THE UTILIZATION OF USED STUFF IN MAKING TEACHING TOOL BASED ON LOCAL WISDOM AS A MEANS TO INCREASE TEACHER PROFESSIONALISM

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ABSTRACT

The aim of this study was to determine the feasibility of teaching tool based on local wisdom from used stuff to improve the professionalism of teachers in SD N 1 Potrobangsan, Magelang. This research was quantitative research. The research subjects were eight elementary schools teachers. The instrument used in this study was a questionnaire. The data analysis technique was the scale method with modified Likert scale. The product is teaching tool which contain the elements of the local wisdom and made from used stuff. The visual aids that we made were volcanic eruption simulation of Mount Merapi which made from used cardboard containing elements of the local wisdom of the Magelang. The results of the data analysis concluded that the teaching tool based on local wisdom from used stuff are suitable to be used as teaching tool as a means of increasing teacher professionalism. This can be seen from the average value of the indicator of good teaching tool of 87.14%. This research implies that the effectiveness of learning can be increased by using props made from used materials

Keywords: Teaching tools, Local wisdom, Used stuff, Teacher professionalism

INTRODUCTION

Indonesia is a country that has diversity, both ethnicity, race, culture, regional languages, religion, natural potential, and other. This is a matter of pride for the people of Indonesia. Local wisdom is the results of the earth, artistic creations, cultural traditions, services, services, natural resources, human resources, or others that are the advantages of an area. According to Rahyono [1] local wisdom is obtained through the experience of certain people or ethnic groups from the results of their intelligence. That is, local wisdom itself is a result of certain communities
through their experience and not necessarily other communities experience it. These values will be strongly attached to the community and will be remembered throughout the life of the community.

Local wisdom is generally defined as ideas, values, views that are wise, full of wisdom, good value, which are embedded and followed by members of the community [2]. Education that utilizes local excellence in various aspects is education based on local wisdom. The content of local wisdom in education is very important because it can help stakeholders in carrying out an inventory of local wisdom [3,4], learning is more effective by incorporating cultural values in it so that students do not forget the cultures in a particular area [5], as well as local wisdom content of the local area are often found and close to students so that they are easily remembered by students. Tisngati [2] revealed that local wisdom in education can be applied into several aspects such as economic aspects, arts and culture, human resources, languages, information and communication technology, ecology, and others. In the school curriculum, local wisdom is useful for the development of student competencies in facing global competition. Preparation of lesson plans, use of methods and media, and evaluation of learning are efforts that can be done to develop student competency. Therefore, teachers must have competence in preparing lesson plans, using methods, using media, and evaluating learning. Teachers can develop their competencies by innovating in designing works that support learning activities. Zuriah et al. [6] revealed that the development of teaching materials as well as the preparation of syllabus and lesson plans, handouts, worksheets and modules, were able to produce reports on the best practices of implementing teaching materials development creatively and innovatively in developing works.

Local wisdom-based education can be used with innovation into learning media.

According to Islahudin et al. [7] learning media is a tool to transfer knowledge so that it can improve student learning outcomes. Teaching aids are part of the learning media, where teaching aids is one of the determinants of learning effectiveness [8]. Teaching aids are learning media that function to concretize learning material that is abstract so that it can facilitate students in understanding learning material. Therefore, the use of teaching aids is one way to meet the learning needs of students. The use of teaching aids in learning means optimizing the functions of all five senses by listening, seeing, feeling and thinking logically so that they can increase the activities of students in the learning process [9,10,11].

Based on Permendiknas number 16 of 2007 issued by the Minister of National Education states that a teacher must have four competencies namely, pedagogical competence, personality competence, professional competence and social competence [2]. A teacher in carrying out their duties must have the competence and professional attitude to be taught to students. From these competencies, the teacher must prepare themselves in conveying learning materials well, starting from the preparation of learning plans (lesson plans, tools, models used, worksheets, etc.), implementation (the learning process) and reflection (picture on when the learning process occurs) [12]. Therefore, a teacher must have professional competence, one of which is in the use and manufacture of instructional media in the form of teaching aids to improve the learning process.

According to Yulianti, et al [7] said in theory of teaching tool should, (1) In terms of its form: durable, the shape and color are attractive, simple, not dangerous. (2) In terms of its purpose: right with the purpose of teaching, support the
contents of the lesson material, can help the learning process, useful for students during learning, in accordance with the level of thinking of students.

The learning process can be improved by using teaching tool based on local wisdom. The media contains cultural values in it so students do not forget the cultures that exist in a particular area. Therefore, researchers will conduct research related to teacher responses in the manufacture and use of teaching tool based on local wisdom using used stuff. Used stuff are selected as materials for teaching aids because of the high cost of materials used to make teaching aids, used stuff are easily obtained around the environment of students, utilizing and developing existing materials can create critical thinking skills, curiosity, and curiosity seeking truth from participants [13]. In addition, the use of used items for teaching tool can also motivate students to learn and learn new things [14] as well as efforts to overcome environmental damage by utilizing used stuff. This includes the implementation of scientific character and science concepts in learning [15].

METHOD

The study was conducted on March 17, 2020. The subjects of this study were elementary school teacher 1 Potrobangsan, Magelang City. They numbered 8 people consisting of 6 women and 2 men.

This research is a quantitative research. This research was conducted in three stages: (1) Preparation, this stage includes the design of teaching aids, (2) Expert Test, this stage is carried out by assessing the appropriateness of teaching aids by the lecturer, (3) Feasibility Test, this stage is carried out by assessing the feasibility of teaching aids by the teacher.

In accordance with the type of data to be obtained in this study, the research instrument used was a questionnaire. The questionnaire is used to obtain data on the assessment of teaching tool based on local wisdom from used stuff. The questionnaire was given to teachers at Potrobangsan Elementary School 1 Magelang City during training for teaching aids, this questionnaire referred to good indicators of teaching aids.

The data analysis technique uses scale method with Likert scale modification. Likert scale is a psychometric scale that is used in a questionnaire to reveal a person's attitude and opinion towards a phenomenon. Respondents' responses in the form of quantitative data were changed to quantitative data expressed in the form of answers ranging from strongly disagree to strongly agree. This scale can be simplified to just 5 answer scales so that respondents' responses are clearer in which position.

<table>
<thead>
<tr>
<th>No</th>
<th>Choice Answer</th>
<th>Scale Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Strongly disagree</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Disagree</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Normal</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>Agree</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>Strongly agree</td>
<td>5</td>
</tr>
</tbody>
</table>

After all respondents' answers have been changed into grades 1 to 5, the total value of respondents is calculated by finding the ideal score or expected score for each assessment indicator and overall indicator, after which a percentage is drawn so that a conclusion can be drawn on how appropriate the learning media is used. This calculation can be calculated using the formula below:

\[ \text{Score obtained} = \frac{\text{number of respondents} \times \text{scale value}}{\text{Expected score} = \text{highest scale} \times \text{the number of respondents}} \]

Calculation of the feasibility of learning media using the method exemplified by Sugiyono [16].
**Percentage of eligibility** = \( \frac{\text{score obtained}}{\text{expected score}} \times 100\% \)

The formula above is used as a reference to calculate the percentage of eligibility based on data obtained from the teacher. After all the percentages of eligibility have been calculated, then to find out how feasible the learning media is, the table used by Arikunto [17].

**RESULTS AND DISCUSSION**

The results of the assessment of teaching aids based on local wisdom using used stuff were assessed by Potrobangsan Elementary School 1 Magelang teachers. The assessment is carried out by providing training in the production of teaching tool based on local wisdom using used stuff and then submitting a questionnaire to the teacher. The questionnaire is categorized into two aspects, namely from the aspect of its appearance and from the aspect of its purpose which is elaborated into 14 questions. Based on these two aspects, the teacher’s assessment of teaching tool based on local wisdom of used stuff can be seen in the Table 3.

<table>
<thead>
<tr>
<th>No</th>
<th>Assessment Aspects</th>
<th>Score</th>
<th>Percentage and criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Score obtained</td>
<td>Expected score</td>
<td></td>
</tr>
<tr>
<td>A. Form of teaching tool</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Can be used repeatedly</td>
<td>33</td>
<td>40</td>
</tr>
<tr>
<td>2</td>
<td>Not easily broken</td>
<td>33</td>
<td>40</td>
</tr>
<tr>
<td>3</td>
<td>Size accordingly</td>
<td>35</td>
<td>40</td>
</tr>
<tr>
<td>4</td>
<td>Attractive color</td>
<td>38</td>
<td>40</td>
</tr>
<tr>
<td>5</td>
<td>Ease of making</td>
<td>38</td>
<td>40</td>
</tr>
<tr>
<td>6</td>
<td>Does not require special support equipment</td>
<td>34</td>
<td>40</td>
</tr>
<tr>
<td>7</td>
<td>Can be used for students</td>
<td>36</td>
<td>40</td>
</tr>
<tr>
<td>8</td>
<td>Use does not need teacher supervision</td>
<td>26</td>
<td>40</td>
</tr>
<tr>
<td>B. The purpose of teaching aids</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Explain abstract material</td>
<td>35</td>
<td>40</td>
</tr>
<tr>
<td>2</td>
<td>Does not deviate from KI and KD</td>
<td>37</td>
<td>40</td>
</tr>
<tr>
<td>3</td>
<td>Solver of misconceptions</td>
<td>33</td>
<td>40</td>
</tr>
<tr>
<td>4</td>
<td>Having local area specialties</td>
<td>35</td>
<td>40</td>
</tr>
<tr>
<td>5</td>
<td>Facilitate the teacher in delivering material</td>
<td>38</td>
<td>40</td>
</tr>
<tr>
<td>6</td>
<td>Make it easy for students to facilitate the material</td>
<td>37</td>
<td>40</td>
</tr>
</tbody>
</table>

**Rata-rata Presentase** | 87.14 % (Worthy)

Based on the above table, seen from the aspect of the appearance of teaching tool there are 8 indicators, namely: 1) Can be used repeatedly, 2) Not easily damaged, 3) Size is appropriate, 4) Attractive colors, 5) Ease of making, 6) No requires special support equipment, 7) Can be used for students, 8) Use does not need teacher supervision.
The objective aspect of the teaching aid consists of 6 indicators, namely: 1) Explaining abstract material, 2) Does not deviate from KI and KD, 3) Solver of misconceptions, 4) Has local characteristics, 5) Facilitates teachers in delivering material, 6) Facilitates participants students in understanding the material. The description of these aspects is as follows.

1. **Forms of Teaching Tool**
   a. Can be used repeatedly
      
      Indicators can be used repeatedly to get a percentage of 82.5. This means that this indicator gets a score that is relatively decent. This is seen from the teaching aids that can be used repeatedly in learning.

      The teaching tool based on local wisdom from used stuff can be used repeatedly because they can be reset to their original position, and the material used is not a consumable material.

   b. Not easily broken
      
      The indicator is not easily broken gets a percentage of 82.5. This means that this indicator gets a score that is relatively decent. This is seen from the teaching tool not easily damaged when used or when storing (durable).

      The teaching tool based on local wisdom from used stuff are not easily damaged because the material we use is a material that is solid, namely cardboard with the appropriate thickness.

   c. Size accordingly
      
      The corresponding size indicator gets a percentage of 87.5. This means that this indicator gets a relatively good score. This can be seen from the teaching aids that have a size that is suitable for use in class.

      The teaching tool based on local wisdom from used stuff have A3 size or 29.7 x 42 cm. The size is appropriate, meaning that it is ideal for use, care and storage.

   d. Attractive color
      
      Attractive color indicator gets a percentage of 95.0. This means that this indicator gets a score that is relatively decent. This is seen from the teaching aids that have attractive colors so that they can attract the attention of students.

      The teaching tool based on local wisdom from used stuff have interesting colors because they use printed images with good quality.

   e. Ease of making
      
      Indicator of ease in making gets a percentage of 95.0. This means that this indicator gets a score that is relatively decent. This can be seen from the process of making teaching tool that are easily made because the goods and equipment needed are in the surrounding environment.

      The teaching tool based on local wisdom from used stuff are easy to make because they only use the concept of cutting and pasting in the manufacturing process.

   f. Does not require special support equipment
      
      The indicator does not require special support equipment gets a percentage of 85.0. This means that this indicator gets a score that is relatively decent. This can be seen from the visual aids that have a simple form so that they do not require special supporting equipment.

      The teaching tool based on local wisdom from used stuff do not require special equipment. This means that it can be used immediately after the teaching aids have been finished.

   g. Can be used for students
      
      The indicator can be used for students getting a percentage of 90.0. This means that this indicator gets a score that is relatively decent. This can be seen from the teaching aids that are suitable for students.

      The teaching tool based on local wisdom from used stuff can be used for students because it does not require special expertise in its operation or use.

   h. Use does not need teacher supervision
      
      The use indicator does not need teacher supervision to get a percentage of 65.0. This means that this indicator gets a score that is quite
decent. This can be seen from the use of the teaching aids which can be used without special supervision from the teacher.

The teaching tool based on local wisdom from used stuff do not require teacher supervision in their use because they are easy to use and the teaching tool do not use sharp components, have electricity, or other dangerous materials.

2. Purpose of Teaching Tool  
   a. Explain abstract material
      The indicator explaining the abstract material gets a percentage of 87.5. This means that this indicator gets a score that is relatively decent. This can be seen from the use of visual aids to explain abstract material.

      This proverbial of teaching tool based on local wisdom from used stuff explains material about volcanoes, namely the structure of a volcano and the process of volcanic eruptions. The process is abstract because it occurs inside a volcano that cannot be seen directly.

   b. Does not deviate from KI and KD
      The indicator does not deviate from KI and KD gets a percentage of 92.5. This means that this indicator gets a score that is relatively decent. This can be seen from the compatibility between visual aids and KI and KD.

      The teaching tool based on local wisdom from used stuff are made based on KI 3. (understanding factual and conceptual knowledge by observing, asking questions and trying based on curiosity about himself, God's creatures and their activities, and objects they encounter at home, in school and playground) 4. (presents factual knowledge and healthy children, and in actions that reflect the behavior of children of play and noble character and KD 3.7 (analyzing the effect of heat on changes in temperature and form of objects in everyday life) 4.7 (reporting the results experiment of the effect of heat on objects).

   c. Solver of misconceptions
      Indicator solver misconceptions get a percentage of 82.5. This means that this indicator gets a score that is relatively decent. This is seen from the teaching aids that are able to help break down misconceptions in learning material.

      The teaching tool based on local wisdom from used stuff can be used to explain how the structure and process of volcanoes erupt so that they can break down misconceptions on the material.

   d. Having local area specialties
      The indicator has a specific local area gets a percentage of 87.5. This means that this indicator gets a score that is relatively decent. This can be seen from the teaching tool based on local wisdom of the local area.

      The teaching tool based on local wisdom from used stuff have local characteristics, namely Mount Merapi, which is one of the famous mountain objects in Magelang and is still active.

   e. Facilitate the teacher in delivering material
      Indicators make it easy for teachers in delivering material to get a percentage of 95.0. This means that this indicator gets a score that is relatively decent. This is seen from the teaching aids that help the teacher to deliver the material during the learning process.

      The teaching tool based on local wisdom from used stuff can facilitate the teacher in delivering the material because the teacher can explain and simulate the material being taught.

   f. Make it easy for students to facilitate the material
      Indicators make it easy for students to understand the material gets a percentage of 92.5. This means that this indicator gets a score that is relatively decent. This is seen from the use of teaching aids that help students in understanding the material.

      The teaching tool based on local wisdom from used stuff can facilitate students in understanding the material because students can
see concretely and can simulate the process of volcanic eruptions directly.

Based on the calculation it can be seen that the average percentage of the tools assessment is 87.14%. This value is included in the category of appropriate as a good learning media

CONCLUSION

Based on the results of research and discussion, it can be concluded that educators must have competence and creativity in delivering learning material. Therefore, teachers must be equipped with knowledge and skills to improve their competence and creativity so that teachers can improve their professionalism in teaching. One of the efforts that can be done is by conducting training to produce teaching tool. The teaching tool based on local wisdom from used stuff are made using goods that are easily found in the surrounding environment. In addition, it also contains the cultural values of the local area so that students continue to recognize the local wisdom in their area. Based on the results of the study, of teaching tool based on local wisdom obtained an average percentage of 87.14% and included in the feasible category.

REFERENCES


