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IMPLEMENTATION OF GENERATE ARGUMENT MODEL INTEGRATED WITH LOCAL WISDOM OF BATIMUNG TRADITION ON STUDENTS' ARGUMENTATION SKILLS

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ABSTRAK

Abstrak: Pembelajaran berbasis argumentasi terintegrasi kearifan lokal dapat mendorong siswa menggunakan teori, data, dan fakta untuk mendukung klaim terkait kehidupan sehari-hari. Penelitian ini bertujuan untuk mengetahui penerapan model *Generate Argument* terintegrasi tradisi Batimung terhadap keterampilan argumentasi siswa pada materi Termokimia di MAN 1 Samarinda Plus Keterampilan dan Riset. Metode penelitian menggunakan quasi-experimental dengan desain *non-equivalent control group design*. Sampel melibatkan dua kelas XI, yaitu MIPA 1 dan MIPA 2, dengan teknik sampling jenuh. Instrumen penelitian mencakup *pretest-posttest* untuk nilai keterampilan argumentasi, lembar observasi aktivitas guru dan siswa, serta angket respon siswa. Hasil uji t menunjukkan nilai signifikansi 0,000 < 0,05, mengindikasikan pengaruh signifikan penerapan model ini terhadap keterampilan argumentasi siswa. Observasi aktivitas siswa berada dalam kategori sangat baik, dan rata-rata respon siswa terhadap pembelajaran mencapai 75,2% (kategori sangat baik). Temuan ini menunjukkan bahwa penerapan model Generate Argument berbasis tradisi Batimung berpengaruh dalam meningkatkan keterampilan argumentasi siswa pada materi Termokimia.

Abstract: *Argument-based learning integrated with local wisdom can encourage students to use theories, data, and facts to support claims related to everyday life. This study aims to determine the implementation of the Generate Argument model integrated with the Batimung tradition on students' argumentation skills on Thermochemistry material at MAN 1 Samarinda Plus Skills and Research. The research method used quasi-experimental with non-equivalent control group design. The sample involved two XI classes, namely MIPA 1 and MIPA 2, with a saturated sampling technique. The research instruments included pretest-posttest for argumentation skill scores, teacher and student activity observation sheets, and student response questionnaires. The t-test results showed a significance value of 0.000 <0.05, indicating a significant effect of applying this model on students' argumentation skills. Observations of student activity were in the very good category, and the average student response to learning reached 75.2% (very good category). These findings indicate that the application of the Generate Argument model based on the Batimung tradition has an effect in improving students' argumentation skills on Thermochemistry material.*

A. INTRODUCTION

The independent curriculum has made many changes, emphasizing project-based, active, and learner-centered learning. (Tuerah & Tuerah, 2023). Most of the learning process in schools is still teacher-centered. As a result, students can only listen to what is analyzed and understand the argument because they are only given information from the sourcebook used by the teacher. (Trisnayanti, 2017). Students still find it challenging to find and structure information into smaller parts to recognize patterns or relationships and only a few students can express their opinions, while science learning emphasizes students have good argumentation skills (Dewina et al., 2017; Rahayu et al., 2020).

Argument-based learning can encourage students to provide theories, data, and facts supporting claims against a problem (Rahayu et al., 2020). Argumentation is an attempt to convince or prove the truth of a statement, opinion, attitude, or belief by using facts. (Pasaribu, 2020). Argumentation skills come naturally to students, but

they are not developed in the school curriculum. Schools should ensure students can formulate opinions independently, empirically, rationally, and critically. However, based on facts in the field, students' argumentation skills can be categorized as low (Jayanti et al., 2018). Observations made in several schools in Samarinda show that students are lacking in scientific argumentation skills. Some students failed to provide the data or theories they learned to support their claims and some simply expressed their opinions without including the chemical theories or concepts they learned. (Ramadhan et al., 2022).

The reality in the field shows that students' scientific argumentation skills during learning are still relatively low with an argumentation level of 63.3% in presenting data to support claims (Dame et al., 2023). In line with Dewantari's research (2022) which states that students' argumentation skills in learning chemistry are still dominated by the basic structure of argumentation, namely the submission of claims accompanied by the presentation of data. The results of other studies show the percentage of students' argumentation skills in the aspects of claiming by 3.74%, data by 4.48%, justification by 5.05%, support by 3.33%, and refutation by 1.17%. (Devi et al., 2018).

Argumentation skills in science, especially in Thermochemistry material are still low (Wahyuni et al., 2022). Thermochemistry material is chemistry subject matter that tends to be considered difficult and abstract by students. The difficulties experienced by students in understanding thermochemical material are not only influenced by the learning process, but can also be influenced by teaching materials and learning models that have been used (Nomizar et al., 2023).

Students tend to memorize concepts rather than understand and communicate them critically. Learning models used in schools often do not link the material to the cultural context of students (Ramdani, 2018). Batimung tradition as a local wisdom practice can be a more meaningful contextual approach (Hadirah, 2022). Research related to the use of the Generate Argument model is still limited, especially those that integrate local wisdom. In fact, this approach has the potential to increase student engagement and their conceptual understanding. By linking learning materials with everyday life, abstract concepts become more concrete and easier to understand with real examples (Andriana, 2024).

Based on the low argumentation skills and the way of teaching using direct learning, a teacher needs to use a variety of models according to the characteristics of chemistry and chemistry learning. Teachers must use the right learning model to influence argumentation skills (Musdiani, 2019). To achieve this goal, a learning model specifically designed to influence argumentation skills is required. One of the learning models that can be used to improve argumentation skills is the Generate Argument learning model. The Generate Argument model was developed by Sampson and Grooms in 2010. This model is designed to help students acquire deeper knowledge. Students are allowed to express what they know, how they know it, and the reasons why they consider it to be the most relevant statement or conclusion. (Jayanti et al., 2018). The results showed that the Generate Argument model had a positive effect on students' argumentation skills (Huda, 2014; Jayanti et al., 2018; & Siswanto et al., 2014).

According to Sormin's research (2018), argumentation skills will improve if it is associated with local wisdom. The values of local wisdom will help students understand each topic concept so that the knowledge they gain is not only limited to their knowledge but can also be applied in practice outside of school (Shufa, 2018). The local wisdom that is the focus of researchers is the local wisdom of the Batimung tradition. The Batimung tradition is an ancestral tradition from Kalimantan, especially the Banjar tribe, which has been passed down from generation to generation (Saefuddin & Maryadi, 2018).

The local wisdom of the Batimung tradition can be linked to chemistry learning. The local wisdom of the Batimung tradition involves the process of evaporation and boiling, so in this Batimung tradition process can be associated with Thermochemistry material (Roghdah et al., 2021). The Generate Argument model integrated with Batimung local wisdom in Thermochemistry material, is expected to make it easier for students to influence their argumentation skills because the material studied is related to real life and is not abstract (Shufa, 2018).

Previous research proves that the Generate Argument model can improve argumentation skills (Jayanti et al., 2018; Siswanto et al., 2014). Research conducted by Siswanto et al (2014) used the generate argument model using scientific methods to improve students' cognitive abilities and argumentation skills. The application of the generate argument learning model using scientific methods can significantly improve students' cognitive abilities and argumentation skills compared to the generate argument learning model without using scientific methods.

Research conducted by Jayanti et al (2018) on the application of the argument generator learning model on optical material to improve the argumentation skills of class VIII students of SMPN 20

pekanbaru found that the argumentation skills of experimental class students were higher than the control class so it can be concluded that the argument generator learning model has a positive effect on students' argumentation skills.

The research that will be conducted by researchers is to use the same Generate Argument model learning as previous research and the novelty in this study is that it is integrated with the local wisdom of the Batimung tradition which is associated with Thermochemical material. Based on this explanation, the purpose of this study is to determine the application of the Generate Argument model integrated with Batimung local wisdom to students' argumentation skills on Thermochemical material at MAN 1 Samarinda Plus Skills and Research.

B. RESEARCH METHODS

This type of research uses quasi-experimental research. The form of experimental design used is a non-equivalent control group design. There are two classes of research subjects to be tested, namely the experimental class and the control class. Both classes were given the same learning material, namely Thermochemistry but taught in different ways. The experimental class was taught with the Generate Argument model integrated with Batimung local wisdom, while the control class was taught with a direct learning model.

Table 1. Research Design

Class	Pre-test	Treatment	Post-test
Experiment	O_1	X	O_2
Control	O_3	-	O_4

(Abraham & Supriyati, 2022)

Description:
O_1 = Pre-test of experimental class
O_2 = Post-test of experimental class
O_3 = Control class pre-test
O_4 = Post-test of control class
X = Treatment given

The population in the study were all students of class XI MIPA at MAN 1 Samarinda Plus Skills and Research into 2 classes, namely class XI MIPA 1 and XI MIPA 2. The sample selection method itself uses a saturated sampling technique. This study uses data collection techniques consisting of test and non-test techniques. The test technique used is a written test in the form of 5 essay questions. Non-test techniques used are observation, documentation, and questionnaires.

Data processing of pretest and post-test test scores is obtained based on the scores obtained in the form of essay questions given during learning activities. According to Arikunto (2018), the scores obtained are calculated using the formula:

$$P = \frac{\text{Total score obtained}}{\text{Maximum number of scores}} \boldsymbol{x100}\%$$

Description:
P = Pretest and posttest scores

According to Hardini & Alberida (2022), the qualifications of students' argumentation skills are determined by standards following the guidelines contained in Table 2 below:

Table 2. Score Interpretation Guidelines

Score Interpretation	Qualification
$0< x \leq 19{,}99$	Very weak
$20\% < x \leq 39{,}99$	Weak
$40\% < x \leq 59{,}99$	Fair
$60\% < x \leq 79{,}99$	Strong
$80\% < x \leq 100$	Very Strong

Processing of student observation data using the Likert Scale and teacher observation data using the Guttman Scale. Data analysis techniques for students' pretest-posttest scores used normality tests, homogeneity tests, and t-tests.

C. RESULTS AND DISCUSSION

1. Results

a. Results of Written Test Data Analysis of Students' Argumentation Skills

Data analysis of written tests of students' argumentation skills was carried out to measure the effect of the application of the Generate Argument model integrated with the local wisdom of the Batimung tradition on students' argumentation skills in Thermochemistry material. Based on the pretest and post-test data analysis, the students' argumentation skills scores in the experimental and control classes are presented in Table 3 below:

Table 3. Recapitulation of Students' Argumentation Skills Score

Component	Experiment Class		Control Class	
	Pretest	Posttest	Pretest	Posttets
Highest score	54	93	56	77
Lowest score	30	65	25	30
Average	42	79	40,5	53,5

This result is in line with previous research that emphasizes the importance of argumentation-based learning in improving students' argumentation skills (Candra et al., 2024). Previous research proves that the Generate Argument model can improve argumentation skills (Fatmawati et al., 2018; Jayanti et al., 2018; Siswanto et al., 2014). These findings suggest that structured argumentation-based learning can help students build stronger claims,

supported by relevant evidence, and improve their ability to develop counter-arguments.

b. Statistical Test

After knowing the students' pretest and posttest scores, a normality test was conducted. Normality test is a test used to determine whether the distribution of data is normally distributed or not (Sintia et al., 2022; Sukestiyarno & Agoestanto, 2017). The normality test used in this study used the Kolmogorov-Smirnov test because the sample used was > 50 which is presented in table 4 below:

Table 4. Normality Test

Class	Test Type	Significance	Description
Experiment Class	Pretest	0,085	Normally Distributed
	Posttest	0,200	Normally Distributed
Control Class	Pretest	0,102	Normally Distributed
	Posttest	0,200	Normally Distributed

Table 4 shows that the pretest and posttest scores of students are normally distributed, namely the Sig value > 0.05, so because the data is normally distributed, the homogeneity test is then carried out. The homogeneity test is used to determine whether some population variants are the same or not (Sukestiyarno & Agoestanto, 2017). This test is carried out as a prerequisite in the independent sample t test analysis (Usmadi, 2020). The homogeneity test of pretest scores and posttest scores was carried out using the Levene Statistic test in the SPSS 25 program as in table 5 below:

Table 5. Homogeneity Test

Type Test	Sig	Keterangan
Pretest (Experiment- Control)	0,660	Homogeneous
Posttest (Experiment- Control)	0,351	Homogeneous

Table 5 shows that the pretest and posttest scores of argumentation skills of students in class XI MIPA are homogeneous because the Sig> 0.05 value. After the data is proven to be normally distributed and homogeneous, then proceed to the t test. The t test is used to determine the effect of each independent variable on the dependent variable (Hendri & Setiawan, 2017) which is presented in table 6 below:

Table 6. Independent Sample T-Test

Type Test	Sig (2-tailed)	Description
Posttest (Eksperimen-Control)	0,000	There is a Significant Effect

Based on table 6, shows that the Sig value (2.tailed) <0.05, it can be said that there is an effect of the application of the Generate Argument model integrated with the local wisdom of the Batimung Tradition on the argumentation skills of grade XI students at MAN 1 Samarinda Plus Skills and Research. This is also in line with research conducted by (Fatmawati et al., 2018; Jayanti et al., 2018; Siswanto et al., 2014) that the application of the Generate Argument model in learning can improve students' argumentation skills.

According to Annisha (2024) the implementation of local wisdom in learning shows significant effectiveness. Supported by research conducted by Rahmatih (2020) which states that local wisdom values in learning help create contextual and relevant learning experiences because they can be related to the daily lives of students.

c. Non-Test Data Analysis Results

1) Observation data analysis

Analysis of student and teacher observation data is used to understand how the implementation of the Generate Argument model integrated with the local wisdom of the Batimung tradition takes place in the classroom. These observations help in identifying student engagement, the implementation of learning syntax carried out by teachers, and obstacles that may occur during the learning process (Tabroni et al., 2022).

Table 7. Teacher Observation Analysis

Experiment Class	
Percentage	Category
94,25%	Highly Applied
Control Class	
Percentage	Category
94%	Highly Applied

Based on Table 7, states that the percentage of teachers' teaching and learning activities in teaching in experimental classes and control classes in the category is very applied.

Table 8. Student Observation Analysis

Experiment Class	
Percentage	Category
84%	Very good
Control Class	
Percentage	Category
82,05%	Very good

Based on table 8, it states that the percentage of student activity in experimental and control classes is in the Very Good category. According to Fadli (2024) observation is an effective method for obtaining authentic data about classroom interactions. This shows that the observation method can provide a real picture of student involvement in learning as well as differences in activity between experimental and control classes.

Observation allows researchers to directly observe how students participate in argumentation activities, how they construct and organize arguments, and how teachers facilitate the process (Syarifuddin, 2024). According to Dianti et al (2023) emphasizes that verbal interactions in the classroom can be used to evaluate how students construct claims, provide evidence, and connect with reasoning. Thus, observations not only help in identifying patterns of student engagement, but also provide insight into the argumentation process that occurs during learning.

2) Analysis of student questionnaire data

Supporting data in this study are the results of analyzing student response questionnaires. The student response questionnaire is an instrument used to measure students' perceptions, experiences, and level of satisfaction with the learning model applied (Sulastri et al., 2024). In this study, the student response questionnaire was used to evaluate the extent to which the Generate Argument model integrated with the local wisdom of Batimung tradition had a positive impact on their argumentation skills in Thermochemistry material. Students' response to learning was obtained through filling out a questionnaire through google form.

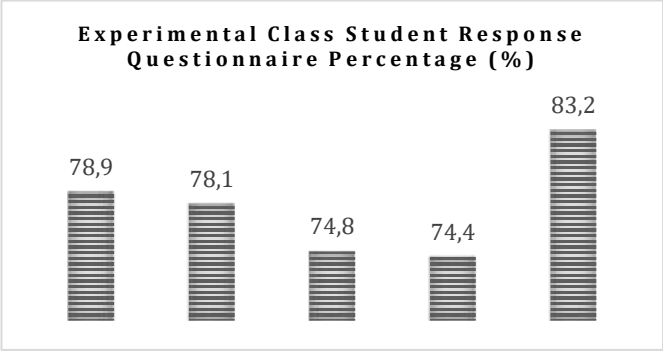

Image 1. Percentage of student response questionnaire

Description:
A = Ease of understanding the material
B = Use of learning model
C = Student activeness
D = Use of LKPD
E = Student Interest

According to Setiawan et al (2024) the use of questionnaires in educational research can help identify how students respond to certain learning methods, whether they feel more motivated, find it easier to understand the material, or experience difficulties in the learning process. Research by Wulandari et al (2022) shows that student response questionnaires can be used to assess how a learning model improves their understanding and engagement in the classroom. Students' positive response to a learning model is often associated with an improvement in their critical thinking and argumentation skills.

2. Discussion

a. Reconstructing Local Wisdom of Batimung Tradition in Thermochemical Learning

The batimung tradition is one of the local wisdom that can be associated with chemistry learning. According to Annisha (2024), the implementation of local wisdom in learning shows significant effectiveness. Supported by research conducted by Rahmatih (2020) which states that the values of local wisdom in learning help create contextual and relevant learning experiences because they can be related to the daily lives of students.

Table 9. Cultural Reconstruction of Batimung Tradition

Indigenous Science	Scientific Science
Batimung health is usually used for the bride and groom's requirements before standing in the aisle. The purpose of carrying out the batimung procession is so that the bride and groom, both men and women who will take place in marriage at the time of pairing later, do not emit an uncomfortable sweat odor, but change to a fragrant or fragrant smell. Batimung treatment is a traditional method that aims to cure certain types of diseases, both the batimung process is carried out by the Dayak Meratus and Banjar communities. Banjar people use more plants around the house such as galangal leaves, lemongrass, and flowers and for Banjar people it can only treat wisa pain, while for Dayak people, besides wisa pain it can also treat pain due to sangga, bone pain, and	In scientific knowledge, this reaction can be studied in class XI MIPA thermochemical material. The relationship between the batimung tradition and Thermochemical material is that the Batimung process has the same concept as a closed system in thermochemical material where energy transfer occurs with the environment (Sa'adah, 2023). In the batimung process, when water and spices are heated to produce steam which is then used in a steam bath, there is an absorption of energy in the form of heat. This process of boiling water is an endothermic reaction, while the process of burning firewood to heat water can traditionally be attributed to an exothermic reaction (Siagian & Yasthophi, 2021). In addition, the batimung tradition has the same principles as thermochemical material, namely exothermic

Indigenous Science	Scientific Science
typhoid. During the batimung process, people suffering from jaundice (liver disease) or wisa can sweat as much as possible, so the amount of disease present in their bodies gradually decreases.	reactions. An exothermic reaction is a heat release reaction from the system to the environment. The same principle also occurs in the batimung tradition, where the heated jajarangan releases water vapor to the person being shaded so that his body feels hot and sweats (Sa'adah, 2023).

b. Argumentation Skills of Learners

Students' argumentation skills in this study were measured using a test instrument consisting of 5 essay questions representing five indicators of argumentation skills, namely claim, ground, warrant, backing, and rebuttal.

1) Claim

Students are given an understanding that the claim indicator is a statement put forward by a writer that can convince the reader/listener (Hardini & Alberida, 2022). In the claim indicator, students are asked to make claims that are based on theory, data, or other supporters correctly (Handayani et al., 2015). The teacher directs students to make tentative arguments, at this stage the teacher reminds them of examples of tentative arguments that are relevant to everyday life so that students have an idea of the arguments to be made.

Implementation during learning at this stage students get a percentage of 100% with a very good category. According to Dianti (2023), the phase of making tentative arguments helps students develop a basic understanding of an argument in science and teaches students to decide whether the evidence for claims, data, guarantors, and supporters provided is valid, relevant, sufficient, and convincing to support the arguments they make.

The average score of students' argumentation skills for the claim indicator is 82 and is in the very strong category. This shows that the increase in students' knowledge occurs due to the success of the learning process they have gone through. The claim indicator is considered easy because claims usually only require students to identify or convey the main statement based on the information available without having to do an in-depth analysis (Jayanti et al., 2018)

2) Ground

The ground argumentation skill indicator is an answer that contains evidence/facts that can prove the argument (Hardini & Alberida, 2022). In this indicator, students are expected to be able to include fully analyzed data to support the claims that students have written. Data are facts used to provide reinforcement based on the claims submitted (Handayani et al., 2015).

Indicators of grounded argumentation skills are in a strong category with an average value of 76.9 this is because students can collect, understand, and present relevant data clearly to support their claims (Rahayu et al., 2020). This shows that students understand a good conceptualization of the importance of data as the basis for argumentation and can use the data effectively to strengthen claims in the learning context. Based on the results of observations of students in the classroom on the implementation of the integrated generate argument model of local wisdom of the batimung tradition is at the stage of planting concepts, identifying problems, making questions, and dividing tasks into groups, students get a percentage of 83.3% with a very good category. This is in line with research conducted by Siswanto (2014) which states that planting concepts to students can be done through verbal disclosure by students such as understanding through discussions to understand the concepts taught.

3) Warrant

The indicator of warrant argumentation skills is a general and hypothetical logical statement and is used to connect with data/evidence (Hardini & Alberida, 2022). The quality of evidence is reviewed from the ability to explain the relationship between data and claims (Budiyono, 2016). In this case, mastery of the theory and concepts of the material taught is needed to explain the relationship between data and claims.

The guarantor argumentation skill indicator is still in the strong category with a value of 62.6, this is because students are still able to provide logical justification for linking data and claims (Rahayu et al., 2020). Students tend to provide reasons that are less specific or in-depth, so the connection between data and claims is not yet fully established. Students can understand how to make claims and use data but still have difficulty explaining why the data supports claims scientifically or logically (Rahman et al., 2018).

4) Backing

The backing argumentation skill indicator is a further statement that supports the warrant (Hardini & Alberida, 2022). In this indicator, students are asked to create support for underlying evidence that supports claims based on data (Handayani et al., 2015). The supporting indicator is in the sufficient category with an average score of 48.4 this is because students are not yet fully skilled in providing additional explanations or reasons that strengthen their guarantors. Students have not fully understood the role of backing as supporting guarantors and how to use scientific facts or theoretical principles to strengthen arguments (Setiawati, 2017).

The sufficient category in this indicator indicates that the ability of students is not fully optimal, so they still need further practice making arguments. According to Asriyani (2023) when students have not been able to provide backing, it means that their mastery of knowledge related to the problem given is still lacking, this shows that students' ability to provide backing is very dependent on mastery of the knowledge underlying the problem.

5) Rebuttal

The rebuttal indicator is a statement of refutation of other people's opinions that are still classified as low or not by the theory/facts (Hardini & Alberida, 2022). The rebuttal given must be based on relevant reasons and evidence so that it can be accepted by readers and discussion participants.

The results of data analysis on the rebuttal indicator written by students are still in the weak category with an average score of 36.4 this is because students still have difficulty understanding the arguments that need to be refuted and have difficulty finding relevant evidence or reasons to support their refutation (Hardini & Alberida, 2022). Learners have not been able to provide responses or arguments that anticipate potential weaknesses or alternative views to the claims submitted (Nurdin, 2017).

In line with research conducted by Sandhy (2018), the rebuttal indicator also shows the lowest percentage because most of the arguments made still do not contain elements of rebuttal and have not been able to respond to other opinions properly despite having claims, data, warrant, and backing.

When learning in class, students have been able to convey their rebuttals. The percentage obtained by students is 85% with a very good category. According to Siswanto (2014), when presenting arguments through group discussion activities, students in the experimental class looked more skillful in making claims, data, justification, support, and refutation. This result is based on the corrections made by the teacher during the learning process.

Students' argumentation skills in class discussions can appear better due to social interaction and direct correction from the teacher, but in written tests, a greater challenge arises because students have to construct their own arguments without direct help or feedback. In class discussions, students receive stimulus from teachers and peers that can provoke them to think and deliver rebuttals (Sutarto, 2023).

c. Student Response Questionnaire

Learning using the generate argument model integrated with the local wisdom of the batimung tradition is strengthened from the results of the student response questionnaire in Figure 1 on the ease of understanding the material, the use of learning models, student activeness, the use of LKPD, and student interest.

The positive response of students from the generate argument model integrated with the local wisdom of the batimung tradition on the indicator of the ease of understanding thermochemical material integrated with local wisdom in learning activities received a positive percentage of 78.9% in the very good category. This is because the teacher provides a stimulus in the form of a video of the local wisdom of the batimung tradition which is shown together in class. Through learning videos, students can receive material and understand learning material (Norma, 2021). Research conducted by Bua et al (2023) states that the ease of students in understanding learning material must be accompanied by examples that follow real life such as being associated with local wisdom.

The use of the generated argument learning model integrated with the local wisdom of the batimung tradition received a positive response from students with a percentage of 78.1% with a very good category. This is because argument-based learning is rarely used at MAN 1 Samarinda Plus Skills and Research. This is by research conducted by Fakhriyah et al (2021) which states that empowering argumentation in learning can develop student motivation in investigating the information they are looking for, daring to argue, and increasing conceptual understanding of the material they are learning.

According to Rahmayanti et al (2022) in the learning process, student activeness in asking questions is important because students can immediately find out information that students do not understand and by asking questions students can become more understanding in mastering the material provided by the teacher.

The development of education in this era of globalization has experienced a lot of shifts in good values replaced with unfavorable characteristics, especially at the middle and upper levels (Syaharuddin, 2017). After students can understand the material taught by the teacher, students are given assignments in groups to work on LKPD (Learner Worksheet). Positive student responses related to the use of LKPD in learning get a percentage of 74.4% in the good category. The teacher's ability to increase students' interest in learning is very important and has a big influence (Hakim & Amir, 2018). Learning that can attract students' interest will make students follow learning without laziness and students will find it easier to concentrate on learning (Nasution, 2020).

Students' interest in learning thermochemistry using the generate argument model integrated with the local wisdom of the batimung tradition received a

positive response of 83.2% in the very good category. Students' interest in this learning is due to the discussion that is relevant to everyday life, especially the local tradition of batimung, thus making the material easier to understand and meaningful. According to Annisha (2024), the integration of the use of local wisdom into the learning process can increase the relevance of material to students' lives, enrich cultural insights, and build awareness of traditional values.

D. CONCLUSIONS AND SUGGESTIONS

Based on the results of data analysis, this study can be concluded that the results of the t test show a significance value of 0.000 <0.05, which indicates that there is an effect of the application of the generate argument model integrated with the local wisdom of the batimung tradition on the argumentation skills of XI MIPA class students at MAN 1 Samarinda Plus Skills and Research. Based on the research that has been done, there are still low indicators of argumentation skills such as backing and rebuttal. It is hoped that for further research to be able to increase the two indicators that are still low.

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