

LOCAL POTENTIAL INTEGRATED SCIENCE: NEW INNOVATION TO SUPPORT STUDENT'S INTEREST

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ABSTRACT

Utilizing local potential in learning can make students understand the object of material in daily life, its giving a positive impact on higher learning interests. This research aimed to find out student's interest in learning science after using local potential integrated learning. The subject of the study was a class of students in one of Yogyakarta Junior High School 7th grade, consist of 30 students. This was Pre Experimental research with One Group Pretest Posttest research design. The sample choosed by purposive sampling techniques. The instrument used was learning interest questionnaires. The poll was developed by researchers, by showing indicators of learning interest with 23 questions. The data analysis using paired sample t-test and n-gain test. The result shows that the significance value in paired sample t-test is 0.000, lower than 0.05, so it can be said that local potential integrated learnig is significance in increasing students' science learning interest. The average N-gain of student's learning interest increased before and after treatment by 0.60, belong to moderate criteria.

Research Paper

INOVASIA

Kata Kunci: Student interest, learning, local potential.

INTRODUCTION

Science learning is expected to introduce the environment, nature, and excellence of its region. Students need learning resources that suit their environment and their needs during the learning process (Wilujeng et al., 2017). Local potential has an emotional closeness to students and has a strong collectivity bond in students to have concern for the environment (Muhaimin, 2015). Each region has different originality and peculiarities (Mungmachon, 2012). The recent issue is about how to pass on local wisdom and potential to the next generation, how to maintain, and how to revive local potential quickly. This problem can be suppressed by integrating local potential in learning. Local potential can be integrated into learning, not only as a medium but also a learning resource (Lase et al., 2016). Educators can integrate local potential in natural science

learning materials to improve students' ability (Wilujeng et al., 2018).

Interest is one of the psychic aspects that can encourage students to achieve their goals. Students who have an interest to an object, tend to pay greater attention or pleasure to the object (Harackiewicz & Hulleman, 2010). Integrated learning of local potential is one alternative to increase learning interest, this is one of the reasons that local potential is important to be applied in learning by teachers, because it can help students to understand concepts and examples conclusively; hone students' knowledge, skills, and attitudes; as well as a medium to add affection to the local potential in the region (Lase et al., 2016; Rahardini et al., 2017; Shufa & Khusna, 2018). To achieve good achievement, not only requires intelligence, but also a growing interest in learning from students (Christidou, 2011; Nesi & Akobiarek, 2018). Without interest, students will not be

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passionate in every learning activities. Engaging learning and making students active, positively impacting students' interests (Wahjudi, 2015).

The local potential raised in this study is Bakpia food. Bakpia is one of the local potentials of Yogyakarta food industry, made from a mixture of sugar with green beans and wrapped in flour, then baked (Ihsan, 2010). This research aimed to find out student's interest in learning science after using local potential integrated learning. Local potential is proven to play a role in learning because it makes learning activities more contextual and meaningful (Sopacuaperu et al., 2021). Local potential of bakpia can facilitate students in learning, because students can learn directly the tools and materials needed in the manufacturing process of Bakpia and the process of making Bakpia.

The process of making Bakpia consists of several stages that also contain several scientific events such as changes in form or shape (Bakpia's dough before and after mixed, then made into circle), changes and chemical properties (process of immersion of green beans and roasting of bakpia), changes and physical properties (the process of solving green beans with milling tools), separation of mixtures (the process of immersion and filtering of green beans for three days). This fit to the material of 7th grade chapter, substances and their characteristics (Wida & Anam, 2016).

LITERATURE REVIEW

Media is a means of communication that is categorized into six including text, audio, visual, video, engineering, and people (Heinich et al., 2012). Learning media is something that is understood as a tool to provide messages from sources so that learning can be conducive (Munadi, 2013). The purpose of media is to facilitate communication and communication so that a direct relationship can be realized between the work of a developer and students (Heinich et al., 2012; Sukiman, 2012). A textbook is a set of written materials arranged in sequence with easy-to-understand language according to the level of knowledge and age of the student.

Textbooks are information and tools needed by teachers to make lesson plans and implement lessons (Daryanto & Dwicahyono, 2014; Prastowo, 2015). The information in the textbook is derived from the basic competencies contained in the curriculum (Prastowo, 2015). Learning will be carried out better if it is supported by good textbooks as well, so that it can achieve the planned learning goals (Kinasih et al., 2018). Based on some of the opinions above, textbooks are part of teaching materials as learning media that are used as information distributors so that the learning environment is created conductively. Textbooks can help students in learning a competency in sequence so that they are able to master the competency thoroughly. Textbooks have certain components that can be used in the creation or development of textbooks.

Science learning prioritizes providing hands-on experience for the development of competencies to be achieved so that students can explore and understand the surrounding nature scientifically. Science learning is prioritized to do and do in order to help students to gain a deeper experience and understanding of the surrounding nature (Widhy H, 2013). The purpose of science learning strengthens the understanding of the environment and the surrounding nature along with the wealth that students have, therefore learning is needed that integrates the local potential that exists around the student environment.

Local potential is a specific community or industrial activity owned by a certain area as a development of regional independence (Agung, 2015; Anisa, 2017). Local potential has an emotional closeness to students and has a strong collectivity bond in students to have concern for the environment, so it will provide motivation (Muhaimin, 2015). Each region has different originalities and peculiarities. Local potential can be integrated in learning, both as a medium and a learning resource (Lase et al., 2016). Teachers can integrate local potential in science learning materials so that they can improve students' abilities (Wilujeng et al., 2018).

Integrated learning of local potential is important to be applied in learning by teachers

because it can help students to understand concepts and examples contextually; can hone students' knowledge, skills, and attitudes; and as a medium to increase affection for local potential in the area (Lase et al., 2016; Rahardini et al., 2017; Shufa & Khusna, 2018). Students observe, understand, analyze, and interpret all phenomena and resources in the surrounding environment. Local potential is used for basic knowledge gained from the student environment (Mungmachon, 2012). Learning with local potential can make students more free to search, research, and analyze all information related to learning materials thoroughly on the learning resources that are being studied (Anisa, 2017).

Local potential is a specific resource owned by an area that can be developed to develop its area. Local potential can be said to be basic knowledge because it has an affinity for students so that it can improve students' skills in learning. Bakpia is a local potential of the food industry that can be integrated in science learning because the raw materials and the process of making bakpia can be discussed in the science learning material discussing substances and their characteristics from class VII.

METHODS

The subject of the study was a class of students in one of the junior high school in Yogyakarta, 7th grade student with 12-14 years who participated in science subjects in the first semester of the academic year 2019/2020 consist of 30 students. The study used the Experimental Pre method because it did not include the control group, with one group pretest posttest research design. The sampling technique used is purposive sampling, due to the selection of schools close to the Bakpia local potential raised. The instrument used was student learning interest questionnaires.

The poll was developed by researchers by showing indicators of learning interest

with 23 questions. The result is in the form of scores (quantitative data) with 4 scale, very agree, agree, disagree, and disagree. Scoring and observations performed before experiments (O1) are called pretests, after experiments (O2) are called posttest. The design of the research can be seen in Table 1.

Table 1. Research Design

Pretest	Treatment	Posttest
O1	Local potential integrated natural science learning	O2

The data analysis used paired sample t-tests to compare initial ability with after treatment, as well as n-gain tests to find out how much improvement before and after treatment with the help of SPSS 20 (the significance rates is smaller than 0.05).

RESULTS AND DISCUSSION

This research aimed to find out student's interest in learning science after using local potential integrated learning. Students' learning interests were measured using a questionnaire with four indicators: feelings of interest, feelings of pleasure, attention, and desire or awareness outlined into 23 questions. There is a paired sample t test assumption test, which is a normality and a homogeneity test.

The normality test uses Shapiro Wilk, while the homogeneity test uses Levene's test. Based on the Shapiro Wilk test, it produced a significance value of 0.952 and Levene's test yielded a significance value of 0.841. Based on Shapiro Wilk and Levene's tests, the significance value is more than 0.05 so it can be said that the distributed data is normal and homogeneous.

Once proven to be normal and homogeneous distributed data, it can be continued on paired t-test. Paired sample t-test results are found in Table 2 as follows.

Table 2. Paired Samples T-Test Result

	Std. Deviation	df	Sig. (2-tailed)
Pair 1 Pre-Post	7.087	30	0.000

Based on [Table 2](#), the sig value. (2.tailed) is 0.000, which is less than 0.05, so it can be said that local potential integrated science learning is significant in increasing junior high school

students' learning interest. To find out how much students' science learning interest can be continued by looking at the N-Gain score. The results of the N-Gains test can be seen in [Table 3](#) as follows.

Table 3. Students' Science Learning Interest Result

Indicator	Pre Score	Post Score	Gain Score	Criteria
Feeling of Interest	616	772	0.69	Moderate
Feeling of Pleasure	228	315	0.66	Moderate
Attention	523	631	0.55	Moderate
Awareness	629	737	0.51	Moderate
Average			0.60	Moderate

[Table 3](#) shows that the average of student learning interest's N-Gain increased from before and after treatment by 0.60 that belong to moderate criteria. The largest increase was seen in the interest indicator of 0.69 with moderate criteria. The smallest increase was seen in the attention indicator of 0.51 with moderate criteria. Interest is one of the factors that can affect the quality of students' thinking towards one of the materials taught ([Triarisanti & Purnawarman, 2019](#)). A person with an interest is likely to be able to devote all their abilities to getting the optimal learning result according to the expected goals ([Kahayun et al., 2015](#)). The higher the interest that students have will encourage students to learn vigorously and increase their learning frequency.

Factors that influence students' learning interests include: how the teacher teach, classroom atmosphere, and facilities used ([Asyar, 2012](#)). By harnessing the local potential, students can understand the object of learning in daily life, have a positive impact on higher learning interests, helps them to achieve a set of learning goal. In addition, integrated learning through things that are attached to daily life causes students to have enthusiasm to participate the teaching and learning activities ([Tyas et al., 2020](#)).

At the beginning of the study, students were asked to observe a video of Bakpia manufacturing process to stimulate students' interest. Presenting videos at the beginning of learning can stimulate students' attention in learning something ([Arnone et al., 2011](#)). When local potential integrated learning takes place, students are active during learning by asking questions to teachers or have

discussion with their friends. Integrated learning of local potential as a learning resource contributes positively to students ([Khoiri et al., 2018](#)).

This is because the example of the object used in learning is close to the student environment, so students are more interested in learning it, even wanting to try to other local potentials by asking "What other local potential can be used in Natural Science learning?". Asking questions is characteristic of someone who has a curiosity and interest in what they learn ([Cain, 2019](#)). This is because students are directly involved in learning and observation objects close to their environment.

This statement is in accordance with research that states that interesting learning has a positive impact on students ([Ainley & Ainley, 2011](#)), because they have the opportunity to be more active during the learning ([Maulidar et al., 2016](#)). This also supported by the statement that student centered learning has a positive impact on students' interests and learning outcomes ([Salwan & Rahmatan, 2018](#); [Wahjudi, 2015](#)).

Learning by integrating local potential can provide students with direct experience with existing learning resources around the school ([Anisa, 2017](#)). The active role played by students with a high interest is helpful in improving knowledge and constructing the materials studied ([Arnone et al., 2011](#); [Shanmugam & Balakrishnan, 2019](#)). Increasing student activity in learning makes students more excited about learning and will increase students' learning interests. Students who have a high interest in learning will provide a sense of pleasure in the form of

changes in behavior or attitudes of knowledge and skills (Arlianty, 2017).

CONCLUSION

Indonesia is one of the countries with abundant natural, cultural, and local potential. Integrated natural science learning that is attached to daily life will increase students' interest in learning. Based on the results of the research that has been done, it is known that local potential learning is significant in increasing students' science learning interest, judging by sig scores. (2.tailed) in paired t-test samples with results of 0.000, less than the specified level of significance of 0.05 and the average n-gain of student learning interest increased from before and after treatment by 0.60 with moderate criteria.

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