Improving Students’ Entrepreneurial Attitude Through Local Potential Pottery and Furniture of Jepara

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Abstract—This research aims to analyzing the effectiveness of science teaching based on local potential pottery and furniture of Jepara to improve students’ entrepreneurial attitude of SMPN 1 Bangsri Jepara. The methods of this research is quasi-experiment with the cluster random sampling and pretest-posttest control group design. The instruments is entrepreneurial attitude questionnaire which has been valid by the expert, teacher, and peers validation. This research held by an activity in science learning that makes students and entrepreneurs can interact each other directly. Jepara’s pottery and furniture are some example of home industry also some of local potential in Jepara that related to science subject, especially in VIII grade of SMP. Entrepreneurial ability is needed to commemorate ASEAN economic community in the future of 21st century. This learning activity expected improve students’ entrepreneurial attitude in the 21st century. The results of the research is science teaching based on Jepara’s local potential effective to improve students’ entrepreneurial attitude of SMPN 1 Bangsri Jepara. The effectiveness of science teaching obtained from t test. The Result of t test on entrepreneurial attitude shows at sig. 0.000. It’s mean science teaching based on local potential pottery and furniture of Jepara effective to improve students’ entrepreneurial attitude of SMPN 1 Bangsri Jepara.

Keywords: science teaching, local potential, entrepreneurial attitude

I. INTRODUCTION

Many potential areas in Indonesia, including local potential relating to the cultural and entrepreneurial world (home industry). Parmin, Sajidan, Ashadi, & Sutikno revealed that "Indonesian society has a variety of traditions, habits, and values of life that has been used for generations as a guide, which in the past has proven capable of maintaining the environmental balance" [1]. Potential local is an activity in community and industry in a local or regional. Mumpuni states that local potential is the potential of an area includes the potential of natural sources, the potential of human resources, geographic, cultural, and historical [2]. Meanwhile, Kanzunnudin & Oktavianti mention that the benefits of local (local potential) is everything that characterizes regionalism include agricultural products, the creation of art, tradition, culture, care, services, natural resources, human resources, or others who become the advantage of an area [3].

Local potentials need to be explored and exploited in supporting the teaching process. Exploitation of the region potential (local potential) can be done by involving local potential in developing the teaching kit, so that teaching process makes students easier to understand the material by interacting directly with the source of teaching materials. It is according with the opinion of Alexon which states that education should involve a variety of significant local potentials to the needs of the community so the school is not estranged from the community and local culture [4]. The involvement of local potential is expected to make the students to be more creative and flexible in exploring all relevant information in depth learning materials. Students are also easier to understand the existence and benefits of local potentials in the surrounding area, so it can improve the entrepreneurial attitude of students. In the Regulation Ministry of Education and Culture, No. 103 of 2014 in Primary and Secondary Education, the Education Minister said that "Teaching is a process of interaction between all students and between students with teachers and learning resources in a learning environment" [5]. Learning sources can be obtained by utilizing local potentials around the school that can be formed as a teaching kit.

Each region has a specific location causing local potential differences respectively. Jepara is one of regencies in Central Java province has a lot of local potential in several districts, including industrial manufacture of pottery in Mayong district, industry Furniture in Mlonggo district, industrial Monel in Kalinyamatan district, Trosa Weaving industry in Pecangaan district, and industrial manufacturing of bricks in Welahan district. The
existence of Jepara regency in Central Java province has a lot of local potential can be utilized and integrated into the learning process of science education at all levels, including at the junior level. Especially science materials on the 2013 curriculum of the junior high school. Local potentials are related to people's livelihood around. The majority Jepara livelihoods in agriculture, manufacturing, services and trade are scattered in various districts in Jepara regency. Processing industry which is meant them in the form of furniture (wood processing), convection, weaving, and various craft industries [6].

Local potentials in Jepara regency are including convection center in Sendang village Kalinyamatan districts, Troso weaving industry located in Troso village Pecangaan district, Monel handicraft in Kriyan village Kalinyamatan districts, and centers of rubber plants in Kembang district. Mlonggo district is one of the districts in Jepara regency that became an industrial area in the other district of Jepara furniture than the Tahunan districts, both small and large scale. In addition, there are centers of handicrafts made of clay which are in Mayong district which is an area of making pottery and in Welahan district which is a center for the manufacture of bricks, but in this study will focus on making pottery in Mayong district and industry of furniture in the Mlonggo district.

Local potential of manufacturing pottery (earthenware of jug or kendi in Javanese) in Mayong district started from the utilization of natural resources in the form of clay as basic materials. Clay used for the manufacturing of pottery are processed through several stages (Figure 1). The stages in manufacturing of pottery at least consist of soil acquisition, preparation of the soil so that the soil becomes clay and smooth, the formation of pottery using swivel traditional techniques in two steps, namely the manufacture of the borong (body of jug) and gucu (neck of jug) which is then affixed, drying process using room temperature, burning process with gradual warming to temperatures 1200°C, and improvement (finishing). Finishing earthenware of jug by coloring is done during the process of reduction of the furnace when the condition is still smoldering. Earthenware of jug coloring is done using bran (bekatul) sprinkled and burned (dibrongot in Javanese) on the outer wall of the pottery (earthenware of jug).

Local potential furniture of Jepara is an industry that requires a wood as base materials to be processed into various products mebelair in the household, such as tables, chairs, cabinets, beds, and some trinkets souvenirs from wood. The type of wood must be adjusted to the goals and needs, as well as the type of product to be produced. The wood from the different trees have different characteristic, so its use is also different. The wood characteristics that must be considered before the forming process into products mebelair are density, durability, hardness, color, texture, the value of decorative, the impression of touch, smell, and taste.

Some stages of wood manufacturing process in furniture industry of Jepara as shown in Figure 2 are:
a. The preparation stage: the selection of good wood material for the manufacture of furniture.
b. The drying stage: drying the wood by using sunlight.
c. Forming stage of part of the furniture: the wood is cut or sawn formed the parts of furniture to be made.
d. Smoothing stage (the first sanding stage): each piece of furniture smoothed with sandpaper way
e. Glueing stage: each piece of furniture to be assembled furniture raw product
f. The second sanding stage: raw furniture grinded again until completely smooth and ready to be painted or colored furniture.
g. Finishing stage: raw refined furniture, painted or polished up to be the final furniture products.

FIGURE 2. STAGES OF MANUFACTURING FURNITURE OF JEPARA

The development of science, technology, and information of 21st century has brought changes in all aspects of life, including in the industry and economy that requires readiness of related resources. As one of the country members of ASEAN (Association of South East Asian Nations), Indonesia is appropriately prepared all resources to commemorate AEC (ASEAN Economic Community). Human resources that qualified and characterized as a potential successor to the nation is expected to compete in the ASEAN economic community in the 21st century.

Efforts to prepare the next generation that qualified and characterized are being implemented by Indonesia to improve the quality of Indonesian human resources. This effort can be reached through education in a teaching process to commemorate of the science and technology development in the 21st century. It is consistent to the statement of the President of the Republic of Indonesia in Law No. 20 Year 2003 on National Education System, Chapter II, Verse 3 [7] that:

National Education serves to develop the ability and character development and civilization of the nation’s dignity in the context of the intellectual life of the nation, aims to develop students' potentials to make faith and devoted person to Almighty God, noble, healthy, knowledgeable, skilled, creative, independent and become citizens of a democratic and accountable.

Natural science as part of the educational system uses a scientific approach and contextual knowledge in teaching process to create more meaningful learning. Meaningful learning in teaching process should be oriented to engage students as maximal as possible in each of the activities [4]. This meaningful learning will be felt as during the preparation of learning is done by considering the needs and involvement of students maximally.

There are many learning materials which can exploit the potential of the local environment around the school, including in the science teaching. Science should be seen as a way of thinking for the purpose of understanding the nature, as a way of investigation to declare the phenomena, and as a body of knowledge as the results of inquiry [8]. In science teaching process, emphasis granting direct experience to develop skills that students are able to explore and understand the universe around (the local potential) scientifically by seeking out and do or interact directly. This helps students to gain deeper experience of the surrounding nature of facts, concepts, principles, laws of nature, models, and theories that form the knowledge. This depth of experience that will be obtained students to engage in science-based learning environment (local potential).

Entrepreneurial attitude is an attitude related to the interest in entrepreneurial or do business to earn income. Entrepreneurship is a dynamic process to create additional prosperity. This additional wealth created by the entrepreneurs who bear the risk, spending the time and provides a variety of products or services [9]. Hisrich, Peters, & Shepherd [10] reveals that “… there are some common aspects: risk taking, creativity, independence, and rewards. This commonalities will continue to be the driving force behind the notion of entrepreneurship in the future.”.

Fan, Zhang, & Qiu [11] state that need combine between entrepreneurial and education from entrepreneurs directly. Social interaction between students and entrepreneurs can improve the entrepreneurial skill of students
Lupiyoadi [13] also state that “... mitos entrepreneur is born tidak berlaku, karena pada realitasnya kewirausahaan dapat dibentuk melalui proses belajar”. Its mean that entrepreneurial attitude need to be learn as habitual.

The value of entrepreneurship can be developed on the students through the teaching process at schools to improve the entrepreneurial attitude of students. Enterpreneurship was originally only developed in the field of trade, but over the times, pursued expansion into other fields such as industry, healthcare, government, education, and community organizations. Ministry of National Education [14] revealed that the development of academic texts have some entrepreneurial values that are considered most appropriate for the level of development of students. There are 17 values (attitude) of entrepreneurship were developed by educational units gradually, they are: independence, creative, risk-taking, action-oriented, leadership, hard work, honesty, discipline, innovation, responsibility, cooperation, never give up (tough), commitment and curiosity, realistic, communicative, and has a strong motivation to succeed.

Entrepreneurial attitude is the nature and value of someone to do entrepreneurship both in industry and society. Appropriate to the development stage of students in junior high school is necessary to develop an entrepreneurial attitude through a teaching process based on local potentials on four aspects of entrepreneurial attitudes, they are: independent, creative, honest, and hard work.

Based on the description above, researchers need to analyze the effectiveness of science teaching based on local potential pottery and furniture of Jepara to improve the entrepreneurial attitude of SMPN 1 Bangsri Jepara’s students.

II. METHODS

This research is a quasi eksperimen. The research was held in Jepara regency, precisely at SMPN 1 Bangsri in the academic year 2015/2016 the 1st semester.

The subjects were VIII grade students of SMPN 1 Bangsri Jepara regency in the academic year 2015/2016 the 1st semester. This school is one of the schools that have been use the 2013 curriculum, in Jepara regency. Population of this research was all VIII grade students of SMPN 1 Bangsri Jepara regency. Samples are drawn by random cluster sampling from 9 classes, and obtained class VIII C as the experimental group and class VIII B as the control group.

This research was held using a quasi-experimental with class VIII B and VIII C as the experimental group and control group. The design of this research in quasi-experimental research is pretest-posttest control group design as shown in Figure 3. Students in the experimental group and control group given pretest and posttest for questionnaire of entrepreneurial attitude before and after treatment.

![Figure 3. Pretest-Posttest Control Group Design](image)

Information:
O1: pretest of the experimental group
O2: posttest of the experimental group
O3: pretest of the control group
O4: posttest of control group

Teachers implement instructional by the teaching kit based local potential of manufacturing pottery and furniture from Jepara to the experimental group, while the control group teachers implement instructional by the teaching kit are used to be
A. Data, Instruments and Data Collection Techniques

The data in this research were obtained using non-test evaluation techniques such interview guideline sheet using when the initial study, a questionnaire for the assessment of entrepreneurial attitudes and observation sheet for observation of teaching implementation. Data from interviews at the preliminary study stage is used to determine the needs and field conditions. The results of the data were described as the basis of this research.

Entrepreneurial attitudes were measured using a questionnaire of entrepreneurial attitude that consists of 15 items which has been valid by the materials expert, media expert, science teacher, and peers validation. The questionnaire of entrepreneurial attitude was used to measure the entrepreneurial attitude of students. The observations of teaching implementation were done by using observation sheet of teaching implementation. The observations were done to measure percentage of teaching implementation using teaching kit based on local potential pottery and furniture from Jepara. The observations were done by two observers (observer) each of the teaching process.

B. Data Analysis Technique

Data of pretest and posttest that have been obtained during the research, calculated the score of standard gain before analysis process. Data of gain standards obtained using the Gain Standards technique [16]. Equation for this technique is:

\[ Gain \, Standard = \frac{skor \, posttest - skor \, pretest}{skor \, maksimum - skor \, pretest} \]

Gain score which has been obtained can be categorized in the category of low, medium, or high. [17] describes a category gain the following standards:

\[ g \geq 0.7 \quad : \quad \text{high gain} \]
\[ 0.3 \leq g < 0.7 \quad : \quad \text{medium gain} \]
\[ g < 0.3 \quad : \quad \text{low gain} \]

There are two analysis processes, then are analysis of teaching implementation using the teaching kit based on local potential and effectiveness analysis of science teaching using the teaching kit based on potential local pottery and furniture Jepara to improve students’ the entrepreneurial attitude.

At each meeting using the teaching kit based on local potential of pottery and furniture from Jepara, assessed using a questionnaire sheet of teaching implementation by two observers, so that each obtained a total score. The teaching implementation using teaching kit based on local potential assessed from the implementation of each item in the observation sheet. Number of items divided by total grain accomplished so teaching implementation score obtained in a percentage. To determine the percentage of teaching implementation each observer using the following equation.

\[ \% \, of \, Teaching \, Implementation = \frac{Total \, of \, teaching \, step \, on \, lesson \, plan \, implemented}{Total \, of \, teaching \, steps \, on \, lesson \, plan} \times 100\% \]

Implementation of the teaching kit based on local potential in learning observations by two observers catagorized be good if \( g \geq 0.75 \), or 75% [18]. To determine the percent of agreement on the implementation of the lesson plan using the following equation.

\[ Percentage \, of \, agreement = 100\% \left[ 1 - \frac{A-B}{A+B} \right] \]

Information:
\( A = \) Rate of observer 1 (which gives high value)
\( B = \) Rate of observer 2 (which gives low value) [18].

The t test on the data entrepreneurial attitudes of students use to determine the effectiveness of teaching process based on local potential pottery and furniture from Jepara.

The t test statistic requires two assumptions that must be done first, the normal distribution of data and the data must from a homogeneous population univariate. Assuming the test is performed on a standard score gain the entrepreneurial attitude of students using SPSS 22 on a significance level of 5%.
Normality test were have been performed on data standard gain scores calculated with the following hypotheses.

\( H_0 \): Data derived from normal distributed population.
\( H_a \): Data come from populations that are not normally distributed.

The normality test is done on each of the experimental group and control group. Normality test is done using SPSS 22 Shapiro Wilks at 5% significance level \( \alpha \). Criteria for normality test at 5% significance level \( \alpha \) is the data comes from populations with normal distribution or \( H_0 \) accepted if the significance value is greater than the value of \( \alpha \) (sig. \( > \alpha \)).

The next assumption is homogeneity test. Homogeneity test is performed to determine whether the samples homogeneous population or not.

\( H_0 \): Both population samples are equal or homogeneous.
\( H_a \): Both population samples are not equal or not homogeneous.

The homogeneity test is done by using SPSS 22 Levene’s Test at the 5% significance level \( \alpha \). Criteria for test of homogeneity of the significance level \( \alpha \) is the second population is otherwise the same sample or homogeneous or \( H_0 \) accepted if the significance value is greater than the value of \( \alpha \) (sig. \( > \alpha \)).

After the second test of the above assumptions are met, t test must be done to determine the effectiveness the science teaching based on local potential pottery and furniture of Jepara to improve students’ entrepreneurial attitude. Here are t test hypothesis.

\( H_0 \): science teaching kit based on local potential Jepara is not effective than teaching kit commonly used to improve the entrepreneurial attitude of students
\( H_a \): science teaching kit based on local potential Jepara effective than teaching kit commonly used to improve the entrepreneurial attitude of students

The t tests were performed on significance level \( \alpha \) 5% with SPSS 22. Criteria for acceptance or rejection of \( H_0 \) at significance level \( \alpha \) 5% are:

a. \( H_0 \) is rejected if sig. \( < \alpha \).
b. \( H_0 \) is accepted if sig. \( > \alpha \).

III. RESULT AND DISCUSSION

This research was held in three times meeting of teaching process. The students in experimental group are given the science worksheet based on local potential pottery and furniture of Jepara to guide learning activity. Meanwhile, the students of the control group using science worksheet like used to be. During the teaching process, there are two observers who observe teaching implementation using lesson plan based on local potential pottery and furniture of Jepara. The data were analyzed as presented in Table 1.

<table>
<thead>
<tr>
<th>No</th>
<th>Meeting</th>
<th>Observer</th>
<th>Total of Implemented Teaching Step</th>
<th>% of Implementation</th>
<th>% of Agreement</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td>15</td>
<td>83.33</td>
<td>96.55</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>14</td>
<td>77.78</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>1</td>
<td>16</td>
<td>88.89</td>
<td>96.97 Good</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>17</td>
<td>94.44</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>1</td>
<td>17</td>
<td>94.44</td>
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<td></td>
</tr>
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<td></td>
<td>2</td>
<td>16</td>
<td>88.89</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Based on Table 1, at each meeting of learning using lesson plans based on local potential pottery and furniture of Jepara lead to the conclusion percentage of agreement is over than 75%. According to the provisions, if the percentage of agreement over than 75%, then the criteria of teaching implementation of the lesson plan is good. Students are also very enthusiastic in following the teaching, learning both in the classroom (laboratory) and learning outside the classroom during a visit to the manufacture of pottery in Mayong district and manufacture of furniture in Mlonggo district.

The students of two group are given a questionnaire of entrepreneurial attitude before and after treatment. Based on data from the pretest score, posttest score, and standard score gain of entrepreneurial attitudes, can be summarized some data description required. Data description of pretest, posttest score, and standard score gain of entrepreneurial attitudes of students in the experimental group and control group is presented in Table 2.
Based on Table 2, analysis on the average score of the standard gain (<g>) that obtained the average value of the standard gain entrepreneurial attitude in the experimental group of 0.59 and 0.30 in the control group. The average gain is standard on the experimental group and control group each middle category, but still showed improvement scores entrepreneurial attitudes students experimental group higher than the control group students. This improvement was possible by the interaction of students with the craftsmen of pottery and furniture that makes the entrepreneurial attitude that has been owned students become more excavated.

Comparison charts the average score of pretest and posttest entrepreneurial attitudes between the experimental group and control group is presented in Figure 4.

![Figure 4](image-url)

**FIGURE 4. COMPARISON OF THE AVERAGE OF PRETEST AND POSTTEST OF ENTREPRENEURIAL ATTITUDE BETWEEN THE EXPERIMENTAL GROUP AND CONTROL GROUP**

Based on an average, standard gain scores in the experimental group is higher than the control group. As a comparison chart average achieved a standard score gain between the experimental group and control group is presented in Figure 5.

![Figure 5](image-url)

**FIGURE 5. COMPARISON STANDARD GAIN SCORE OF STUDENTS’ ENTREPRENEURIAL ATTITUDE IN FIELD TESTING BETWEEN THE EXPERIMENTAL GROUP AND CONTROL GROUP**

The univariate normality test of Shapiro-Wilk was done on each group of experimental and control using SPSS 22. Based on the analysis of data normality test showed that the data came from a normal distributed population or H₀ accepted by sig. > α at significance level 5%. Normality test results are presented in Table 3.

**TABLE 3. RESULT OF UNIVARIATE NORMALITY TEST SHAPIRO-WILK**

<table>
<thead>
<tr>
<th>No.</th>
<th>Variable</th>
<th>Experimental Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Sig.</td>
<td>Decision</td>
</tr>
<tr>
<td>1.</td>
<td>Entrepreneurial Attitude</td>
<td>0.229</td>
<td>accepted</td>
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<td></td>
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</tr>
<tr>
<td>1.</td>
<td>Entrepreneurial Attitude</td>
<td>0.229</td>
<td>accepted</td>
</tr>
</tbody>
</table>
The homogeneity test Levene’s Test was performed using SPSS 22. The homogeneity of the data can be concluded that the sample data came from a homogenous population if $H_0$ is accepted by the $\alpha > \alpha$ at significance level 5%. The test results show the homogeneity of the sample data comes from a homogenous population. Univariate homogeneity test results are presented in Table 4 below.

**TABLE 4. RESULT OF HOMOGENEITY TEST (LEVENE’S TEST)**

<table>
<thead>
<tr>
<th>No.</th>
<th>Variable</th>
<th>Sig</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Entrepreneurial Attitude</td>
<td>0.329</td>
<td>$H_0$ accepted</td>
</tr>
</tbody>
</table>

Univariate normality test of the entrepreneurial attitude variable found that the data came from a normal distributed population. Levene's test of homogeneity test has been done also lead to the conclusion samples come from a homogenous population, thereby t test on the entrepreneurial attitude variable to determine differences in the effectiveness of the use of the science teaching kit based on local potential Jepara as a result of the development. The effectiveness of the use of the science teaching kit based on local potential pottery and furniture of Jepara as a result of the development compared to the commonly used learning science teacher can be seen from the gain on the differences between the mean scores of each group of treatment to improve students’ entrepreneurial attitude. The results of t test on the entrepreneurial attitude variable is presented in Table 5.

**TABLE 5. RESULT OF THE T TEST ON ENTREPRENEURIAL ATTITUDE**

<table>
<thead>
<tr>
<th>No.</th>
<th>Variable</th>
<th>$t$</th>
<th>Average of $&lt;g&gt;$</th>
<th>Sig</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Entrepreneurial Attitude</td>
<td>10.199</td>
<td>0.25</td>
<td>0.30</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Based on the result of t test in Table 5, it can be concluded that the science teaching based on local potential pottery and furniture of Jepara effective than science teaching that commonly used to improve the entrepreneurial attitude of students. This research according to the research before by Sarah & Maryono that the utilization of local potential in learning process improve the students’ living values [19]. This is possible because a visit to the local potential of manufacturing pottery in Mayong district and furniture of Jepara in Monggo district as part of the science teaching process makes students learn actively and interactively directly to the craftsmen. It is according to Alexon’s statement that involvement of local potential to the activities in teaching process gives the student a meaningful learning. The involvement of local potential as it also makes learning more contextual and meaningful and provide a deep understanding. These learning process also give a direct example of living values in entrepreneurship so as to improve the entrepreneurial attitude of students as the future generation in ASEAN economic community of 21st century.

**IV. CONCLUSION AND SUGGESTION**

**A. Conclusion**

Based on the analysis that has been done, it can be concluded that the science teaching based on local potential pottery and furniture of Jepara effective to improve students’ entrepreneurial attitude SMPN 1 Bangsri Jepara.

**B. Suggestion**

Based on the research that has been done, the suggestion that can be given is:

1. Science teacher of SMP in Jepara regency should be able to exploit the local potential pottery and furniture of Jepara around the school into learning activity, so that students can learn a contextual and meaningful about the matter directly with entrepreneurs as the appropriate learning resources.
2. Learning science based on local potential pottery and furniture of Jepara is expected to be an example for teachers in making science teaching kit which involves local potential around the school.
3. For areas with different characteristics of local potential, teachers can modify the local potential to be integrated in the learning process according to the conditions.

**ACKNOWLEDGMENT**

Thanks to Ministry of Research Technology and Higher Education Republic of Indonesia that gives provides research grants so the research done successfully. Thanks to the team of lecturers in research team Mrs. Insih
Wilujeng, Mr. I Gusti Putu Suryadarma, and Mr. Zuhdan Kun Prasetyo who always give suggestion and guidance so that the paper can be completed.

The completion of this paper could not have been done without the support of all the people around me. Thanks to my parents as well who always supported my research and also my classmates in science education of graduate school of Yogyakarta State University.

REFERENCES
