ABSTRACT
This study purposed to determine the effect of professional competence on work effectiveness of state vocational high school teachers in Samarinda City. The research method used was a survey with a causal design. The data analysis method used is descriptive, simple linear regression, coefficient of determination with t-test. The results of the regression analysis obtained a coefficient of 1.001, and the results of the t test obtained a significance value smaller than the alpha level (α) 5% (0.000 < 0.05). Thus there is a significant influence of professional competence on the work effectiveness of vocational school teachers in Samarinda City. The results of the analysis of the coefficient of determination ($R^2$) obtained a value of 0.670. This means that 67% of the regression model is able to explain changes in the variable work effectiveness of teachers due to variance in the variables of professional competence. And the remaining 33% teacher effectiveness is explained by other variables not included in the research model. The quality of the teacher's work effectiveness of 29.48% is in the low range. And the quality of professional competence at 38.95% is also in the low range.

Keywords: Professional Competence, Vocational School, Work Effectiveness.

THE EFFECT OF PROFESSIONAL COMPETENCE ON THE WORK EFFECTIVENESS OF STATE VOCATIONAL HIGH SCHOOL TEACHERS IN SAMARINDA CITY

I. INTRODUCTION
Efforts to improve the quality of education are the government's strategic steps to improve the quality of Indonesia's human resources. Tanang and Abu (2014: 25-40) said “... the government invests in education as a strategy to develop high quality human resources”.

Education is only likely to improve in quality if supported by quality teaching. Habib (2017: 530-532) said “... nothing is more fundamental to achieving our goal of success for every student than high quality teaching. That is why classroom first places the teacher at the centre of our improvement efforts”. The point of Habib's statement is that there is nothing more fundamental to achieving educational success except the high quality of teaching. Therefore the teacher factor is the main center that needs to be improved.
In line with Habib, Tanang and Abu (2014: 25-40) argued that “Quality education must be supported by professional teachers to produce the people who have life skills and strong self-confidence to be competitor among other people in global life”.

The views of Tanang and Abu are reinforced by Zahrri and Iqbal (2018) “... a teacher is a crucial component in the success of an education, because he or she is spearhead that contacts directly with students as subjects and objects of study. If teachers have a good ability in teaching, it will bring the impact on the climate of good teaching and learning”.

Associated with the quality of teaching and professional competence, researchers found a number of irregularities in the teacher, namely: 1) Teachers do not arrange annual programs and semester programs; 2) The teacher does not draw up a lesson plan at the beginning of the year; 3) The lesson plans prepared by the teacher are the result of sticky coffee; 4) The teacher does not manage the learning class properly; and 5) Test equipment for student learning outcomes without qualifying.

II. THEORETICAL BASIS

1. Effectiveness of Teacher's Work
   In terminology, Ravianto (1989: 113) argued that "Effectiveness is how well the work is done, the extent to which people produce outputs as expected".
   In line with Ravianto, Hidayat (1986: 8) argued that "Effectiveness is a measure that states that how far the target (quantity, quality and time) has been achieved".

   The work of teachers is in the teaching field which includes "Planning learning, implementing quality learning processes, and assessing and evaluating learning outcomes" (Law No. 14 of 2005).

   Work effectiveness is influenced by a number of factors. According to Robins, there are 5 factors that affect a person's work to be effective, namely: a) Attitude/discipline; b) Interest; c) Motives; d) Past experience; and e) Expectations.

   The effectiveness of teacher work is measured through the grading of the performance of subject teachers formulated by the Indonesian Ministry of Education and Culture (2012):
   a. Learning Planning
      1) The teacher formulates the learning objectives in the lesson plan with the curriculum syllabus and pays attention to the characteristics of the students.
      2) The teacher arranges teaching materials in a sequential, logical, contextual and up-to-date manner.
      3) The teacher plans effective learning activities.
      4) The teacher chooses learning resources / learning media according to the material and learning strategies.
   b. Implementation of Active and Effective Learning
      5) The teacher starts learning effectively.
      6) The teacher masters learning.
      7) The teacher applies an effective learning approach / strategy.
      8) The teacher utilizes learning resources / media in learning
      9) The teacher triggers and / or maintains student order in learning.
     10) The teacher uses correct and appropriate language in learning.
     11) The teacher ends the learning.
   c. Learning Assessment
      12) The teacher designs an evaluation tool to measure students' learning progress and success.
      13) Teachers use a variety of assessment strategies and methods to monitor student progress and learning outcomes in achieving certain competencies as written in the lesson plan.
      14) The teacher uses a variety of assessment results to provide feedback for students about their learning and materials for the preparation of further learning designs.

2. Professional Competence
   According to the Indonesian Education Law (2005) on Teachers and Lecturers, competence is a set of knowledge, skills and behaviors that must be possessed, internalized and mastered by teachers or lecturers in carrying out professional duties. Furthermore, the Act explains that professionals are work or activities carried out by a person and a source of income for life that requires expertise, skills, or skills that meet certain quality standards or norms and require professional education.

   A teacher needs to have a professional standard by mastering the materials and learning strategies. In addition, teachers should also be able to encourage their students to study seriously. Jumriati, Suryadi, Sjamsir found that (2018), a teacher's professional competence includes personality, science, and skill even though the greater emphasis lies in the skill element according to the role performed.
Uno (2007: 18-19) explained that professional competence is an ability that must be possessed by teachers in order to carry out teaching tasks that include the ability to plan, implement and evaluate learning systems, as well as the ability to develop learning systems.

Professional aspects that must be mastered by teachers according to Arikunto (1993: 239) are broad and deep knowledge about the subject areas being taught, as well as mastery of methodology in the sense of having theoretical concept knowledge, being able to choose the right method, and being able to use it in the teaching and learning process.

Professional competence is measured through indicators formulated by the Ministry of National Education (2011) as follows:

a. Mastering the material, structure, concepts, and scientific mindset that supports the subjects being taught. This competitive aspect has the following three indicators:
1) The teacher maps the competency standards and basic competencies for the subjects being taught, identifies learning materials that are considered difficult, conducts planning and implementation of learning, and estimates the time allocation required.
2) The teacher includes appropriate and current information in the planning and implementation of learning.
3) The teacher prepares materials, plans and implements learning that contains information that is accurate, current, and which helps students to understand the concept of learning material.

b. Develop professionalism through reflective action. This competency aspect has 6 indicators as follows:
1) The teacher conducts a self-evaluation specifically, completely, and supported by examples of self-experience.
2) The teacher has a learning journal, input notes from peers or the results of an assessment of the learning process as proof of the performance description.
3) The teacher utilizes evidence of his performance description to develop the planning and implementation of further learning in the ongoing professional development program.
4) The teacher can apply the professional development program experience in planning, implementing, evaluating learning and following it up.
5) Teachers can conduct research, develop innovation work, participate in scientific activities (e.g. seminars, conferences), and be active in implementing professional development program.
6) Teachers can use information and communication technology in communicating and implementing professional development program.

III. RESEARCH METHODOLOGY

This study used a survey method because what was learned was sample data from the population (Sugiyono, 2003: 7). The design used is causal by analyzing a variable influencing other variables (Sugiyono, 2009: 73).

The study population numbered 879 teachers in 20 State Vocational Schools in Samarinda City with a sample of 95 teachers in 7 State Vocational Schools.

To get the instrument's validity, a validity test is conducted which debates to what extent the measurement is appropriate in measuring what (Febrinawati, 2018: 17-23). And to get the instrument's constancy, a reliability test is carried out which questions the increase in which a measurement can be trusted because of its constancy (Febrinawati, 2018: 17-23).

To get the main data, a questionnaire was used. According to Sugiyono (2009: 142) "Questionnaire is a data collection technique carried out by giving a set of questions or written statements to respondents to answer". Furthermore, to deepen the research findings, interviews were conducted with several respondents.

Statistical data that has been collected is validated through classical assumptions which consist of 1) normality test; 2) heteroscedasticity test; and 3) linearity test. Then a simple linear regression analysis is performed which illustrates the effect of the independent variables on the dependent variable. The alleged regression equation model used is as follows:

\[ \hat{Y} = a + bX \]

Information:
- \( \hat{Y} \) = dependent variable (work effectiveness)
- \( a \) = constants / intercepts
- \( b \) = Regression coefficient of X (professional competency variable)
- \( X \) = independent variable (professional competence)

To find out whether or not the independent variable affects the dependent variable, a t test is performed. As for knowing the ability of the regression model, an analysis of the coefficient of determination (R²) is performed.

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**IV. RESEARCH RESULTS AND DISCUSSION**

1. **Description of Teacher Quality**
   a. **Effectiveness Quality of Teacher’s Work**

   The quality of work effectiveness of State Vocational School teachers in Samarinda City is outlined in the following table:

   **Table 1 Quality of Teacher Work Effectiveness**

<table>
<thead>
<tr>
<th>Category</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very high</td>
<td>25</td>
<td>26.32%</td>
</tr>
<tr>
<td>High</td>
<td>23</td>
<td>24.21%</td>
</tr>
<tr>
<td>Medium</td>
<td>19</td>
<td>20.00%</td>
</tr>
<tr>
<td>Low</td>
<td>18</td>
<td>18.95%</td>
</tr>
<tr>
<td>Very low</td>
<td>10</td>
<td>10.53%</td>
</tr>
<tr>
<td>Total</td>
<td>95</td>
<td>100%</td>
</tr>
</tbody>
</table>

   The results of this category indicate that there are 28 teachers or 29.48% of the teacher’s work effectiveness is in the low range.

   The low effectiveness of the teacher’s work is shown through the indicators of questionnaire learning plan number 4. That there are 61 teachers or 64.21% of teachers rarely compile annual and semester programs.

   The low effectiveness of teacher work was also shown through questionnaire number 5 that there were 55 teachers or 57.90% of teachers were in the range of not compiling learning implementation plans at the beginning of the learning year.

   b. **Professional Competency Quality**

   The quality of professional competence of state vocational teachers in Samarinda City is outlined in the following table:

   **Table 2 Quality of Professional Competence**

<table>
<thead>
<tr>
<th>Category</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very high</td>
<td>5</td>
<td>5.26%</td>
</tr>
<tr>
<td>High</td>
<td>37</td>
<td>38.95%</td>
</tr>
<tr>
<td>Medium</td>
<td>16</td>
<td>16.84%</td>
</tr>
<tr>
<td>Low</td>
<td>23</td>
<td>24.21%</td>
</tr>
<tr>
<td>Very low</td>
<td>14</td>
<td>14.74%</td>
</tr>
<tr>
<td>Total</td>
<td>95</td>
<td>100%</td>
</tr>
</tbody>
</table>

   The category results can be confirmed as 37 teachers or 38.95% of the professional competence of teachers is ranked low.

   The low professional competency of teachers is ranked through the questionnaire number 3. It takes 45 teachers or 47.37% of teachers to prepare their lesson plans by sticking copies from other people’s ready-made lesson plans.

   The low competency of professional teachers is also shown through questionnaire number 17. It takes 47 teachers or 49.47% of teachers are in a higher scope and develop learning plans after evaluating teacher performance (teacher performance assessment).

2. **Hypothesis Test**

   a. Hypothesis testing

   After the data is processed with the help of the SPSS program, the results are presented in the following table:

   **Table 3 Results of Simple Linear Regression Analysis**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Regression Coefficient</th>
<th>t</th>
<th>Sig.</th>
<th>r²</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work Effectiveness (Constants)</td>
<td>31.874</td>
<td>5.568</td>
<td>0.000</td>
<td>0.821</td>
<td>0.670</td>
</tr>
<tr>
<td>Professional Competence</td>
<td>1.001</td>
<td>13.854</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

   Based on table 3, the regression coefficient values are obtained that can be arranged into the model of the alleged regression equation as follows:

   \[
   \hat{Y} = 31.974 + 1.001
   \]

   The meaning of these numbers is:
The Effect of Professional Competence on the Work Effectiveness

1) Constant of 31.974. That is, if the professional competence variable is zero (0), then the work effectiveness variable is worth 31.874.
2) Regression coefficient of 1,001. That is, every increase of one variable unit of professional competence increases the teacher's work effectiveness variable by 1,001.

Furthermore, to determine the effect of professional competence on the work effectiveness of vocational school teachers in Samarinda City, a t-test was carried out with the following hypotheses:

- \( H_0 : \beta < 0 \) = There is no significant effect of professional competence on the work effectiveness of the State Vocational School teachers in Samarinda City.
- \( H_1 : \beta > 0 \) = There is a significant influence of professional competence on the work effectiveness of the State Vocational School teachers in Samarinda City.

Decision making criteria used are \( H_0 \) rejected if the statistical significance is smaller than the alpha level (\( \alpha \)) of 5% (Sig. <5%). Thus there is a reason to accept \( H_1 \).

Based on the results of the regression analysis obtained a coefficient of 1,001 and the results of the t test obtained statistically significant figures smaller than the alpha level (\( \alpha \)) 5% (0.000 <0.05). Thus, \( H_0 \) is rejected and \( H_1 \) is accepted stating that there is a significant influence of professional competence on the work effectiveness of State Vocational School teachers in Samarinda City.

b. Determination Coefficient Analysis (\( R^2 \))

The results of the analysis of the coefficient of determination (\( R^2 \)) obtained a figure of 0.670. This means that 67% of the regression model is able to explain the changes that occur in the variable work effectiveness of teachers due to variance in the variables of professional competence. And the remaining 33% of work effectiveness variables are influenced by other variables not included in this research model.

3. Discussion

The results showed that the variable of professional competence had a significant effect on the work effectiveness of vocational school teachers in Samarinda City. It was based on the acquisition of a regression coefficient of 1,001 with a statistical significance smaller than the alpha level (\( \alpha \)) of 5%. Therefore the higher the professional competence, the higher the teacher's work effectiveness. And the lower the professional competence, the lower the teacher's work effectiveness.

The work effectiveness of State Vocational School teachers in Samarinda City is in the low range of 29.48%. The low effectiveness of the work of teachers, especially on the problem of teachers rarely compile annual programs and semester programs 64.21%. In addition, teachers also do not prepare lesson plans at the beginning of the year amounting to 57.90%.

Professional competence is in the low range of 38.95%. The low professional competence, especially in the problem of lesson plans prepared by teachers, is the result of copy and paste from other people's lesson plans by 47.37%. In addition, the teacher also did not develop a lesson plan (RPP) of 49.47%.

V. CONCLUSIONS AND RECOMMENDATIONS

Professional competence significantly influences the work effectiveness of vocational school teachers in Samarinda city.

The work effectiveness of State Vocational School teachers in Samarinda City is in the low range of 29.48%, and the professional competency of State Vocational School teachers in Samarinda City is in the low range of 38.95%.

In order to improve work effectiveness and professional competence of State Vocational School teachers in Samarinda City, it is necessary to improve teacher work items that are low in effectiveness and professional items that are still of low competence.

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