ICARE Learning Model: Its Effect on Learning Outcomes

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ABSTRACT

This research discusses the influence of the Introduction, Connection, Application, Reflection, and Extension (ICARE) learning model on the learning outcomes of class IX students at MTsN 1 Sidenreng Rappang. The aim of the research is to investigate the influence of the ICARE learning model. The type of research used is a quasi-experiment using a non-equivalent control group design. The samples used were divided into two classes: class IX A as the experimental class and class IX B as the control class, both of which were chosen using the purposive sampling technique. Instruments included learning outcome tests, product assessment sheets, and presentation assessment sheets, as well as lesson plans (RPP). The data analysis techniques used were descriptive analysis and inferential analysis. Based on the research conducted, the experimental class showed an average cognitive learning outcome score of 84.28, whereas the control class scored 75.24. Meanwhile, the students' psychomotor learning outcome score was 87.38 in the experimental class and 81.07 in the control class. The significance value obtained is tcount 0.000<0.05. There is a notable disparity in learning outcomes between students taught with the ICARE learning model and those taught without. The ICARE learning model can enhance students' interest in and comprehension of learning activities, including knowledge and skills.

Keywords: Cognitive, Introduction, Connection, Application, Reflection, and Extension (ICARE) model, learning outcomes, psychomotor

1). INTRODUCTION

Education can be defined as activities to guide, direct, and provide assistance aimed at the maturity of students, or help students be able to solve the problems they face in everyday life. Education can also be interpreted as activities carried out to gain experience; this experience will help students interact with their environment (Ahmad, 2011). Education is an effort carried out with the hope that students will have intelligence, personality, good morals, and skills that are useful to themselves and others. The primary aim of education is to form excellent character and personality in students for the welfare of the students themselves and the nation's welfare. Students who are good, have good morals, a good personality and character, and have devotion to Allah SWT will have a positive impact on the welfare of the country (Hilda, 2014).

Education always changes along with changing times; therefore, education always requires efforts to improve and improve quality in line with the increasing needs and demands of society. The abilities that need to be mastered by future generations are not only the emphasis on mastering material and routine thinking but also the ability to communicate, be creative, and think clearly and critically. Schools are expected to facilitate students in improving the quality of education through the teaching and learning process (Ketut, 2019).

Based on interviews with students regarding food biotechnology material, they know the theory but find it difficult to apply this theory or knowledge in everyday life. Educators at these schools certainly hope for a learning model that can help students be able to apply the learning material that they receive in everyday life. Subject, which aim to improve students' skills, using conventional learning models makes learning objectives challenging to achieve.

Good teaching and learning activities are activities that can increase students' interest in participating in the learning process. Therefore, to create a learning atmosphere that students enjoy and make it easier for them to receive the material presented, an educator must be able to apply a learning model that is interesting and involves students in every learning process so that students play an active role and easily accept the material that will be presented.

Teachers can use the Introduction, Connection, Application, Reflection, and Extension (ICARE) learning model, which can help students gain more knowledge about a subject while also developing the skills necessary to apply what they have learned to real-world situations. In addition, this learning approach can enhance students' capacity to apply critical thinking to the tasks they complete (Tri, 2022). The Introduction, Connection, Application, Reflection, and Extension (ICARE) learning model directs students to be more active in the learning process, teaches students to think critically, and trains skills. Apart from that, one advantage of this ICARE learning model is that educators act as facilitators and motivators who stimulate students to be more confident in participating in each learning process (Sunaryo et al., 2015).

The application of the ICARE learning model has five stages, namely introduction, explaining the things that will be learned and the competencies that will be achieved. Connection, linking the learning material that will be carried out with previous experiences of students. Application, making a food biotechnology product, reflection, presentation of product results and extensions, and additional assignments in questions. This research aims to determine the effect of the ICARE learning model on student learning outcomes in food biotechnology material.

2) METHODS

The type of research used is quasi-experimental research (Quasy Experiment). This design has a control group but cannot fully function to control external variables that influence the implementation of the experiment. This research uses a control group as a comparison of the treatment of the experimental group (Fatmah et al., 2016). This research uses two types of variables: independent and dependent variables. The independent variable is the learning model (ICARE), while the dependent variable is student learning outcomes on food biotechnology material.

The research design used is a nonequivalent control group design; this design consists of two groups that were then given a pretest and posttest. The learning treatment in the group experiment was taught using the introduction, connection, application, reflection, and extension (ICARE) learning model, while in group control was taught without the model. The control class was taught using a conventional model, namely the lecture method.The lecture method itself is a common way used to deliver lessons to students or to practice theories that have been taught, with the aim of achieving learning objectives. The sampling technique in this research uses a purposive sampling technique, which is a sampling technique determined by the researcher with various considerations. The considerations made in sampling depend on the needs of the research to be carried out (Muh. Fitrah & Lutfiyah, 2017). The number of students in one class is one thing that needs to be considered, and the classes used as samples must have the same number of students. This research used a sample of two classes. The first class as an experiment was class IX A with 29 people and class IX B as a control class with 29 students. The research instrument in this study consists of tests, which will be administered to the participants as pretests and posttests. The pretest questions will be given to the students before the learning process begins, and the posttest questions will be given to the students after the learning process is completed. The total number of questions provided to the students will be 25, performance assessment, which is used to assess students' skills, and lessons plan (RPP)

The research procedure begins with the preparation stage, where the researcher prepares the learning tools that will be used during the process, such as the syllabus, lesson plans, and other needs.

Next is the implementation stage, namely the learning process stage, which begins with giving a pretest and continues with the learning process, which includes five stages of implementing the learning model: introduction, connection, application, reflection, and extension (ICARE). The next stage is giving a posttest with the aim of comparing student learning outcomes with the previous pretest. This is then continued with the data collection stage, where pre-test and post-test data are collected for analysis. The data collection stage is carried out by taking data in the form of learning test results, which are used to measure students' cognitive abilities in learning. After that, the data analysis stage and report preparation are carried out by processing the data that has been collected. This research uses data processing techniques using descriptive and inferential data analysis.

3) RESULTS AND DISCUSSION

3 .1 Results of Descriptive Statistical Analysis

Table 1. Pretest and Posttest Analysis of Experimental Class and Control Class

Statistics	Expeerimental class		Control class	
	Pretest	*Postets*	*Pretest*	*Postest*
Maximum score	48	96	48	88
Minimum score	8	68	16	60
Average score	33,24	84,28	32,55	75,24
Standard deviation	9,862	7,851	9,485	8,919
Variance	97,261	61,635	89,970	79,547

Based on Table 1, it can be seen that the experimental class, namely class IX A, shows an average pretest score of 33.24 with a maximum score of 48, a minimum score of 8, a standard deviation of 9.862, and a variance of 97.261. The average posttest score was 84.28 with a maximum score of 96, a minimum score of 68, a standard deviation of 7.851, and a variance of 61.635. Apart from that, the control class, namely class IX B, showed an average pretest score of 32.55 with a maximum score of 48 and a minimum score of 16, a standard deviation of 9.485 and a variance of 89.970, while the posttest average score was 75.24 with The maximum value is 88, the minimum value is 60, the standard deviation is 8.919 and the variance is 79.547.

Table 2. Analysis of Psychomotor Learning Results for Experimental Class and Control Class

Statistics	Experimental class	Control class
Maximum score	94	90
Minimum score	80	65
Average score	87,38	81,7
Standard deviation	3,968	6,129
Variance	15,744	37,567

Based on Table 2, it can be seen that the experimental class, namely class IX A, shows an average value of 87.38 with a maximum value of 94, a minimum value of 80, a standard deviation of 3.968, and a variance of 15.744. Apart from that, the control class, namely class IX B, showed an average value of 81.7 with a maximum value of 90 and a minimum value of 65, a standard deviation of 6.129 and a variance of 37.567.

3 .2 Results of Inferential Statistical Analysis

a. Normality test

Table 3. Normality Test Results for Cognitive Learning Results

Shapiro-Wilk				
Class	*Statistic*	*Df*	*Sign*	*Description*
Eksperimental *Pretest*	0,950	29	0,181	
Eksperimental *Postest*	0,935	29	0,075	Normally distributed
Control *Pretest*	0,941	29	0,108	
Control *Postest*	0,932	29	0,061	

Based on Table 3, the results of the analysis using the Shapiro-Wilk test with the help of the Statistical Product and Service Solution (SPSS version 27) software program on data from the experimental group (IX A) which was taught using the ICARE learning model, obtained a sign value = 0.181 in the pretest and in The posttest obtained a value of sign = 0.075, while the value of α = 0.05, this shows that sign > α, which means that the learning outcome data for the experimental class (IX A) taught using the ICARE learning model is normally distributed. The results of the analysis for the control class (IX B) which was taught without using the ICARE learning model, obtained a sign value = 0.108 in the pretest and in the posttest a sign value = 0.061, while the value α = 0.05, which means the learning outcomes data for the control class (IX B) which was taught without using the ICARE learning model, was normally distributed, so that the data from both classes, namely the experimental class (IX A) and the control class (IX B) were normally distributed.

Table 4. Normality Test Results for Psychomotor Learning Results

Shapiro-Wilk				
Class	*Statistic*	*Df*	*Sign*	*Description*
Eksperimental	0,942	29	0,111	Normally distributed
Control	0,933	29	0,066	

Based on Table 4, the results of the analysis using the Shapiro-Wilk test with the help of the Statistical Product and Service Solution (SPSS version 27) software program on data from the experimental group (IX A) which was taught using the ICARE learning model, obtained a sign value = 0.111 while the value α = 0.05, this shows that sign > α, which means that the psychomotor learning outcome data for the experimental class (IX A) taught using the ICARE learning model is normally distributed. The results of the analysis for the control class (IX B) which was taught without using the ICARE learning model, obtained a sign value = 0.066 while the α value = 0.05 which means psychomotor learning outcome data for the control class (IX B) which was taught without using the ICARE learning model , is normally distributed, so the data from the two classes, namely the experimental class (IX A) and the control class (IX B) is normally distributed.

b. Homgeneity test

The homogeneity test is carried out to determine whether the sample used was taken from a homogeneous population or not.

Table 5. Homogeneity Test Results for Control and Experimental Classes (Cognitive)

Levene Statistic	Df1	Df2	Sign	Description
0,412	3	112	0.745	Homogeneou s

Based on Table 5, the results of the homogeneity test analysis using the Statistical Product and Service Solution (SPSS version 27) software program obtained a sign value of 0.745 while the α value was 0.05, so the sign value > α. This means that the two groups come from a homogeneous population.

Table 6. Homogeneity Test Results for Control and Experimental Classes (Psychomotor)

Levene Statistic	Df1	Df2	Sign	Description
0,412	6	20	0.701	Homogeneou s

Based on Table 6, the results of the homogeneity test analysis using the Statistical Product and Service Solution (SPSS version 27) software program obtained a sign value of 0.701 while the α value was 0.05, so the sign value > α. This means that the two groups come from a homogeneous population.

c. Hypothesis test

Hypothesis testing was carried out to determine whether there was an influence of the ICARE learning model on student learning outcomes.

Tabel 7. Hypothesis Test Results Cognitive Learning Outcome Data

	Levene's Test for Equility of Variances		t-test for Equality of Means		
	F	Sign	t	df	Sign (2tailed)
Equal Variances	0,596	0,443	4,095	58	<0.000

Asssumed					
Equal Variances non Asssumed			4,095	55,113	<0.000

Based on Table 7, it is found that the significant value in hypothesis testing using the Statistical Product and Service Solution (SPSS version 27) software program is sign (2-tailed) = 0.000. A study is said to have a proven hypothesis if the significant value is smaller than 0.05 (sign < 0.05), where H0 is rejected and H1 is accepted, so the hypothesis in this study can be said to be proven because 0.000 < 0.05 or by looking at the tcount of 4.095 while ttable is 2.003, thus t count > t table.

Tabel 8. Hypothesis Test Results Psychomotor Learning Outcome Data

	Levene's Test for Equility of Variances		t-test for Equality of Means		
	F	Sign	t	df	Sign (2tailed)
Equal Variances Asssumed	43,018	0,000	6,090	58	<0.000
Equal Variances non Asssumed			6,090	29	<0.000

Based on Table 8, it is found that the significant value in hypothesis testing using the Statistical Product and Service Solution (SPSS version 27) software program is sign (2-tailed) = 0.000. A study is said to have a proven hypothesis if the significant value is smaller than 0.05 (sign < 0.05), where H0 is rejected and H1 is accepted, so the hypothesis in this study can be said to be proven because 0.000 is <0.05 or by looking at the tcount of 6,090 while t table is 2,003, thus t count > t table.

3.3 Learning Outcomes of Students taught using the ICARE Learning Model

The outcomes of cognitive learning among ninth-grade students in the Food Biotechnology class at MTsN 1 Sidenreng Rappang, utilizing the ICARE learning model, reveal notable success. The study assessed 25 students, with 21 of them meeting the Minimum Completeness Criteria (KKM) set at 75. This achievement reflects a strong performance by the majority of the students. Only four students did not meet the KKM, indicating that a high proportion of the cohort successfully grasped the material. The overall average posttest score for these students was 84.28, which falls into the 'good' performance category. This impressive result underscores the effectiveness of the ICARE learning model in enhancing students' cognitive understanding in food biotechnology.

Further analysis of psychomotor learning outcomes for the same cohort confirms the ICARE model's efficacy. All 29 students achieved scores exceeding the Minimum Completeness Criteria (KKM = 75), demonstrating the model's success across all assessed individuals. The average psychomotor learning score was 87.38, also categorized as 'good,' highlighting the students' proficiency and the model's effectiveness in developing practical skills. These findings collectively affirm that the ICARE learning model is effective in improving both cognitive and psychomotor abilities, specifically in the context of food biotechnology education at MTsN 1 Sidenreng Rappang.
To enhance learning outcomes, it is crucial to implement an appropriate learning model that actively engages students. Active participation is essential as it allows students to gain hands-on experience and conduct experiments, which increases their interest and supports the achievement of learning objectives (Triatno, 2014). The ICARE learning model excels in this regard by involving students in interactive and practical activities. This model encourages students to engage deeply with the content through various stages, ensuring they are not passive recipients of information but active contributors to their learning process.

In class IX A, the ICARE model facilitated greater student engagement by incorporating relevant learning media. The model used familiar food biotechnology products, such as tempeh, sticky rice tape, cassava tape, and yogurt, which students recognized but had limited knowledge about their production processes. This familiarity with the products piqued students' curiosity and motivated them to participate actively in the learning process. Despite their prior knowledge of the products, the unfamiliarity with production methods provided a new learning experience, enhancing their interest and involvement.One of the key stages of the ICARE model, Application, significantly contributed to this active participation. During this stage, students were required to collaborate to create designated biotechnology products. This collaborative effort involved documenting the stages of product creation, which served as evidence of their genuine work. This documentation process not only reinforced students' understanding but also encouraged them to take ownership of their learning. By working together to complete tasks and solve problems, students developed practical skills and gained a deeper appreciation of the subject matter.

The ICARE model's emphasis on application and collaboration aligns with contemporary educational theories that advocate for student-centered learning. By engaging students in hands-on activities and problem-solving tasks, the model fosters a more dynamic and interactive learning environment. This approach allows students to apply previously acquired knowledge and integrate new information, facilitating a more comprehensive understanding of the material. The model also promotes the development of critical thinking skills, as students are encouraged to analyze, evaluate, and synthesize information in practical contexts. Furthermore, the ICARE model helps students improve their communication skills and teamwork abilities. At each stage of the model, students are encouraged to collaborate with their peers, share ideas, and solve problems collectively. This collaborative approach not only enhances their ability to work effectively in groups but also fosters better communication skills. As students engage in discussions and joint activities, they develop the ability to express their ideas clearly, listen to others, and contribute constructively to group efforts.

The model's focus on active collaboration and problem-solving also supports the development of students' critical thinking skills. By working together to tackle complex problems and create innovative solutions, students are exposed to diverse perspectives and approaches. This exposure helps them refine their analytical and evaluative skills, leading to a deeper understanding of the subject matter. The ability to think critically and solve problems effectively is essential for academic success and personal growth, making the ICARE model a valuable tool for enhancing these competencies.

Overall, the ICARE learning model has demonstrated significant effectiveness in improving students' cognitive and psychomotor learning outcomes in the Food Biotechnology class at MTsN 1 Sidenreng Rappang. The model's emphasis on active participation, practical application, and collaborative problem-solving has proven to be highly beneficial in engaging students and supporting their learning achievements. By incorporating familiar and relevant learning media, the ICARE model captures students' interest and motivates them to participate actively in their education. The positive outcomes observed in both cognitive and psychomotor domains underscore the model's success in enhancing students' understanding, skills, and overall performance.

In conclusion, the implementation of the ICARE learning model offers a promising approach to improving educational outcomes. By fostering active participation, collaboration, and practical application, the model effectively supports students in achieving their learning goals and developing essential skills. The success observed in the Food Biotechnology class at MTsN 1 Sidenreng Rappang serves as a testament to the model's effectiveness and provides a valuable example of how innovative teaching approaches can enhance student learning.

3.4 Learning Results of Students Who Were Taught Without Using the ICARE Learning Model

The academic performance of ninth-grade students in the Food Biotechnology class at MTs Negeri 1 Sidenreng Rappang, where the ICARE learning model was not employed, presents a range of outcomes. Among the 29 students assessed, 13 fell below the Minimum Completeness Criteria (KKM = 75), indicating areas where improvements are needed. On the positive side, 16 students met or exceeded the KKM threshold, resulting in an average posttest score of 75.24. This average categorizes their overall performance as 'good,' although there is variability in the individual results achieved by the students.

Focusing on the psychomotor learning outcomes within this context, students who were taught without the ICARE learning model displayed varied results. Four students did not reach the Minimum Completeness Criteria (KKM = 75), suggesting potential areas for enhancement in their psychomotor skills. Despite this, the average score for this group was 81.07, reflecting commendable performance within the set criteria. This demonstrates that while the approach used was not entirely optimal, there were still positive aspects in the achievement of the students' practical skills.

The results obtained from the control class reveal that the learning process was less effective compared to the experimental class. This reduced effectiveness was largely due to the lower levels of student activity and participation in the learning process. In the control class, the learning was conducted primarily through a lecture method, where students listened to explanations and then presented on the subject of food biotechnology products. This stage was also part of the experimental class; however, in the control class, students were only asked to create the product after listening and noting down the steps. They then discussed their findings with their peers and presented them.

The significant difference in the learning processes highlights that traditional lecture-based methods may not be sufficient to improve student learning outcomes effectively. The lack of direct involvement in practical activities may diminish students' understanding and skills related to the subject matter. Students who are less actively engaged in the learning process are likely to be less motivated and interested in the material, which can hinder their achievement of optimal learning outcomes. To address these issues, it is crucial to apply a more interactive and participatory learning model. Effective learning models should engage students actively in every stage of the learning process. This includes providing opportunities for students to participate directly in experiments, discussions, and practical activities relevant to the subject matter. Such an approach ensures that students gain not only theoretical knowledge but also practical experience, which can reinforce their understanding of the material.

Innovative learning models can boost students' enthusiasm for learning and reduce the monotony that may arise from traditional teaching methods. A learning model that involves students directly in activities related to the subject matter can increase their interest and encourage active participation. According to Ni Putu et al. (2019), a learning model that actively involves students in the learning process can enhance their engagement and, ultimately, their learning outcomes. Therefore, implementing an appropriate learning model that aligns with the subject matter and meets students' needs is essential for improving the effectiveness of the learning process. The ICARE model, for example, offers a more participatory and practical approach that can enhance student engagement and learning outcomes. By applying the right model, it is expected that students will participate more actively in the learning process, achieve a better understanding of the material, and realize improved learning outcomes.

Overall, selecting and applying a learning model that is suited to the students' needs and the subject matter plays a crucial role in enhancing the effectiveness of the learning process. Models that are more interactive and participatory can help students become more engaged, motivated, and successful in the subjects they are studying.

4.3 The Effect of Implementing the ICARE Learning Model on Student Learning Outcomes

The results of this research indicate that the application of the ICARE learning model to food biotechnology material can improve student learning outcomes. The analysis, using an independent sample t-test, revealed a significant influence on student learning outcomes when taught with the ICARE learning model. The obtained p-value of 0.000 is less than the significance level (α), leading to the rejection of the null hypothesis (H0) and acceptance of the alternative hypothesis (H1). This indicates a noteworthy impact on student learning outcomes through the application of the ICARE learning model. Furthermore, if we look at the posttest average for experimental class students, it is 84.28 with a pretest average of 33.24, while the posttest average for control class students is 75.24, with a pretest of 32.55.

The most important stage in this learning process is application (application), because students are expected to apply the material they have learned in everyday life. As in this study, researchers chose food biotechnology material, which is certainly familiar to students. Students are directed to make one of the food biotechnology products, and with this learning process, they can apply this knowledge in their daily lives. This is in accordance with the theory put forward by Faridah et al. (2021) which states that with a learning process at the application stage, namely making a product, it can train students to increase creativity and innovation, train students' skills, and train students to be more valuable by filling their free time with useful things. Stages that are no less important are reflection and extension, where students are asked to review what they have done, and by doing this, students can deepen their learning for the future. This is under the statement from Helyer (2015) in Chang, B. (2019). Meanwhile, at the extension stage, students are asked to deepen their knowledge. In this way, they can increasingly connect with what they have practiced when carrying out biotechnology practices. In this stage, students are asked to work on questions related to achieving learning objectives. According to Saputri, M., Elisa, E., and Nurlianti, S. (2022), a learning process that constructs its own knowledge can motivate students to have a passion for learning; besides that, it can improve cognitive abilities and train high-level thinking abilities.

Meanwhile, in the control class, without implementing the ICARE learning model, learning outcomes were lower compared to the experimental class. This is because the learning process is centered on educators, so students are not actively participating in learning. Abdurrahman (2012) proposed the theory that low student learning outcomes occur due to the implementation of a conventional learning process. In this approach, the learning is teacher-centered, and students only listen, leading to unsatisfactory learning outcomes.According to Slameto, there are several factors that affect students' learning outcomes, namely internal and external factors. Internal factors include health, interest, talent, and motivation. External factors include family, school, and community. One external factor that affects students' learning outcomes is the teaching method. If the method used is likely to be boring, students will struggle to understand the learning material, which can lead to difficulties in achieving learning objectives. Therefore, educators must be able to apply appropriate teaching models that can capture students' attention and involve them directly in the learning process, so that the learning objectives can be achieved.

The learning process for class IX B (control), which did not apply the ICARE learning model, was carried out through several stages. The educator explained the material on food biotechnology, and the students listened. After that, the students were divided into 4 groups and instructed to watch and observe a presentation on the process of making food biotechnology products. Each group took notes on the steps involved in producing the predetermined product. The students were given the opportunity to present their summaries of the steps for making food biotechnology products, and other groups were allowed to respond if there were any points that were not fully understood.

In this study, differences were observed between students taught using the ICARE learning model and those taught without using the ICARE model. Students taught using the ICARE model appeared to better understand each procedure presented, and they also understood the benefits of the biotechnology products. In contrast, in the control class, students seemed to have a less clear grasp of what they were presenting, as they only summarized the procedures from the presentation shown. Students taught without the ICARE model also appeared less enthusiastic about giving their presentations.

Based on the above description, it can be concluded that the difference in students' learning outcomes is due to the different treatments between the experimental class taught using the ICARE learning model and the control class taught without the ICARE model. This study demonstrates that the application of the ICARE learning model can improve students' learning outcomes. This is evidenced by the significantly higher posttest results in the experimental class compared to the posttest results in the control class.

4). CONCLUSIONS

In conclusion, the cognitive learning outcomes for class IX students in Food Biotechnology at MTsN 1 Sidenreng Rappang, who were taught using the ICARE learning model, demonstrated a notable average posttest score of 84.28 in the very good category. Additionally, their psychomotor learning outcomes achieved an average of 87.38 in the good category. On the other hand, students in the same class who were taught without the ICARE learning model obtained cognitive learning outcomes with an average posttest score of 75.24 in the good category, and their psychomotor learning outcomes averaged 81.07 in the good category.

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REFERENCES

Abdurrahman, Mulyono (2010). Anak Berkesulitan Belajar.Jakarta: Rineka Cipta.

Ainissyifa, Hilda (2014). Pendidikan Karakter dalam Perspektif Pendidikan Islam. Jurnal Pendidikan Universitas Garut.

Chang, B. (2019). Reflection in learning. Online Learning, 23(1), 95-110.

Faridah., Amelia, Indah., Hendaryati, Neni (2021). Pembelajaran Produktif Kreatif dan Kewirausahaan Melalui Pemanfaatan Business Center. Magelang: Pustaka Rumah Cinta,

Fauziah, Fatmah., Setiawan, Deddy., & Rahadian, Dian (2016). Efektivitas Penggunaan Multimedia Interaktif terhadap Motivasi dan Hasil Belajar Siswa di SMP pada Mata Pelajaran IPS. JTEP-Jurnal Teknologi Pendidikan Dan Pembelajaran 1(1), 26–37.

Fitrah, Muh., & Lutfiyah (2017).Metodologi Penelitian; Penelitian Kualtatif, Tindakan Kelas & Studi Kasus. Sukabumi: CV Jejak.

Dewi, Ni Putu Rosma, Ardana, I Made., & Sariyasa. (2019).Efektifitas Model ICARE Berbantuan Geogebra untuk Meningkatkan Kemampuan Pemecahan Masalah Matematika Siswa. Jurnal Nasional Pendidikan Matematika. 3(1), 109-122.

Kartadinata, Sunaryo., Affandi, Idrus., dkk. (2015). (Pendidikan Kedamaian. Bandung: PT Remaja Rosdakarya.

Saputri, M., Elisa, E., & Nurlianti, S. (2022). The Effectiveness of ICARE Learning Model in Improving Students' Critical Thinking Skills and Collaboration Skills. Jurnal Penelitian Pendidikan IPA, 8(3), 1128–1134.

Sastrawan, Ketut Bali. (2019). Peningkatan Mutu Pendidikan Melalui Perencanaan Mutu Strategis. Jurnal Penjamin Mutu. 1(2), 204-205.

Suriansyah, Ahmad. Landasan Pendidikan, Banjarmasin: Bumi Mas Raya Komplek Bumi Jaya.

Suyono (2017). Belajar dan Pembelajaran, Bandung: PT Remaja Rosdakarya Offset.

Suminar, Tri., Arbarini, Mintarsih., Shofwan, Imam., & Setyawan, Novi (2021). Pendampingan Tutor dengan Model Icare untuk Peningkatan Mutu Pembelajaran. Jurnal Pengabdian Kepada Masyarakat. 25(2), 163–168.

Trianto (2014). Mendesain Model Pembelajaran Inovatif, Progresif dan Konstektual, Jakarta: Prenadamedia.