In this phase, students summarize the material they have learned and are given quizzes or assignments.

3.3. Students' Mathematical Connections Ability in CONINCON Learning Model with Ethnomathematics Nuances Are Better Than Students' Mathematical Connections Ability in Problem Based Learning

In learning material of two-variable linear equations *systems* using CONINCON learning model with ethnomathematics nuances at SMP N 1 Kesesi, 29 students in the experimental group achieved completeness. Meanwhile, the students in the control group who completed the problem-based learning model of the two-variable linear equation system material were 25 students. Based on these data, it can be said that the proportion of students who complete the material learning system of two-variable linear equations with the CONINCON model with ethnomathematics nuances at SMP N 1 Kesesi is beter than the problem-based learning model. Statistically the results obtained $z_{count} = 1.92 \geq z_{(0.5-\alpha)} = 1.64$ so it can be concluded that the proportion of students who complete the class using the CONINCON learning model with ethnomathematics nuances is more than the proportion of students who use the problem learning model based learning. The results of the average difference test obtained $t_{count} = 2.79 > t_{table} = 1.67$ so that it can be said that the average test results for students' mathematical connection abilities for the material two-variable linear equations *systems* in the CONINCON learning model *with* ethnomathematics nuance more than the average the average test results of students' mathematical connection abilities in the material two-variable linear equations *systems* in problem-based learning model. Even though the control group used worksheets and textbooks from the teacher in the learning process, the experimental group used ethnomathematics nuanced worksheets and powerpoint media with ethnomathematics nuances so that it helped students better understand the problems they faced and better understand the material of a system of two-variable linear equations.

3.4. Influence of Self Efficacy on Students' Mathematical Connection Ability

Based on the results of the analysis of simple linear regression tests, there is a significant influence between students' mathematical connection abilities and students' self efficacy. This can be seen from the results of the analysis which obtained an R Square value of 0.687. This value implies that the influence of students' self efficacy on students' mathematical connection abilities is 68.7%, while 31.3% of students' critical mathematical connection abilities are influenced by other variables that not researched. This can be seen from the results of student test work and interviews conducted by researchers with students. Students with high self efficacy have enthusiasm in working on questions with confidence. Students always try to do things on their own to the best of their abilities. This is in line with the results of research conducted by Rahmi et al. (2020) which suggested that 70% of students scored below the class average due to students' low of self efficacy.

3.5. Classification of Student Self Efficacy

Students grouping was determined based on the category of student self efficacy by using a questionnaire consisting of 20 statement items with four Likert scale options that students had to choose according to the conditions of each student. After all the self efficacy questionnaire statement items were filled in by students, the results of grouping students in the experimental group were obtained which can be seen in Table 2.

Table 2. Data of student self efficacy category

Category of Self Efficacy	The Number of Students	Percentage
High	6	19%
Medium	22	69%
Low	4	12%

For each category, 2 students with high self efficacy, 2 students with medium self efficacy, and 2 students with low self efficacy were taken so that there were 6 students as research subjects. The determination of the 6 research subjects is shown in Table 3 as follows.

Table 3. Data of student self efficacy category

Category of Self Efficacy	Student Code	Self Efficacy Score	Test Score
High	E-09	64	95
	E-12	59	88
Medium	E-02	47	80
	E-31	47	85
Low	E-20	38	73
	E-05	37	68

3.6. Description of Mathematical Connection Abilities Viewed by Students' Self Efficacy in CONINCON Learning Model with Ethnomathematics Nuances

3.4.1 Students' Mathematical Connection Ability Viewed by High Self Efficacy

There are 2 research subjects in the category of high student self efficacy, namely subject E-09 and subject E-12. Subjects with a high level of student self efficacy tend to have high mathematical connection abilities as well. It can be seen from the mathematical connection ability test scores obtained by subjects in high student self efficacy groups tend to be higher than subjects in moderate and low student self efficacy groups.

Figure 2. Answers to Subject E-09 from Indicator 4 Question Number 4

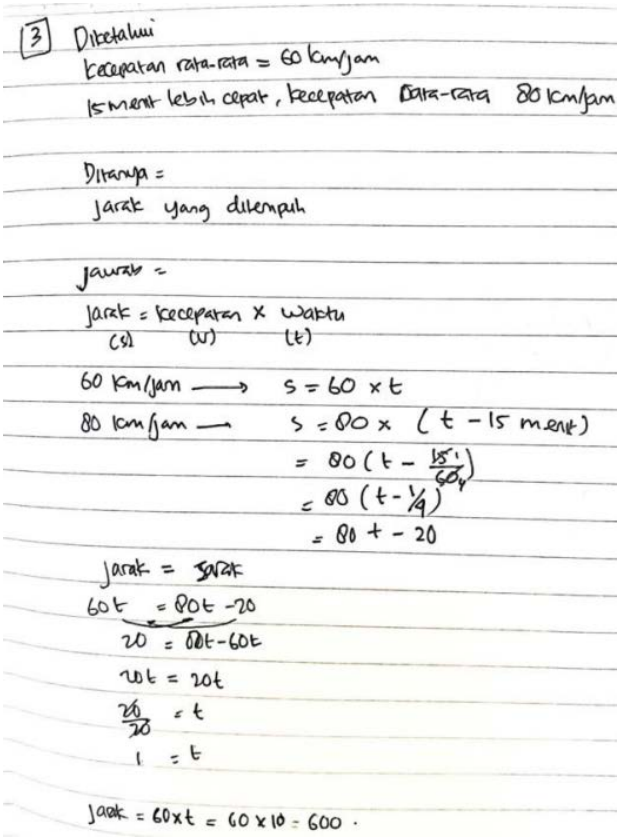

Figure 3. Answers to Subject E-12 from Indicator 3 Question Number 3

3.4.2 Students' Mathematical Connection Ability Viewed by Medium Self Efficacy

There are 2 research subjects in the high student self efficacy category, namely subjects E-02 and E-31. Subjects with a medium level of student self efficacy have mathematical connection abilities between subjects in the high and low self efficacy groups. It can be seen from the mathematical connection ability test scores obtained by subjects in the medium student self efficacy group tend to be higher than subjects in the low student self efficacy group, but lower than subjects in the high student self efficacy group.

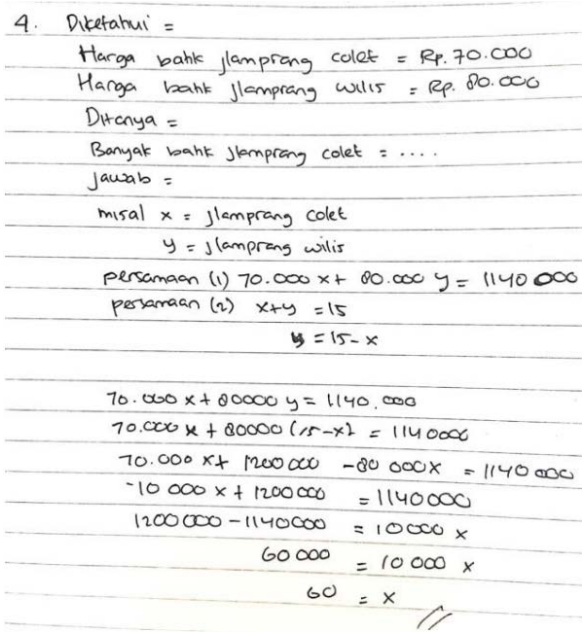

Figure 4. Answers to Subject E-02 from Indicator 4 Question Number 4

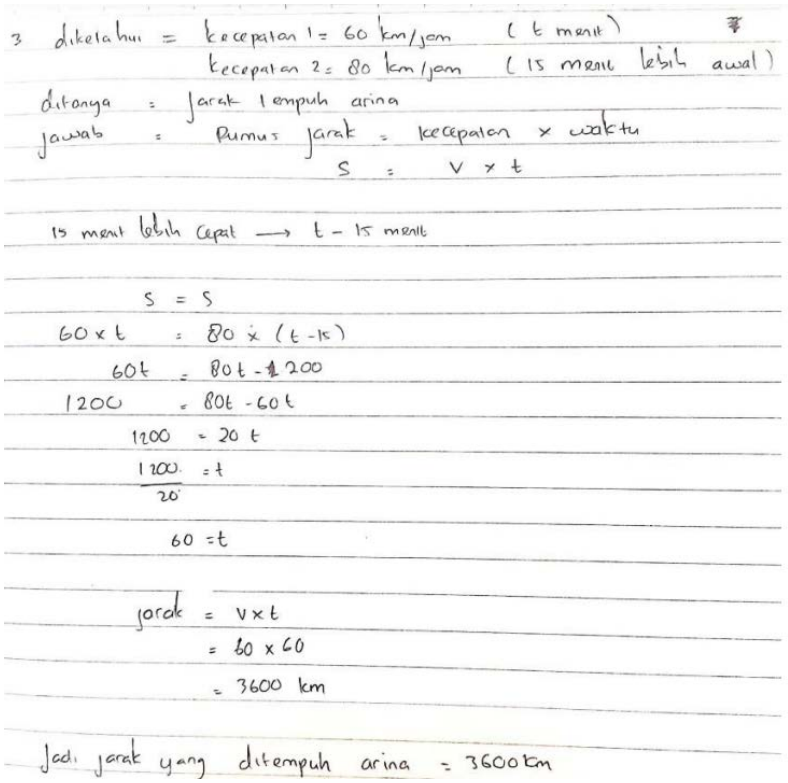

Figure 5. Answers to Subject E-31 from Indicator 3 Question Number 3

3.4.3 Students' Mathematical Connection Ability Viewed by Low Self Efficacy

There are 2 research subjects in the category of high student self efficacy, namely subjects E-20 and E-05. Subjects with a high level of student self efficacy tend to have low mathematical connection abilities as well. It can be seen from the mathematical connection ability test scores obtained by subjects in low student self efficacy groups tend to be lower than subjects in high and medium student self efficacy groups.

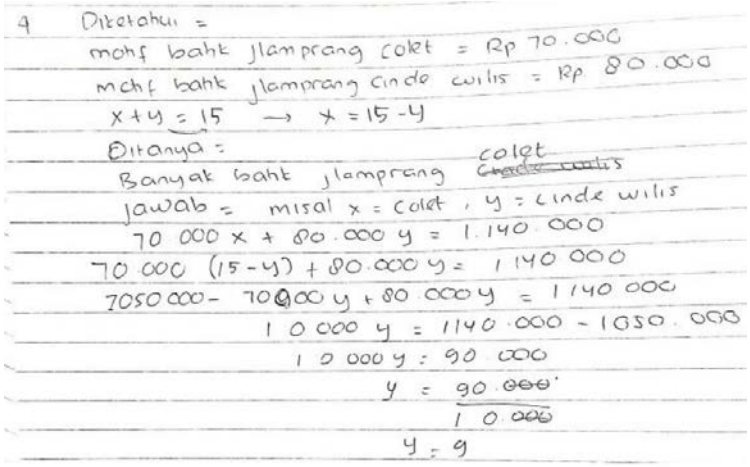

Figure 6. Answers to Subject E-20 from Indicator 4 Question Number 4

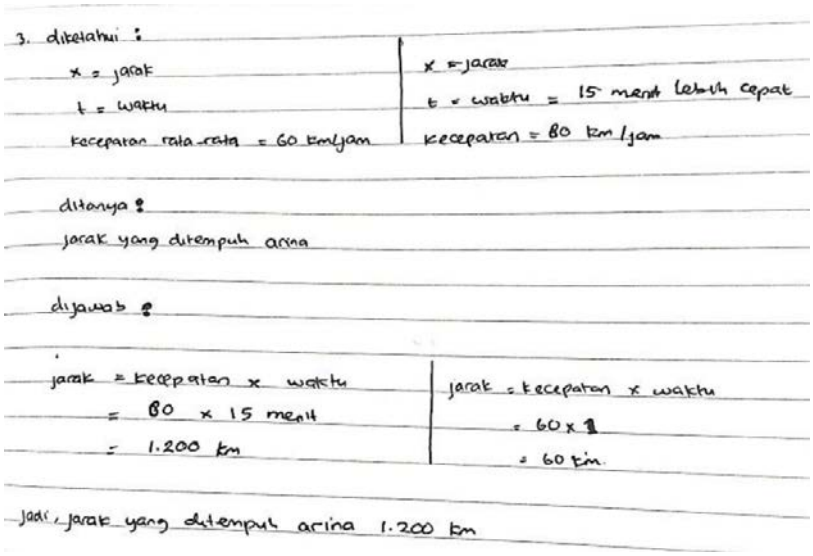

Figure 7. Answers to Subject E-05 from Indicator 3 Question Number 3

4. Conclusion

Based on the results of research and discussion, the following conclusions are obtained: (1) Proportion of students with mathematical connection abilities ≥ minimum criteria of mastery learning in CONINCON learning model with ethnomathematics nuances is more than the learning completeness limit, namely 75%; (2) students' mathematical connections ability in CONINCON learning model with ethnomathematics nuances are better than students' mathematical connections ability in problem based learning; (3) there is an influence of self efficacy on students' mathematical connection ability of 68.7%. (4) description of mathematical connection abilities viewed by students' self efficacy in CONINCON learning model with ethnomathematics nuances as follows: (a) subjects at high categories of self efficacy are able to fulfill all indicators of mathematical connection abilities; (b) subjects at medium self efficacy categories are less able on indicators of the connection of mathematics with sciences other than mathematics and indicators of the connection of mathematics with everyday life. (c) subjects at low categories of self efficacy are only fullfill an indicators of mathematical connection ability.

References

Baiduri, Putri, O. R. U., & Alfani, I. (2020). Mathematical Connection Process of Students with High Mathematics Ability in Solving PISA Problems. *European Journal of Educational Research*, *9*(4), 1527–1537. https://doi.org/10.12973/eu-jer.9.4.1527

Fadilah, R. R., Adiastuty, N., & Sumarni, S. (2021). ANALISIS KEMAMPUAN KONEKSI MATEMATIS SISWA PADA MATERI SEGIEMPAT DITINJAU DARI SELF-REGULATED LEARNING. *Jurnal Edukasi Dan Sains Matematika (JES-MAT)*, *7*(1), 17–30. https://doi.org/10.25134/jes-mat.v7i1.3699

Fitasari, N. P. D., Suniasih, N. W., & Agustika, G. N. S. (2019). Pengaruh Pola Asuh Orang Tua Terhdap Hasil Belajar Matematika dengan Efikasi Diri Sebagai Intervening. *International Journal of Elementary Education*, *3*(4), 404–412. https://doi.org/10.23887/ijee.v3i4.21313

Hasbi, M., Lukito, A., Sulaiman, R., & Muzaini, M. (2019). Improving the Mathematical Connection Ability of Middle-School Students through Realistic Mathematics Approach. *Journal of Mathematical Pedagogy (JoMP)*, *1*(1), 37–46. https://doi.org/10.26740/jomp.v1n1.p37-46

Isfayani, E., Johar, R., & Munzir, S. (2018). Peningkatan Kemampuan Koneksi Matematis dan Self-Efficacy Siswa melalui Model Pembelajaran Kooperatif Tipe Rotating Trio Exchange (RTE). *Jurnal Elemen*, *4*(1), 80–92. https://doi.org/10.29408/jel.v4i1.473

Iswara, R., Dewi, N. R., & Cahyono, A. N. (2021). Student Mathematic Connection Ability Through Ict Assisted Preprospec Learning Model. *Unnes Journal of Mathematics Education Research*, *10*(2), 122–128.

Kartika, Y. K., Pujiastuti, E., & Soedjoko, E. (2019). The Effectiveness of Project Based Learning with Creative Mind-Map Tasks for Improving Mathematical Connection Ability and Student Curiosity. *Unnes Journal of Mathematics Education*, *8*(2), 145–151. https://doi.org/10.15294/ujme.v8i2.31937

Kemendikbud. (2016a). *Permendikbud Nomor 21 Tahun 2016 Tentang Standar Isi Pendidikan Dasar dan Menengah*. Kemendikbud.

Kemendikbud. (2016b). *Permendikbud Nomor 22 Tahun 2016 Tentang Standar Proses Pendidikan Dasar dan Menengah*. Kemendikbud.

Kenedi, A. K., Helsa, Y., Ariani, Y., Zainil, M., & Hendri, S. (2019). MATHEMATICAL CONNECTION OF ELEMENTARY SCHOOL STUDENTS TO SOLVE MATHEMATICAL PROBLEMS. *Journal on Mathematics Education*, *10*(1), 69–80. https://doi.org/10.22342/jme.10.1.5416.69-80

Maulida, A. R., Suyitno, H., & Asih, T. S. N. (2019). Kemampuan Koneksi Matematis pada Pembelajaran CONINCON (Constructivism, Integratif and Contextual) untuk Mengatasi Kecemasan Siswa. *PRISMA, Prosiding Seminar Nasional Matematika*, *2*, 724–731.

Maulida, A. R., Suyitno, H., & Asih, T. S. N. (2022). Mathematical Connection Ability viewed from Cognitive Style and Gender in the CONINCON Learning (Constructivism, Integrative & Contextual). *Unnes Journal of Mathematics Education Research*, *11*(2), 127–134.

Mukhtari, Z., Yuliani, A., & Hendriana, H. (2019). ANALISIS PENGARUH SELF EFFICACY TERHADAP KEMAMPUAN KONEKSI MATEMATIK SISWA SMP PADA MATERI BANGUN RUANG SISI DATAR. *Jurnal Pembelajaran Matematika Inovatif*, *2*(5), 337–346.

Nugraha, A. A. (2018). Analisis Koneksi Matematis Siswa pada Materi SPLDV. *Suska Journal of Mathematics Education*, *4*(1), 59–64. https://doi.org/10.24014/sjme.v4i1.4579

Nugraheni, M. D., & Junaedi, I. (2019). The Mathematics Connection Ability of 8th Grade Students In Terms of Cultural Capital in Brain-Based Learning. *Unnes Journal of Mathematics Education*, *8*(2), 128–134. https://doi.org/10.15294/ujme.v8i2.32480

Nurafni, A., & Pujiastuti, H. (2019). Analisis Kemampuan Koneksi Matematis ditinjau dari Self Confidence Siswa: Studi Kasus Di SMKN 4 Pandeglang. *ANARGYA: Jurnal Ilmiah Pendidikan Matematika*, *2*(1), 27–33. https://doi.org/10.24176/anargya.v2i1.3013

OECD. (2022). *Mathematics Performance (PISA) (Indicator)*.

PISA. (2018). *Results Combined Executive Summaries*.

Rahmi, Febriana, R., & Putri, G. E. (2020). Pengaruh Self efficacy terhadap Pemahaman Konsep Matematika dengan Menerapkan Model Discovery Learning pada Siswa Kelas XI MIA 1 SMA N 5 Solok Selatan. *Edumatica: Jurnal Pendidikan Matematika*, *10*(1), 27–34.

Reksadini, M., Rochmad, R., & Junaedi, I. (2022). Mathematical Connection Ability Based on Self Confidence of Class XI Students in STEM-Based CONINCON Learning. *Unnes Journal of Mathematics Education Research*, *11*(1), 88–96.

Simamora, R. E., Saragih, S., & Hasratuddin. (2018). Improving Students' Mathematical Problem Solving Ability and Self efficacy through Guided Discovery Learning in Local Culture Context. *International Electronic Journal of Mathematics Education*, *14*(1), 61–72. https://doi.org/10.12973/iejme/3966