

## **The Correlation Between POE Learning Model And Critical Thinking Ability of Students In PAI And Budi Pekerti Subject**

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### **Abstract:**

*This research aims to find out: (1) The application of the Predict, Observe, and Explain (POE) learning model in the subject of Islamic Religious Education & Budi Pekerti class VII at SMP Negeri 2 Waru. (2) The level of critical thinking ability of students in the subject of Islamic Religious Education & Ethics class VII at SMP Negeri 2 Waru. (3) The correlation between the application of the Predict, Observe, and Explain (POE) learning model in Islamic Religious Education & BP subjects with an increase in the critical thinking skills of seventh grade students at SMP Negeri 2 Waru. The method used in this research is field research with a quantitative approach with correlational techniques. The population in this study amounted to 344 students and a sample of 60 students. The data collection techniques used are observation, documentation, and questionnaires. As for the instrument prerequisite test using validity and reliability tests and hypothesis testing using product moment correlation tests and significance tests. The results of this study indicate that the application of the POE model in PAI & BP subjects is in the good category with an average of 79%. The level of critical thinking skills of students in PAI & BP subjects in class VII of 70% is in the good category. And the correlation test results obtained  $r_{hitung}$  of 0.671. At the 1% and 5% significance levels the results of  $r_{count} > r_{table}$  so it can be concluded that  $H_0$  is rejected and  $H_a$  which reads there is a correlation between the application of the critical thinking mode and the critical thinking mode.*

**Keywords:** POE learning model, critical thinking skills, Islamic religious education.

### **Introduction**

Islamic Religious Education must improve not only academic knowledge, but also learners' character and critical thinking skills. All subjects, including PAI, should also improve and foster learners' critical thinking skills. It is this aspect that must be learnt and developed in schools and at various levels of education. According to Noer critical thinking is not only to search for answers, but also to deepen answers, facts from existing information. The act of deciding what to consider and what to do is also included in this. Critical thinking means thinking about arguments and reasons before making a decision.<sup>1</sup> It is very important for a person to constantly develop their thinking skills because it can improve life, see various ways of solving problems, make it easier for us to be fluent in thinking, generate many new ideas, and solve problems from various points of view. Critical thinking skills are essential the future of learners. To generate learners' understanding and critical thinking skills, teachers must actively use methods in learning activities. Understanding learning principles and developing effective strategies are essential for teachers to provide solutions for learners to achieve academic goals and learn better.<sup>2</sup>

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<sup>1</sup> I Wayan Sadia, *Model Pembelajaran Yang Efektif Untuk Meningkatkan Keterampilan Berfikir Kritis* (Program Pascasarjana, Universitas Pendidikan Ganesha, 2008).

<sup>2</sup> Haizatul Faizah and Rahmat Kamal, "Belajar Dan Pembelajaran," *Jurnal Basicedu* 8, no. 1 (2024): 466–76, <https://doi.org/10.31004/basicedu.v8i1.6735>.

A good teacher must have professional competence, including an understanding of the subject matter and key materials to be taught to learners.<sup>3</sup> To improve the quality of learning, teachers should concentrate on certain aspects such as accurate learning objectives, relevant and interesting materials, different learning methods, appropriate media, accurate and objective assessment, and active participation of learners in the classroom.

The Predict, Observe, Explain (POE) learning model is a dynamic approach used by teachers to help them plan and carry out learning activities.<sup>4</sup> The POE learning model is a conceptual or operational framework that uses systematic methods to enhance learners' collaboration with the teacher and their peers to gain understanding.

As a constructivism-based model, this model will be effective if learners are given opportunities to observe demonstrations by their own teachers or by peers chosen by the teacher. How learners create or explore their own knowledge is part of the concept of this model. Learners are now engaged and focused on the learning process because of the Islamic concept of the POE learning model. Humans should utilise their intelligence to consider everything in the universe, including themselves, because the Qur'an was written as a philosophy and a set of rules for humans. As Allah SWT said in verse 164 of Surah Al-Baqarah, it is:

إِنَّ فِي خَلْقِ السَّمُوتِ وَالْأَرْضِ وَاخْتِلَافِ اللَّيْلِ وَالنَّهَارِ وَالْفَلَكَ الَّتِي تَجْرِي فِي الْبَحْرِ بِمَا يَنْفَع النَّاسَ وَمَا أَنْزَلَ اللَّهُ مِنَ السَّمَاءِ مِنْ مَّاءٍ فَأَحْيَا بِهِ الْأَرْضَ بَعْدَ مَوْتِهَا وَبَثَّ فِيهَا مِنْ كُلِّ دَابَّةٍ وَتَصْرِيفِ الرِّيْحِ وَالسَّحَابِ الْمُسَخَّرِ بَيْنَ السَّمَاءِ وَالْأَرْضِ لَآيَاتٍ لِقَوْمٍ يَعْقِلُونَ

Based on the verse, the POE learning model is an active learning approach, where the learner perspective views learning as a process that learners do themselves, not by the teacher. This approach also views learning as a process that encourages introspection and learners' sense of responsibility, and views learning as an activity that is done by the learners themselves.

In the POE model, a series of problem-solving activities are carried out in three stages: observing or proving something (observe), making predictions or initial guesses (predict), and explaining the results of the analysis (explain). This method helps to know the learners' knowledge base, demonstrate their thinking ability, improve their speaking skills, and encourage learners to learn ideas they already know. It is expected that this model will improve learners' critical thinking skills by encouraging them to solve problems through research.<sup>5</sup>

## Method

The type of research method used in this study is field research with a quantitative approach, utilizing correlational techniques. Correlational studies test

<sup>3</sup> Rusman, *Model-Model Pembelajaran: Mengembangkan Profesionalisme Guru* (Rajawali Pers/PT Raja Grafindo Persada, 2011).

<sup>4</sup> Heni Mularsih Karwono and Heni Mularsih, "Belajar Dan Pembelajaran Serta Pemanfaatan Sumber Belajar," *Depok: Raja Grafindo Persada*, 2017.

<sup>5</sup> Tri Wiji Astuti, Joko Ariyanto, and Sri Dwiastuti, "Pengaruh Model Pembelajaran Predict Observe Explain (POE) Terhadap Kemampuan Berpikir Kritis Dan Keaktifan Belajar Siswa," *Jurnal Penelitian Sains Dan Pendidikan (JPSP)* 3, no. 1 (2023): 1–14, <https://doi.org/10.23971/jpsp.v3i1.4482>.

hypotheses by measuring several variables to determine which ones are related.<sup>6</sup> The population in this study consisted of 344 students from Class VII at SMP Negeri 2 Waru, with a minimum sample size of 10% of the population. Since it was not feasible for the researcher to study the entire population—due to time and cost constraints—and considering the likelihood that the population is relatively uniform, a sample of 60 students was selected to represent the whole. The data collection techniques used in this study were observation, documentation, and questionnaires. The questionnaires used Likert scale questions, with statements that could be either positive or negative in nature.<sup>7</sup>

The instrument prerequisite tests include validity and reliability tests. The analysis prerequisite test includes a normality test. Hypothesis testing is conducted using Pearson's product-moment correlation test to obtain a correlation value, which is then compared to the critical value at a 5% significance level. With  $N = 60$ , the critical value is 0.254. The interpretation of the correlation results can be referenced in Table 4: Interpretation of the Correlation Coefficient. Following this, the researcher conducts a significance test for the product-moment correlation using a t-test. The results are compared to the critical t-value at a 5% significance level, with degrees of freedom ( $df$ ) =  $n - 2$ , or  $60 - 2 = 58$ , yielding a t-table value of 2.002

## **Results and Discussion**

### **Data Analysis of the Application of Predict, Observe, and Explain (POE) Learning Model in class VII SMP Negeri 2 Waru**

Cooperative learning is one of the innovative approaches that is often applied by educators. This approach aims to create an interactive learning atmosphere, where active learners are at the centre of the learning process, while educators act as facilitators. The theory of constructivism proposed by Jean Piaget supports this learning model, emphasising that learners' thinking will be clearer and more logical when there is room for social interaction in the classroom, so they can discuss and exchange ideas with each other.<sup>8</sup> In addition, John Dewey, through his social psychology theory, argues that learners need to work together to solve complex social problems.<sup>9</sup>

Through various learning activities, this model provides more opportunities for students to learn and develop their skills optimally. In addition, the POE (Predict, Observe, Explain) learning model offers a dynamic approach, helping teachers to plan and implement learning activities more effectively.<sup>10</sup> The POE learning model is a conceptual or operational framework that uses systematic methods to enhance learners' co-operation with the teacher and their peers to gain understanding. According to Warsono and Hariyanto, the steps of POE learning are as follows:

a. Predict

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<sup>6</sup> Juliansyah Noor, *Metodologi Penelitian* (Jakarta: Kencana, 2011).

<sup>7</sup> Syofian Siregar, *Statistika Deskriptif Untuk Penelitian*, Edisi 1 Ce (Jakarta: Rajawali Pers, 2016).

<sup>8</sup> Dwi Priyo Utomo, "Model Pembelajaran Kooperatif; Teori Yang Mendasari Dan Prakteknya Dalam Pembelajaran Di Sekolah Dasar Dan Sekolah Lanjutan," *Jurnal Pendidikan Matematika* 1, no. 2 (2012): 1–10.

<sup>9</sup> Utomo.

<sup>10</sup> Karwono and Mularsih, "Belajar Dan Pembelajaran Serta Pemanfaatan Sumber Belajar."

At the beginning of the learning activity, the teacher will provide a media or experimental tool to students. They are then asked to make assumptions about what happens and the results that will be obtained from experimenting using the media or tools. During this process, learners provide explanations about the reasons for their predictions. The teacher does not limit learners' thinking, instead, they are given wide freedom to think about learning ideas that are relevant to their personal experience.<sup>11</sup>

b. Observe

Learners will use their five senses to make observations. In this step, learners are asked to make observations or experiments with the aim of proving the truth of their predictions. Experiments are expected to cause an imbalance between new assumptions and information coming from outside. To conclude, they will make repeated observations, measurements, analyses, and interpretations of data. To conclude whether learners' predictions are right or wrong, they must be practised and checked in the real world, for example, by conducting observations or experiments.

c. Explain

This step is the last step of the POE learning model. In this step, learners explain or describe the relationship between the hypothesis or initial prediction given with the knowledge gained when conducting experiments or observations. If the result of the prediction is correct, then learners will be more confident in their prediction. At this time, if the results of their experiments or observations are different from their initial predictions, then new knowledge from the results of the experiments conducted will be obtained by learners. In the sense that learners will face a transition from incorrect to correct. After analysing each item of the statement and each indicator, the next stage is to conduct a descriptive analysis of the variable application of the Predict, Observe, and Explain (POE) learning model. Therefore, it is necessary to first calculate the ideal score for variable X, then divide the score by the ideal score of variable X, and multiply by 100%. The ideal score can be obtained by the formula:

$$\text{Highest score} \times \text{number of question items} \times \text{number of respondents}$$

So the ideal score of variable X =  $4 \times 23 \times 60 = 5.520$ . Based on the questionnaire that has been distributed, the score of variable X is 4,385. Then, put into the descriptive percentage analysis formula, here:

$$P = \frac{F}{N} \times 100\%$$

$$P = \frac{4385}{5520} \times 100\% = 79\%$$

The results of these calculations are then interpreted according to the categories in the following table:

**Table 1. Score Interval Criteria**

Score Interval	Description
81% - 100%	Very good (A)
61% - 80%	Good (B)
41% - 60%	Good enough (C)
21% - 40%	Less Good (D)
<20%	Not good (E)

<sup>11</sup> Tantin Noor Aida, Subuh Anggoro, and Ana Andriani, "Analisis Berpikir Kritis Siswa Melalui Model Poe ( Predict-Observe-Explain )," *Jurnal Elementaria Edukasia* 2, no. 2 (2019): 164–72.

Based on the results of the calculations obtained and relating to the table of value interval criteria above, it can be concluded that the variable application of the POE learning model (X), with a score of 79% with 60 respondents is in the good category.

### **Analysis of Students' Critical Thinking Skills in the Subject of Islamic Education and Character Development (PAI & BP) for Grade VII at SMP Negeri 2 Waru**

Critical thinking is one of the most essential skills for successful problem solving, especially in the context of 21<sup>st</sup>-century skill development. In making significant decisions, individuals need to analyse and evaluate the situation at hand.<sup>12</sup> If a person encounters a problem, they start thinking. They face a situation that requires a solution, this situation encourages the individual to improve their current knowledge, understanding, and skills to find the right and appropriate way to solve the problem. As a result, the person concerned applies a stage known as thinking.<sup>13</sup> Higher-order thinking techniques like critical thinking also help children think critically and come to thoughtful conclusions.<sup>14</sup> In 21st century education, several critical thinking competencies are expected of learners, they are:<sup>15</sup>

- a. Learners must be able to reason effectively
- b. Learners can use systems thinking
- c. Learners can make judgements and decisions
- d. Learners can solve problems

Robert Ennis, a pioneer in research on critical thinking, states that critical thinking is a form of reflection of rational or thoughtful thinking.<sup>16</sup> According to him, an ideal critical thinker should master twelve critical thinking skills that can be grouped into five main aspects, are:

- a. *Elementary Clarification* (giving a simple explanation) which includes:
  - 1) Focusing on the question at hand, including the ability to identify the problem or question, find possible answers, and eliminate irrelevancies. In opinion analysis, it is important to be able to conclude the problem, identify the underlying rationale, and find aspects that are not related to the issue at hand.
  - 2) Try to clarify explanations by asking the right questions.
- b. *The basis for the decision* (determining the basis for decision-making) which includes:

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<sup>12</sup> Adhitya Rahardhian, "Kajian Kemampuan Berpikir Kritis (Critical Thinking Skill) Dari Sudut Pandang Filsafat," *Jurnal Filsafat Indonesia* 5, no. 2 (2022): 87–94, <https://doi.org/10.23887/jfi.v5i2.42092>.

<sup>13</sup> Alec Fisher, *Berpikir Kritis Sebagai Sebuah Pengantar* (Jakarta: Erlangga, 2009).

<sup>14</sup> Riza Kusumawati and Hermin Budiningarti, "Upaya Meningkatkan Keterampilan Berpikir Kritis Siswa Melalui Model Pembelajaran Inkuiri Terbimbing (Guided Inquiry) Pada Materi Kalor Kelas X SMA Negeri 4 Sidoarjo," *Jurnal Inovasi Pendidikan Fisika (JIPF)* 05, no. 03 (2016): 212–15.

<sup>15</sup> Bernie Trilling and Charles Fadel, "21st Century Skills: Learning for Life in Our Times," *Journal of Sustainable Development Education and Research* 2, no. 1 (2009): 243.

<sup>16</sup> Tang Lingying, "On the Cultivation of College Students' Critical Thinking Based on English Course Model," *Journal of Studies in Literature and Language*. 12, no. 3 (2016): 59–63, <https://doi.org/10.2991/emcs-17.2017.254>.

- 1) Consideration of the credibility of information sources.
- 2) Review and evaluation of observation reports.
- c. *Inference* (drawing conclusions) which includes:
  - 1) The deduction process and evaluation of the deduction results.
  - 2) The process of induction and evaluation of the results of induction
  - 3) Compilation and determination of value judgements.
- d. *Advanced clarification* (provide further explanation) which includes:
  - 1) Search for and consideration of relevant definitions of terms.
  - 2) Identification of existing hypotheses.
- e. *Supposition and integration* (estimating and combining) which includes:
  - 1) Considering arguments or questionable assumptions without letting them influence our thinking.
  - 2) Creating decisions by combining different skills and characteristics.

In line with efforts to improve students' critical thinking skills, the PAI and BP subject is an important component in shaping students' values. Rahman said in his article that Islamic Religious Education, according to Harun Nasution, aims to build a Muslim personality through the development of *akhlak karimah* and other elements. The goal is to produce individuals who are devoted and obedient to Allah SWT in performing worship.<sup>17</sup> Given the speed at which information travels, individuals urgently need teachable skills to help them identify issues in a variety of situations and at different stages of the learning process.<sup>18</sup>

According to the Ministry of National Education, PAI is a planned and conscious effort to prepare students to know, understand, and appreciate the teachings of Islam from its main sources, namely the holy books of the Qur'an and Hadith, as well as to have faith, piety, and noble character in practicing the teachings of Islam.<sup>19</sup> One's knowledge and faith must also be balanced, because someone has knowledge but no faith, so he will compromise the knowledge he has gained. Therefore, we need to create a balance between science and faith so that Allah SWT can increase our degree and get great benefits.

After analyzing each item of statement and each indicator, the next stage is to conduct a descriptive analysis of the critical thinking ability variable. Therefore, it is necessary to first calculate the ideal score for variable Y, then divide the score by the ideal score of variable Y and multiply by 100%. The ideal score can be obtained by the formula:

$$\text{Highest score} \times \text{number of question items} \times \text{number of respondents}$$

<sup>17</sup> Abdul Rahman, "Pendidikan Agama Islam Dan Pendidikan Islam: Tinjauan Epistemologi Dan Isi Materi," *Jurnal Eksis* 8, no. 1 (2012): 2055.

<sup>18</sup> Ely Syafitri, Dian Armanto, and Elfira Rahmadani, "Aksiologi Kemampuan Berpikir Kritis (Kajian Tentang Manfaat Dari Kemampuan Berpikir Kritis)," *Journal of Science and Social Research* 4, no. 3 (2021): 320, <https://doi.org/10.54314/jssr.v4i3.682>.

<sup>19</sup> Mokh Iman Firmansyah, "Pendidikan Agama Islam Pengertian Tujuan Dasar Dan Fungsi," *Jurnal Pendidikan Agama Islam -Ta'lim* 17, no. 2 (2019): 79–90.

So, the ideal score of variable X =  $5 \times 13 \times 60 = 3.900$ . Based on the questionnaire that has been distributed, the score of variable X is 2,763. Then to put into the descriptive percentage analysis formula, by:

$$P = \frac{F}{N} \times 100\%$$

$$P = \frac{2763}{3900} \times 100\% = 70\%$$

The results of these calculations are then interpreted according to the categories in the following table:

***Table 2. Score Interval Criteria***

Score Interval	Description
81% - 100%	Very Good (A)
61% - 80%	Good (B)
41% - 60%	Good enough (C)
21% - 40%	Less Good (D)
<20%	Not good (E)

Based on the results of the calculations obtained and linking to the table of value interval criteria above, it can be concluded that the critical thinking ability variable (Y) with a score of 70% with 60 respondents is in the good category.

### **Correlation between the application of the POE learning model and the critical thinking skills of Class VII at SMP Negeri 2 Waru**

PAI & BP is responsible for educating individuals who will later become good role models for others in various fields, including academics and professionalism, and other aspects. Critical thinking skills are also very important to be applied in PAI & BP learning to prepare students when facing difficulties and competitions in the future. Therefore, this allows for a symbiotic mutualism between PAI & BP and critical thinking. PAI as an effort to improve learners' critical thinking skills through the POE learning model. And critical thinking skills as a tool to identify information about PAI more deeply to achieve a proper understanding of religion and ethics. In knowing the answer to the associative formulation of the problem in the third problem formulation, researchers used Pearson's product moment correlation. To simplify the calculation, researchers used excel. So that the correlation number is obtained as follows:

**Table 3. Correlation Calculation Table of X and Y Variables**

Responden	Total X	Total Y	X2	Y2	XY
1	75	42	5625	1764	3150
2	61	36	3721	1296	2196
3	70	41	4900	1681	2870
4	82	49	6724	2401	4018
5	74	48	5476	2304	3552
6	80	50	6400	2500	4000
7	75	50	5625	2500	3750
8	64	39	4096	1521	2496
9	78	45	6084	2025	3510
10	69	41	4761	1681	2829
11	78	50	6084	2500	3900
12	83	50	6889	2500	4150
13	74	49	5476	2401	3626
14	69	44	4761	1936	3036
15	71	40	5041	1600	2840
16	74	41	5476	1681	3034
17	71	49	5041	2401	3479
18	72	45	5184	2025	3240
19	59	37	3481	1369	2183
20	76	50	5776	2500	3800
21	83	52	6889	2704	4316
22	77	51	5929	2601	3927
23	68	45	4624	2025	3060
24	60	38	3600	1444	2280
25	66	46	4356	2116	3036
26	67	44	4489	1936	2948
27	84	48	7056	2304	4032
28	77	52	5929	2704	4004
29	80	49	6400	2401	3920
30	76	47	5776	2209	3572
31	70	42	4900	1764	2940
32	78	45	6084	2025	3510
33	71	52	5041	2704	3692
34	75	57	5625	3249	4275
35	76	57	5776	3249	4332
36	73	44	5329	1936	3212
37	68	40	4624	1600	2720
38	73	47	5329	2209	3431
39	75	51	5625	2601	3825
40	77	48	5929	2304	3696



41	70	52	4900	2704	3640
42	75	58	5625	3364	4350
43	80	50	6400	2500	4000
44	73	52	5329	2704	3796
45	75	47	5625	2209	3525
46	74	43	5476	1849	3182
47	68	44	4624	1936	2992
48	81	49	6561	2401	3969
49	72	48	5184	2304	3456
50	76	50	5776	2500	3800
51	72	41	5184	1681	2952
52	69	41	4761	1681	2829
53	66	37	4356	1369	2442
54	75	45	5625	2025	3375
55	76	48	5776	2304	3648
56	77	45	5929	2025	3465
57	75	45	5625	2025	3375
58	63	36	3969	1296	2268
59	71	41	5041	1681	2911
60	68	40	4624	1600	2720
Jumlah	4385	2763	322321	128829	203082

After that, it is done in the product moment correlation formula as follows:<sup>20</sup>

$$\begin{aligned}
 r_{xy} &= \frac{N \sum XY - (\sum X)(\sum Y)}{\sqrt{\{N (\sum X^2) - (\sum X)^2\} \{N (\sum Y^2) - (\sum Y)^2\}}} \\
 &= \frac{60 (203082) - (4385)(2763)}{\sqrt{\{60 (322321) - (4385)^2\} \{60 (128829) - (2763)^2\}}} \\
 &= \frac{(12184920) - (12115755)}{\sqrt{(19339260) - (19228225) (7729740) - (7634169)}} \\
 &= \frac{69165}{\sqrt{(111035) (95571)}} \\
 &= \frac{69165}{\sqrt{10611725985}} \\
 &= \frac{103013}{69165} \\
 &= 0,6714
 \end{aligned}$$

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<sup>20</sup> Artha Mahindra Diputera, *Statistik Pendidikan* (Yogyakarta: Bintang Semesta Media, 2022).

Based on the calculation value above, a value of 0.6714 is obtained while at the 5% significance level with  $N = 60$  it is known to be 0.254. Because it is greater than thus it can be concluded that  $H_0$  is rejected and  $H_a$  is accepted, meaning that there is a significant correlation or relationship between the application of the POE learning model and the critical thinking skills of students in PAI & BP subject in class VII SMP Negeri 2 Waru in the 2024/2025 school year.

Then, to be able to provide an interpretation of the interpretation of the correlation coefficient found between variables based on the results of calculations using the Product Moment Correlation analysis, it is obtained which is included in the strong category. This can be seen in the correlation coefficient interpretation table. So variable X, namely the application of the POE learning model, has a strong relationship with the critical thinking skills of students as variable Y.

**Table 3. Interpretation of Correlation Coefficient**

Coefficient Interval	Level of Relationship
0,00 – 0,199	Very Low
0,20 – 0,399	Low
0,40 – 0,599	Moderately Strong
0,60 – 0,799	Strong
0,80 – 1,000	Very Strong

Furthermore, to determine the significance of the correlation between the two variables is done in two ways, namely:

1. Consult  $r$  product moment with  $r_{tabel}$  at 1% and 5% significance levels. In the calculation of the product moment formula previously obtained  $r_{hitung}$  of 0,671 with  $N = 60$  the value of  $r_{tabel}$  1% = 0,330 while  $r_{tabel}$  5% = 0,254. So, the value of  $r_{hitung} > r_{tabel}$  so it can be concluded that  $H_0$  is rejected and  $H_a$  is accepted.
2. Using the product moment correlation significance test formula, namely the 't' test, as follows:

$$\begin{aligned}
 t &= \frac{r \sqrt{n-2}}{\sqrt{1-r^2}} \\
 &= \frac{0,6714 \sqrt{60-2}}{\sqrt{1-0,6714^2}} \\
 &= \frac{(0,6714) (7,615)}{\sqrt{1-0,450}} \\
 &= \frac{5,112711}{\sqrt{0,55}} \\
 &= \frac{5,112711}{0,741619} \\
 &= 6,894
 \end{aligned}$$

Based on the calculation of the significance test above, it is obtained by 6.894 while at the level of significance obtained 5% with  $dk = n-2$ , namely  $60-2 = 58$ ,  $t_{tabel} = 2,002$  is obtained. So that it is obtained  $t_{hitung} > t_{tabel}$  or  $6,894 > 2,002$  which means that  $H_a$  is accepted and  $H_0$  is rejected. To determine the amount of correlation or relationship between the application of the POE learning model (X) and the critical thinking skills of students (Y) can be done through the analysis of the coefficient of determination, then the calculation process is carried out with the formula:

$$\begin{aligned}\text{Coefficient of determination} &= r^2 \times 100\% \\ &= (0,6714)^2 \times 100\% \\ &= 0,450 \times 100\% \\ &= 45\%\end{aligned}$$

This showed that 45% of the relationship between the application of the POE learning model (X) and the critical thinking skills of students (Y). So that the correlation between the application of the POE learning model and the critical thinking skills of students in the strong category is 0.671. Then, with the 't' test analysis, the  $t_{hitung}$  is obtained at 6.894, and the coefficient of determination is 45%.

## Conclusion

The application of the Predict, Observe, and Explain (POE) learning model is good for PAI & BP subject. This is reinforced by the analysis of the overall questionnaire average on the application of POE learning model in PAI & BP class VII at SMP Negeri 2 Waru. It is known that 79% with 60 respondents in the good category. Then, critical thinking ability of them is included in the good category. This is reinforced by the analysis of the average critical thinking ability questionnaire of 70% with 60 respondents in the good category.

There is a strong correlation between the application of the POE learning model and the critical thinking skills of students in PAI & BP class VII at SMP Negeri 2 Waru. This is evidenced by the results of the correlation test analysis  $r_{hitung}$  of 0,671. At the 1% and 5% significance levels the results of  $r_{hitung} > r_{tabel}$  so it can be concluded that  $H_0$  is rejected and  $H_a$  which reads there is a correlation between the application of the Predict, Observe and Explain (POE) learning model and the critical thinking skills of students in PAI & BP class VII subjects at SMP Negeri 2 Waru is accepted.

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