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Implementation of Explicit Instruction Learning Model to Increase Practical Skills Achievement of Vocational School Students

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ABSTRACT

Practical skills are competencies that are needed by SMK graduates to improve the work readiness of SMK students. Learning achievement of practical skills can be improved by selecting the right learning model. The purpose of this study was to determine the application of the Explicit Instruction learning model for students of the Light Vehicle Engineering Skills Competency Vocational School (TKR) and to find out how much increased practical learning achievement of TKR Vocational School students after the application of the Explicit Instruction model. The research model is classroom action research (Classroom Action Research). The subjects of this study were students of SMK Muhammadiyah Bambanglipuro TKR Expertise Competence, amounting to 25 students. The data collection technique used was a test with a practical performance sheet instrument. The practice performance sheet is validated by industry experts. After being applied, the results of the practical exam assessment were analyzed descriptively. The results showed that the Explicit Instruction learning model could be applied well by students of SMK Muhammadiyah Bambanglipuro TKR Expertise Competence. After the implementation of the Explicit Instruction learning model, there was an increase in the average score of the competency aspect of practical skill achievement in each research cycle. The aspect of work preparation in the first cycle is 1.44, the second cycle is 2.32 and the third cycle is 2.88. The competency aspect of work knowledge in the first cycle is 1.64, the second cycle is 2.24 and the third cycle 3. While the work skill competency aspect in the first cycle is 1.56, the second cycle is 1.86 and the third cycle is 3.16.

Keywords: Explicit Instruction Learning Model, Practical Skill Achievement, Vocational School Students
INTRODUCTION

Vocational high school (SMK) is a level of education that is oriented towards skills in the fields of work [1][2]. Vocational High Schools are organized to produce graduates who can easily enter the job market and are able to create their own jobs so that they are beneficial for economic growth and development [3][4]. Vocational High School is held as the formation of competencies that are in accordance with the needs of the industrial world [5][6]. Vocational High Schools play an important role in meeting the demand for skilled workers. Based on data from the Central Statistics Agency (BPS) Indonesia requires around 100 million skilled vocational graduates. But in reality, it is vocational graduates who hold the highest unemployment rate (TPT). In 2022, unemployment from the vocational school level is at the highest rank, which is 10.38%. The high unemployment of SMK is caused by the low work skills of SMK graduates [7][8][9]. Work skills include productive skills and practices in certain work fields. In fact, the problem of low practical competence is still a factor that affects the low work readiness of SMK students [10][11].

Vocational graduates work skills are obtained in the learning process. In theory, the learning process in Vocational High Schools has been managed in a conscientious manner to produce optimal work skills. Optimal means learning outcomes or outcomes that are in accordance with the competencies and needs of the industrial world [12][13][14][15]. Strategies in the preparation, implementation and evaluation of learning are planned as well as possible to produce optimal competencies so that SMK graduates are able to compete in the industrial world. The achievement of vocational graduates’ competencies can be measured by the success and achievement of practical skills [16]. Practical skills are the ability of students to deal with real work conditions [17]. Practical skills are insights about information and students’ mindsets to be able to explore problems, which will then be analyzed and resolved in an integral and comprehensive manner [18]. Practical skills are the development of knowledge and technology so that they are suitable for working conditions in the world of work [19][20]. Light Vehicle Engineering Vocational School (TKR) is one of the automotive expertise competencies that aims to prepare graduates who are ready to work in the automotive sector. But so far, the low practical competence of TKR SMK students is still a major problem. Mutohari and Sudarsono concluded that the practical and productive competencies of vocational students are still not maximized [21][15].

To improve the achievement of practical skills, SMK has tried to apply learning models. The application of the Explicit Instruction learning model is suitable and appropriate for TKR SMK students because the Explicit Instruction learning model facilitates
teachers and students to be able to participate maximally in learning. Not only that, the Explicit Instruction learning model has stages that are easily applied to TKR Vocational High School learning [22]. The learning model currently focused on being developed in SMK is the Explicit Instruction learning model. Explicit Instruction learning model is a learning model that emphasizes the personal approach of teachers and students so that students can better understand the material being taught with the guidance of the teacher [23][24]. The stages of the explicit instruction learning model are as follows: (a) Orientation, the teacher explains the purpose of learning. (b) Presentation. The teacher describes the content of learning and its relationship to previous knowledge or experience. (c) Structured Practice. The teacher discusses the learning procedures, namely the responsibilities of students during this activity (d) Practice in Guidance. Teachers monitor learning activities, and (e) Independent Practice. Students carry out learning activities independently[25][26][27].

Explicit Instruction learning model is designed to develop the quality of student learning, especially about knowledge, techniques, procedures and practices. This is in accordance with the results of research from Suroto and Ekayasa which states that the Explicit Instruction learning model can improve achievement and practical learning outcomes [28][29]. Explicit Instruction learning model that is implemented well and consistently is able to improve students' practical skill achievement [30][31][32].

**RESEARCH METHOD**

![Diagram](image)

*Figure 2. Classroom action research cycle [33]*

The research design used in this study is classroom action research (CAR). The research object was carried out at SMK Muhammadiyah Bambanglipuro Bantul with the number of research subjects totaling 25 students. The skill competency material used is the brake system. The research stages adopted the CAR research design from Kemmis and Taggart (1988) which divided
the action research procedure into four stages of activity in one cycle, namely: planning, implementing, observing and reflecting. The stages of the Kemmis and Taggart CAR models can be seen in Picture 2.

The planning activity plan carried out is as follows:

**Planning**

At this stage the researcher designs the actions to be carried out in the study, including the following:

1) Develop a plan that will be implemented in accordance with the findings of the problem and initial ideas.
2) Prepare modules or materials to be taught.
3) Prepare teaching tools and materials
4) Prepare a grid of test questions.

**Implementation (Action)**

In this stage the teacher performs the following activities:

1) Initial activity
   a) Greetings, report and pray
   b) Open lessons in class
   c) Check student attendance
   d) Explain the importance of learning.
2) Core activities
   a) Distributing modules that are used as learning resources
   b) Divide students into several groups
   c) Provide initial guidance and instruction to students
   d) Students in groups discuss the material

3) Closing activity

The closing activity contains the activities of researchers providing conclusions from the results of teaching and learning activities and providing a little overview for the next material, and followed by praying after learning.

**Observation**

Researchers observed the learning process using the Explicit Instruction learning model. This observation aims to determine the implementation of the model and the effectiveness of improving practical skill achievement.

**Reflection**

The reflection stage aims to evaluate the implementation of the model and the achievement of practical skills. Reflection is used as a consideration for carrying out the next cycle.

Furthermore, the data collection technique used to measure practical learning achievement is the practical exam assessment sheet. The practice exam assessment sheet is used to determine the implementation and test the effectiveness of the model. Data were analyzed by descriptive statistics. For indicators of the effectiveness of the model in improving practical learning achievement, refer to Table I.
Table 1. Criteria for the meaning of the practice exam

<table>
<thead>
<tr>
<th>Rating Norms</th>
<th>Score Range</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>$X \geq \mu + 1.3$</td>
<td>$X \geq 3.00$</td>
<td>Very Good (VG)</td>
</tr>
<tr>
<td>$\mu + 1.3 &gt; X \geq \mu$</td>
<td>$3.00 &gt; X \geq 2.50$</td>
<td>Good (B)</td>
</tr>
<tr>
<td>$\mu &gt; X \geq \mu - 1.3$</td>
<td>$2.50 &gt; X \geq 2.00$</td>
<td>Enough (E)</td>
</tr>
<tr>
<td>$X &lt; \mu - 1.3$</td>
<td>$X &lt; 2.00$</td>
<td>Not Good (NT)</td>
</tr>
</tbody>
</table>

Information:

$\mu$: average student overall score in one class (max score + minimum score)

$\beta$: standard deviation of overall score

$\beta = \frac{1}{6} (\text{max score} - \text{minimum score})$[34]

Practical skills learning achievement consists of three aspects of competence, namely, practical preparation competence, practical knowledge, and practical skills. The scoring rubric for practical skills can be seen in Table 2.

Table 2. Practical skills assessment rubric

<table>
<thead>
<tr>
<th>Activity</th>
<th>Competency Aspect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students master the procedures for preparing measuring and hand tools, clothing and manuals</td>
<td>Work</td>
</tr>
<tr>
<td>according to industry standard operating procedures (SOPs).</td>
<td>preparation</td>
</tr>
<tr>
<td>Students can answer all questions correctly and firmly about the knowledge and materials of</td>
<td>Work</td>
</tr>
<tr>
<td>measuring instruments according to industry standard operating procedures (SOPs).</td>
<td>Knowledge</td>
</tr>
<tr>
<td>Students master the use of measuring and hand tools according to the needs of the field of</td>
<td>Work</td>
</tr>
<tr>
<td>work according to industry standard operating procedures (SOPs).</td>
<td>Skills</td>
</tr>
</tbody>
</table>

RESULT AND DISCUSSION

The implementation of the explicit instruction learning model is carried out in three cycles with the competence of brake system skills. The minimum completeness score (KKM) determined on the practical skill learning achievement is >2.50 or with the minimum criteria of "Good".

First Cycle

In cycle one, the implementation of the explicit instruction learning model encountered several obstacles, namely: (a) students were still mostly silent and waiting for the teacher’s direction; (b) students are still choosing groups; and (c) teachers are still not familiar with the stages of the explicit instruction learning model. The explicit instruction learning model emphasizes the teacher’s role as a facilitator for students. The results of practical skills learning achievement in this cycle are not optimal in terms of work competence, getting an average score of 1.44 in the bad category. Aspects of work knowledge competence gets an average score of 1.64 in the bad category. The competency aspect of work skills gets an average score of 1.56 in the bad category.

Second Cycle

In the second cycle, the learning activities have started to run well. Teachers can apply the explicit instruction learning model well. Problems occur in student motivation. Students still often walk around and are not in a learning position. On the other hand, students have been able to position the group, and are able to carry out the work and tasks assigned by the teacher. In the second cycle, the learning achievement
of practical skills began to increase. Aspects of work preparation competence get an average score of 2.32 in the poor category. The competency aspect of work knowledge gets an average score of 2.24 with a poor category. The competency aspect of work skills gets an average score of 1.8 in the bad category.

**Third Cycle**

The third cycle of all stages of learning with the application of the explicit instruction learning model has been carried out well. Students and teachers together carry out without the guidance of researchers. The implementation of the explicit instruction learning model stopped in the third cycle because the average total score of achievement of the competency aspects of work preparation, work knowledge and work skills had reached above the KKM with the criteria of “Good”. Aspects of work preparation competence get an average score of 2.88 in the good category. The competency aspect of work knowledge got an average score of 3.00 with good category. The competency aspect of work skills got an average score of 3.16 in the good category.

Target achievement of practical learning skills can be developed with good implementation through the explicit instruction learning model for three cycles. The increase in the average skill score on practical learning achievement can be seen in Figure 3 and Table 3.

<table>
<thead>
<tr>
<th>Table 3. Total score of practical skills learning achievements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Aspects of Work Preparation Competence</strong></td>
</tr>
<tr>
<td>Criteria</td>
</tr>
<tr>
<td>---------------------</td>
</tr>
<tr>
<td>Very good (VG)</td>
</tr>
<tr>
<td>Good (G)</td>
</tr>
<tr>
<td>Enough (E)</td>
</tr>
<tr>
<td>Not Good (NG)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

<p>| <strong>Aspects of Work Knowledge Competence</strong>                      |</p>
<table>
<thead>
<tr>
<th>Criteria</th>
<th>First Cycle</th>
<th>Cycle Second</th>
<th>Cycle Third</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very good (VG)</td>
<td>0</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Good (G)</td>
<td>3</td>
<td>8</td>
<td>17</td>
</tr>
<tr>
<td>Enough (E)</td>
<td>28</td>
<td>15</td>
<td>4</td>
</tr>
<tr>
<td>Not Good (NG)</td>
<td>10</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1.64</td>
<td>2.24</td>
<td>3</td>
</tr>
</tbody>
</table>

<p>| <strong>Aspects of Work Skills Competence</strong>                        |</p>
<table>
<thead>
<tr>
<th>Criteria</th>
<th>First Cycle</th>
<th>Cycle Second</th>
<th>Cycle Third</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very good (VG)</td>
<td>0</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>Good (G)</td>
<td>1</td>
<td>4</td>
<td>17</td>
</tr>
<tr>
<td>Enough (E)</td>
<td>12</td>
<td>12</td>
<td>2</td>
</tr>
<tr>
<td>Not Good (NG)</td>
<td>12</td>
<td>9</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1.56</td>
<td>1.8</td>
<td>3.16</td>
</tr>
</tbody>
</table>

![Figure 3. Improving practice learning achievement](image)

Application of learning model explicit instructions can be implemented well by
students and teachers in three cycles of application. Learning model explicit instructions based on the score of learning achievement of practical skills increased from cycle 1 to cycle 3. Learning model explicit instructions proven to be able to improve the competency aspects of work preparation well. Students master the procedures for preparing measuring and hand tools, clothing and manuals according to industry standard operating procedures (SOPs). These results are in accordance with the results of Rosmaria and Lorraine Hammond’s research which states that the explicit instruction learning model can improve the learning achievement of vocational students, especially in attitudes and work preparation [35][36].

Improving the aspect of work competence with students being able to answer all questions correctly and firmly about knowledge and measuring instrument materials according to industry standard operating procedures (SOPs) increased from cycle 1 to cycle 3. These results are in accordance with the results of Dickinson and Michael Sadeghi’s research which states that the implementation of the explicit instruction learning model that is carried out well will increase the understanding of the productive scientific fields of vocational students [37][38]. Meanwhile, So Lim Kim stated that the application of the explicit instruction learning model with the correct stages can improve the understanding of vocational students towards basic knowledge of techniques such as measuring tools [39].

Application the implementation of a well-implmented explicit instruction learning model can improve the competency aspect of work skills with a description of students mastering the use of measuring and hand tools according to the needs of the field of work according to industry standard operating procedures (SOPs). These results are supported by Sahade who states that the explicit instruction learning model can form the ability to analyse and apply science to work pieces [40]. While Sharon Vaughn stated that the explicit instruction learning model that is applied with industry standards will provide more real skills [41].

CONCLUSION

From this research, conclusions can be drawn: (1) The explicit instruction learning model can be implemented properly with the following steps: (1) the teacher provides an apperception of learning, (2) the teacher describes the learning content and its relationship to industry-based knowledge or experience, (3) The teacher provides descriptions and procedures as well as student responsibilities during industrial-based practice activities (4) The teacher monitors industrial-based practice learning activities, and (5) Independent practice. Students carry out industrial-based independent learning activities. From the results of the application of the model, there
was an increase in learning achievement of practical skills in aspects of work preparation competence, work knowledge and work skills with good criteria for three cycles.

Results and Discussion contains a detailed description of all research results and their analysis. Research results can be supplemented with tables, graphs, pictures and/or charts. Results and discussion can be separated or described directly. If the results of the discussion are presented directly, include sub-discussions so that readers can easily digest the information presented. The discussion contains the meaning of the results and comparisons with theories and/or similar research results.

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