The Effect of Principal’s Managerial Competence and Teacher Work Culture on Teacher Competence at Junior High Schools in Cilacap

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ABSTRACT

This study aimed to determine: 1) the effect of the principal’s managerial ability on teacher competence; 2) The influence of teacher work culture on teacher competence; 3) The influence of the principal’s managerial ability and teacher’s work culture on teacher competence. This research was descriptive with a quantitative approach. The data were collected by distributing questionnaires to 71 respondents — statistical data processing using SPSS 17.0. The study results that: 1) The managerial ability of principals at Junior High Schools in Central Cilacap Subdistrict was generally in the answer always with quite high criteria. The hypothesis test results indicate that the principal’s managerial ability positively affects teacher competence. It means that the higher the managerial ability of the principal, the greater the teacher’s competence; 2) The work culture of teachers in junior high schools in the Central Cilacap sub-district, in general, is in the frequent answers with quite high criteria. The hypothesis test results show that the teacher’s work culture positively affects teacher competence. One means that the higher the teacher’s work culture, the higher the teacher’s competence; 3) The competence of teachers in junior high schools in Central Cilacap Subdistrict is generally in the answer always with quite high criteria. The results of hypothesis testing indicate that the principal’s managerial ability and teacher work culture positively affect teacher competence. It means that the higher the principal’s managerial ability and the higher the teacher’s work culture, the higher its competence.

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1. INTRODUCTION

An educational institution is an organization formed from several interrelated components and forms a unified system that cannot be separated from one component to another. These components include students, educators, education staff, school leaders, communities, and school committees. Each of these components has its duties, functions, and responsibilities. Educators, namely teachers, have the function in providing education and teaching to the students. The educational staffs’ function is to organize all technical learning activities. Apart from being documentaries, their duties are no less important than managers in the administration of educational institutions.

The center of all teacher activities and school administrative staff is driven by the principal leader of an educational institution. Besides managing the entire activities of teachers, the principal is also an important manager in dynamizing all learning activities inside and outside the classroom. The principal is responsible for organizing educational activities, school administration, fostering other educational staff, and utilizing and maintaining facilities and infrastructure (Mulyasa 2002). Someone cannot handle the principal position without being based on their high competence. Prospective principals must possess several competencies based on Permendiknas number 13 of 2007: personality, managerial, entrepreneurial, supervisory, and social competencies.

Principal managerial skills include three sub-skills. Wahjosumidjo (2010) states, "The principal as a manager needs three kinds of managerial skills, namely conceptual skills, technical skills, and human relations skills." Furthermore, according to Mulyasa (2010), the reasons for the importance of principal managerial skills are: "The principal is a manager who occupies three levels of managers. The principal is a top-level manager within the school, a middle-level manager within the Education Office, and a lower-level manager within the Ministry of Education."

The urgency of this research is that principals a manager who is required to have adequate managerial skills in terms of responsibilities. The principal meets higher and more complex problems than other education personnel at the school level. The more he can dynamize the teacher, the greater the opportunity to appear as a leader who can manage educational institutions professionally. Therefore, the good or bad of an educational institution will largely be determined by the extent to which the principal in one unit and one level of education can mobilize all available educational components with the leadership capital.

Based on a preliminary study through observations in junior high schools in Central Cilacap Subdistrict, Cilacap Regency, school principals' managerial abilities. It is presented in the following table:

<table>
<thead>
<tr>
<th>No.</th>
<th>Dimension</th>
<th>Target</th>
<th>Completion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Conceptual Skill</td>
<td>100%</td>
<td>80%</td>
</tr>
<tr>
<td>2</td>
<td>Human Skill</td>
<td>100%</td>
<td>95%</td>
</tr>
<tr>
<td>3</td>
<td>Technical Skills</td>
<td>100%</td>
<td>85%</td>
</tr>
</tbody>
</table>

**Table 1.**
Managerial Ability of Principals in Junior High Schools in Central Cilacap Subdistrict, Cilacap Regency, 2020

Based on the table above, it can be explained that the completion of the managerial ability of principals in junior high schools in Central Cilacap Subdistrict, Cilacap Regency, has not shown the expected target (100%). It is only reaching an average of 87%. Thus, the managerial ability of the principal can be said to be not optimal.

In improving teachers' ability, the Indonesian government has shown goodwill, by paying attention to welfare through several steps, including available allowances and operating allowance subsidies, professional improvement by holding teacher certification, and a high enough position to
strengthen their role in schools. However, there are still many cases that reflect the opposite where there are still many teachers who educate not according to their competence, level of education, and so on. In addition, teachers’ behaviors vary from skipping work for various reasons, including delays, punctuality, discipline in carrying out work, attractive appearance, unattractive learning implementation, and others. It is a small example that occurs in the field that reflects the work culture of teachers. According to Gering Supriyadi (Tri Guno, 2009), work culture is a philosophy based on a view of life as values that become traits, habits, and driving forces entrenched in the life of a community group or organization. It is reflected from attitudes into behaviors, beliefs, ideas, opinions, and actions that are realized as work.

Work culture reflects how the behavior of workers at work. The job of teachers is to provide teaching and learning to students. Teacher competence will affect students’ success in learning, leading to an increase in the quality of education. Teachers are educators with the main task of carrying out teaching and learning activities. The teachers’ task are not easy because they have to improve the quality of human resources according to certain competency standards and applicable norms and values. The competency qualifications that educators must possess are competencies as learning agents, namely the ability of educators to act as facilitators, motivators, and learning inspiration for students. These competencies consist of (a) pedagogic competence, (b) personality competence, (c) professional competence, and (d) social competence.

Furthermore, to determine the competence of teachers, the results of the assessment in junior high schools in Central Cilacap Subdistrict, Cilacap Regency, are presented as follows:

**Table 2.**

Results of Teacher Competency Evaluation in junior high schools in Central Cilacap Subdistrict, Cilacap Regency in 2020

<table>
<thead>
<tr>
<th>No</th>
<th>Junior High School</th>
<th>Total of teachers</th>
<th>Ped</th>
<th>Kepribadian</th>
<th>Sosial</th>
<th>Professional</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SMPN 6 Cilacap</td>
<td>42</td>
<td>80</td>
<td>100</td>
<td>100</td>
<td>80</td>
</tr>
<tr>
<td>2</td>
<td>SMPN 4 Cilacap</td>
<td>43</td>
<td>80</td>
<td>80</td>
<td>75</td>
<td>80</td>
</tr>
<tr>
<td>3</td>
<td>SMPN 9 Cilacap</td>
<td>24</td>
<td>80</td>
<td>80</td>
<td>75</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>SMP Al- Irsyad</td>
<td>23</td>
<td>70</td>
<td>80</td>
<td>100</td>
<td>80</td>
</tr>
<tr>
<td>6</td>
<td>SMP Al-Azhar</td>
<td>10</td>
<td>70</td>
<td>100</td>
<td>75</td>
<td>60</td>
</tr>
<tr>
<td>7</td>
<td>SMP Purnama 2</td>
<td>20</td>
<td>60</td>
<td>80</td>
<td>75</td>
<td>60</td>
</tr>
<tr>
<td>8</td>
<td>SMP Immaculata</td>
<td>14</td>
<td>60</td>
<td>80</td>
<td>75</td>
<td>60</td>
</tr>
<tr>
<td>9</td>
<td>SMP AL-Manar</td>
<td>12</td>
<td>70</td>
<td>80</td>
<td>75</td>
<td>60</td>
</tr>
<tr>
<td>10</td>
<td>SMP Budi Utomo</td>
<td>9</td>
<td>70</td>
<td>80</td>
<td>100</td>
<td>60</td>
</tr>
<tr>
<td>11</td>
<td>SMPN 2 Cilacap</td>
<td>37</td>
<td>80</td>
<td>80</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td><strong>Average</strong></td>
<td><strong>72</strong></td>
<td><strong>84</strong></td>
<td><strong>85</strong></td>
<td><strong>72</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Source:** Cilacap Regency Education Office, 2020

Details:

- **Ped**: Pedagogik (Eng: Pedagogic)
- **K**: Kepribadian (Eng: Personality)
- **S**: Sosial (Eng: Social)
- **Prf**: Profesional (Eng: Professional)

Based on the table above, it can be explained that, in general, the evaluation result of the competence of junior high school teachers in Central Cilacap Subdistrict, Cilacap Regency, shows that Teacher Competencies are in good criteria, getting a score of 78. However, there are still sufficient competencies, namely per academic and professional, which have just achieved a score of 72. It may
be influenced by several factors, including the managerial ability of the principal, teacher work culture, teacher competence, learning facilities, organizational climate, and other factors.

Recognizing the profession is a manifestation of the teacher’s existence as a component responsible for the success of education. It becomes a demand that teachers be aware of their role and function as educators. One is emphasized by Pidarta (1999:79) that self-awareness is the core of the dynamics of the pace of one’s professional development, and is a source of self-actualization needs. The higher their awareness, the stronger his desire to improve his profession. Coaching and professional development of teachers aim to improve performance and create performance according to the desired requirements. The more often the teaching profession is developed through various activities, the closer the teacher is to achieve the title of a professional teacher in carrying out his duties so that the expectation of better teacher performance will be achieved.

Based on the research background above, the problem identification is as follows: 1) The managerial ability of the principal is not optimal; 2) The work culture of teachers has not shown an increase in teacher competence; 3) There has not been an increase in teacher competence. The research problem formulation is as follows: 1) How does the principal’s managerial ability affect teacher competence? 2) How is the influence of teacher work culture on teacher competence? 3) How does the principal’s managerial ability and teacher work culture affect teacher competence? In line with the research problem that has been formulated above, the objectives of this study are to find out: 1) The effect of the principal’s managerial ability on teacher competence; 2) The influence of teacher work culture on teacher competence; 3) The influence of the principal’s managerial ability and teacher’s work culture on teacher competence.

2. METHODS

Object of Research

In this study, the object of research is the managerial ability of the principal (X1), teacher work culture (X2), and teacher competence (Y). Based on the three objects of this research, it can be analyzed that, first, the influence of the principal’s managerial ability and teacher work culture on teacher competence, Second: The influence of principal’s managerial ability and teacher’s work culture on teacher competence; and Third: The influence of principal’s managerial ability and teacher’s work culture on teacher competence. As for the research unit, the analysis was the teachers at the junior high schools in Central Cilacap Subdistrict, Cilacap Regency.

Research Methods and Research

The research method used is descriptive with a quantitative approach. One is a method that describes what is done based on the facts or events on the object under study, to then be processed into data and then carried out an analysis so that a conclusion is produced in the end.

The research design is the design of how this research is carried out. While the research design carried out is a Causal design. One is used to find the effect and prove the effect of three variables if the data for the three variables are in the form of intervals or ratios, and the data sources of two or more variables are the same. The variables in this study are two independent variables and one dependent variable. The three variables are

a. The independent variable (x1): the managerial ability of the principal
b. The independent variable (x2): teacher work culture
c. The dependent variable (Y): teacher competence

The effect of the independent variable on the dependent variable can be described as follows:
Figure 1. Causal Relationship Between Research Variables

Details:
X1 = Principal’s Managerial Ability
X2 = Teacher Work Culture
Y  = Teacher Competence
e  = Epsilon (another variable not studied)

Variabel Operations

In this study, three types of variables to be measured were determined, namely:

1. The independent variable with the notation (X) is a variable that influences the dependent variable. The notation (X) is the Principal’s Managerial Ability (X1) and Teacher’s Work Culture (X2).
2. The dependent variable with Notation (Y) is a variable that is affected or is the result of an independent variable. The variable is teacher competence.

Table 3. Operationalization of Research Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Dimension</th>
<th>Indicator</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal Managerial Ability (X1)</td>
<td>Plan and create school programs</td>
<td>curriculum field</td>
<td>Ordinal</td>
</tr>
<tr>
<td>Permendiknas (Regulation of the Minister of National Education) No. 13/2007</td>
<td></td>
<td>2. Learning field</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Supervision field</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>4. Student affairs field</td>
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<td></td>
<td></td>
<td>5. Finance field</td>
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<td></td>
<td></td>
<td>6. Infrastructure field</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>7. Staffing field</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>8. Public relations field</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>9. School administration field</td>
<td></td>
</tr>
<tr>
<td>Organizing</td>
<td></td>
<td>10. Clear task details</td>
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<td></td>
<td></td>
<td>11. Task execution</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>12. Grouping of interrelated tasks</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>13. Determination of work mechanism</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>14. Worker motivation</td>
<td></td>
</tr>
<tr>
<td>Actuating</td>
<td></td>
<td>15. Generating the trust and loyalty of subordinates.</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>16. Communicating ideas to others.</td>
<td></td>
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<td></td>
<td></td>
<td>17. The authority of the leader</td>
<td></td>
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<td></td>
<td></td>
<td>18. Leadership Style</td>
<td></td>
</tr>
<tr>
<td>Variable</td>
<td>Dimension</td>
<td>Indicator</td>
<td>Scale</td>
</tr>
<tr>
<td>----------------------------------</td>
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<td>---------------------------------------------------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>Supervising and Leading School</td>
<td></td>
<td>19. Performance evaluation of personnel</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>20. Implementing corrective action</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>21. Maintaining internal peace</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>22. External adaptation</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>23. Good culture</td>
<td></td>
</tr>
<tr>
<td>Teacher Work Culture (X2)</td>
<td>Loyalty aspect</td>
<td>1. Loyalty declaration,</td>
<td>Ordinal</td>
</tr>
<tr>
<td>(Gering Supriyadi, 2003:17)</td>
<td></td>
<td>2. Fidelity maintenance,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Loyalty attitude,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Obedient behavior,</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>5. Openness,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Discipline aspect</td>
<td>6. Starting and finishing work</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>7. Regulations understanding,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>8. Sanctions enforcement,</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>9. Awarding,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>10. Creating a working atmosphere,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>11. Compliance with regulations,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>12. Loyalty to the leader,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>13. Exemplary,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>14. Motivation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Commitment aspect</td>
<td>15. Work emotional involvement,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>16. Engagement organizational commitment,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Leadership aspect</td>
<td>17. Feeling involved in the organization,</td>
<td></td>
</tr>
<tr>
<td>Aspects of student learning achievement</td>
<td></td>
<td>18. Keeping a good name,</td>
<td></td>
</tr>
<tr>
<td>Teacher Competence (Y)</td>
<td>Pedagogic Competence</td>
<td>1. Mastering the characteristics of students from the physical, moral,</td>
<td>Ordinal</td>
</tr>
<tr>
<td>(Permendiknas No.16 the Year 2007)</td>
<td></td>
<td>spiritual, social, cultural, emotional, and intellectual aspects.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Mastering learning theory and educational learning principles.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Developing a curriculum related to the subjects taught.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Organizing educational learning.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. Utilizing information and communication technology for learning purposes.</td>
<td></td>
</tr>
<tr>
<td>Variable</td>
<td>Dimension</td>
<td>Indicator</td>
<td>Scale</td>
</tr>
<tr>
<td>--------------------------</td>
<td>--------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6. Facilitating the development of students’ potential to actualize their various potentials.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>7. Communicating effectively, empathically, and politely with students.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>8. Conducting assessments and evaluations of learning processes and outcomes.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>9. Utilizing the assessment and evaluation results for the benefit of learning.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>10. Taking reflective action to improve the quality of learning.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Personal competence</td>
<td>11. Acting by Indonesian national religious, legal, social, and cultural norms.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>12. Presenting self as a person who is honest, noble, and an example for students and the community.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>13. Presenting self as steady, stable, mature, wise, and authoritative.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>14. Demonstrating work ethic, high responsibility, pride in being a teacher, and self-confidence.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>15. Upholding the code of ethics for the teaching profession.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Social Competence</td>
<td>16. Being inclusive, acting objectively, and not discriminating because of considerations of gender, religion, race, physical condition, family background, and socioeconomic status.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>17. Communicating effectively, empathically, and politely with fellow educators, education staff, parents, and the community.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>18. Adapting to the place of duty throughout the territory of the Republic of Indonesia, which has socio-cultural diversity.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>19. Communicating with the professional community and other professions orally and in writing or other forms.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Professional Competence</td>
<td>20. Mastering the material, structure, concept, and scientific mindset</td>
<td></td>
</tr>
</tbody>
</table>
Table 4. Research Population

<table>
<thead>
<tr>
<th>No</th>
<th>Junior High Schools</th>
<th>Number of Teachers (person)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SMPN 6 Cilacap</td>
<td>42</td>
</tr>
<tr>
<td>2</td>
<td>SMPN 4 Cilacap</td>
<td>43</td>
</tr>
<tr>
<td>3</td>
<td>SMPN 9 Cilacap</td>
<td>38</td>
</tr>
<tr>
<td>4</td>
<td>SMP Al-Irsyad</td>
<td>23</td>
</tr>
<tr>
<td>6</td>
<td>SMP Al-Azhar</td>
<td>10</td>
</tr>
<tr>
<td>7</td>
<td>SMP Purnama 2</td>
<td>20</td>
</tr>
<tr>
<td>8</td>
<td>SMP Immaculata</td>
<td>14</td>
</tr>
<tr>
<td>9</td>
<td>SMP AL-Manar</td>
<td>12</td>
</tr>
<tr>
<td>10</td>
<td>SMP Budi Utomo</td>
<td>9</td>
</tr>
<tr>
<td>11</td>
<td>SMPN 2 Cilacap</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>248</td>
</tr>
</tbody>
</table>

Source: Cilacap District Education Office, 2020

The population in this study was 248 teachers. To determine the size of the sample, the formula of Slovin (1960) in Seville (1964) and Husen Umar (2000).

\[
\frac{n}{N} = \frac{N}{1 + N (e)^2}
\]

Details:
- \(n\) = Sample total
- \(N\) = Population Total
- \(e\) = Percentage of precision leeway (10%)
Based on the calculations above, it could be determined that the number of samples used as respondents was 71 teachers.

For the next step, the sample were 71 respondents, then the size was determined in a balanced way from each group or subpopulation, then for the next step from n1, n2, …., to n3, sampling was done using stratified random sampling with the formula.

\[
\frac{248}{n} = \frac{1 + (248) (0.1)^2}{1 + (248) (0.01)}
\]

\[
\frac{248}{n} = \frac{1 + 2.48}{3.48}
\]

\[
\frac{248}{n} = \frac{248}{71.26} \approx 71
\]

The details can be seen in the table below:

<table>
<thead>
<tr>
<th>No</th>
<th>Junior High Schools</th>
<th>Total (People)</th>
<th>Sample (People)</th>
<th>Rounding (People)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SMPN 6 Cilacap</td>
<td>42</td>
<td>12.02</td>
<td>12</td>
</tr>
<tr>
<td>2</td>
<td>SMPN 4 Cilacap</td>
<td>43</td>
<td>12.31</td>
<td>12</td>
</tr>
<tr>
<td>3</td>
<td>SMPN 9 Cilacap</td>
<td>38</td>
<td>10.88</td>
<td>11</td>
</tr>
<tr>
<td>4</td>
<td>SMP Al-Irsyad</td>
<td>23</td>
<td>6.58</td>
<td>7</td>
</tr>
<tr>
<td>6</td>
<td>SMP Al-Azhar</td>
<td>10</td>
<td>2.86</td>
<td>3</td>
</tr>
<tr>
<td>7</td>
<td>SMP Purnama 2</td>
<td>20</td>
<td>5.73</td>
<td>6</td>
</tr>
<tr>
<td>8</td>
<td>SMP Immaculata</td>
<td>14</td>
<td>4.01</td>
<td>4</td>
</tr>
</tbody>
</table>
Data Collection Tool

The data used in this study are primary data and secondary data. The primary data source was distributing questionnaires to junior high school teachers in Central Cilacap Subdistrict, Cilacap Regency.

Table 6
Data Types and Sources

<table>
<thead>
<tr>
<th>DATA TYPE</th>
<th>DATA SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal's Managerial Ability</td>
<td>Teachers</td>
</tr>
<tr>
<td>Teacher Work Culture</td>
<td>Teachers</td>
</tr>
<tr>
<td>Teacher Competence</td>
<td>Teachers</td>
</tr>
</tbody>
</table>

The data collection procedure was attempted to obtain the required data. These procedures include:
1) The questionnaire, given to the teacher as a respondent, asks questions logically related to the research problem and are closed/structured questions concerning the respondent’s opinion.
2) The Test of validity and reliability of the instrument,

The validity test of the questionnaire was carried out to know the accuracy and accuracy of a measuring instrument in carrying out its measurement function or providing measurement results by the purpose of the measurement. The test validity of the three instruments, namely the instrument to measure the managerial ability of the principal (X1), teacher work culture (X2), and teacher competence (Y) were tested by using content validity and construct validity.

a. Content Validity

Content validity refers to how the instrument reflects the desired content. The content validity of the instruments used in this study was not stated in numbers. Validation of content was based on consideration. For this reason, the researcher conducted a careful and critical study of the instrument’s items because the items of the instrument were closely related to the specified content area. The researcher considers whether the content and objectives measured by the instrument reflect the content and objectives contained in the content area. The researcher also ascertained whether the items in the instrument reflected the indicators contained in the conceptual and operational definitions.

b. Construct Validity

The construct validity approach aims to determine what an instrument measures psychological constructs and how far these constructs can be measured. To test the construct's validity, the experts' opinions (judgment experts) can be used, and the experts are asked for their opinions about the instruments that have been prepared (Sugiyono, 2017). n of construct validity is
c. Instrument reliability test

To determine the instrument’s reliability, it can be seen from the Alpha value; if the alpha value is greater than the $r_{table}$ value, it can be reliable.

d. Test results of Validity and reliability of the instrument.

A validity test is carried out about the accuracy of the measuring instrument against the concept being measured so that it measures what it should measure. Ridwan (2007) explains that validity is “a measure that shows the level of reliability or validity of a measuring instrument.” A measuring instrument that is less valid means it has low validity. To test the validity of the measuring instrument, first, the correlation between the parts of the measuring instrument as a whole is sought by correlating each item of the measuring instrument with the total score, which is the number of each item. To calculate the validity of the measuring instrument, the Pearson Product Moment formula is used as follows:

$$r_{xy} = \frac{n(\Sigma x_i y_i) - (\Sigma x_i)(\Sigma y_i)}{\sqrt{n(\Sigma x_i^2) - (\Sigma x_i)^2} \sqrt{n(\Sigma y_i^2) - (\Sigma y_i)^2}}$$

Description:
- $r_{xy}$ = Correlation coefficient
- $\Sigma X_i$ = Total item score
- $\Sigma Y_i$ = Total score (all items)
- $N$ = Number of respondents.

Furthermore, to find out whether each item is valid or not, the $t$-test formula is used as follows:

$$t_{count} = \frac{r \sqrt{n - 2}}{\sqrt{1 - r^2}}$$

Definition:
- $t = t_{count}$ Score
- $r = r_{count}$ result correlation coefficient
- $n = Number$ of respondents

Distribution (Table t) for $\alpha = 0.05$ and degrees of freedom ($dk = n-2$) Decision rule:
- If $t_{count} > t_{table}$ means valid
- If $t_{count} < t_{table}$ means invalid
- If the instrument is valid, the interpretation criteria regarding the correlation index ($r$) are as follows.
  - Between 0.800-1.000 : very high
  - Between 0.600-0.799 : high
  - Between 0.400-0.599 : high enough
  - Between 0.200-0.399 : low
  - Between 0.000-0.199 : very low (invalid)
(Sugiyono, 2017: 257)

Data Analysis Technique

All data collected were analyzed so that the meaning of the data collected could be seen, and the research results were found. In the implementation of data processing through computer assistance with the SPSS 17.0 (Statistical Product and Smart Solutions) program, the steps if manual are as follows:
1. Select the data to be processed further by checking each respondent’s answer according to the criteria that have been set.

2. Determining the weight of the value of each possible answer on each item, research variable using a predetermined rating scale, then determine the score.

Looking at the description of the observed variables, each indicator looks for statistical measures that show symptoms of central tendency (a measure of central tendency). From this analysis, it can be seen the mean, median, standard deviation, and data variance of each variable. To find out the general trend of respondents' answers to each research variable, the following formula is used:

\[ P = \frac{\bar{x}}{x_{id}} \times 100\% \]

Description:
- \( P \) = Percentage of average score sought
- \( \bar{x} \) = The average score of each variable
- \( x_{id} \) = ideal score for each variable

The results obtained are then adjusted to the criteria that have been set as stated by Riduan (2017: 69), namely:

\[
\begin{align*}
90\% & - 100\% \quad = \text{Very High} \\
80\% & - 89\% \quad = \text{High} \\
70\% & - 79\% \quad = \text{High enough} \\
60\% & - 69\% \quad = \text{Enough} \\
50\% & - 59\% \quad = \text{Low} \\
49\% & - \text{under} \quad = \text{Very low}
\end{align*}
\]

1. Analyzing the strength of the relationship between the variables of the principal’s managerial ability (X1), teacher work culture (X2), and teacher competence (Y), using the product-moment correlation analysis, with the following formula:

\[
\rho_{xy} = \frac{n \sum xy}{\sqrt{(n \sum x^2)(n \sum y^2)}}
\]

\[
\rho_{xy} = \frac{n (\sum x_i y_i) - (\sum x_i)(\sum y_i)}{\sqrt{[n \sum x_i^2 - (\sum x_i)^2][n \sum y_i^2 - (\sum y_i)^2]}}
\]

(Sugiyono, 2007: 228)

Description:
- \( \rho_{\text{correl}} \) = The correlation coefficient of the i-th item score with the i-th total score
- \( (\sum x_i, y_i) \) = The total score of the i-th item with the i-th total score
- \( \sum x_i \) = Total score of item i-th
- \( \sum y_i \) = Total score of i-th
- \( \sum x_i^2 \) = The sum of the squared scores of the i-th item scores
- \( \sum y_i^2 \) = Total score squared total score to i-th
- \( n \) = Number of samples
The value of r is in the interval -1 < r < 1 if the value is -1, it means a perfect negative correlation, and if the value is r = 0, it means there is no correlation; if the value of r = 1, it means the correlation is very strong. At the same time, the meaning of the value of r shows the interpretation of correlation.

- 0.80 - 1.00 = Very strong
- 0.60 - 0.79 = Strong
- 0.40 - 0.59 = Strong enough
- 0.20 - 0.29 = Low
- 0.00 - 0.19 = Very low

2. Analyzing the effect of the variables x1 and x2 together on the variable y by using the multiple moment product correlation formula:

\[
R_{y,x1x2} = \frac{\sqrt{r_{1y}r_{2y}} - 2r_{1y}r_{x1}r_{x2} - r_{x1x2}}{(1 - r_{x1x2})}
\]

(Sugiyono, 2007: 266)

Description:
- \( R_{x1x2} \) = Multiple Correlation Coefficient Value
- \( r_{1y} \) = Coefficient of Determination x1 against y
- \( r_{2y} \) = Coefficient of Determination x2 against y
- \( r_{xy} \) = Simple correlation coefficient x1 to y
- \( r_{x1x2} \) = Simple correlation coefficient x1 to x2
- \( r_{x2} \) = Coefficient of Determination x1 against x2

3. To determine the functional relationship between variables, the regression method used is simple and multiple linear regression.
   a. Simple linear regression is a mathematical equation that expresses the relationship between a dependent variable (response) and an independent variable (predictor). This hypothesis testing aims to find a pattern of functional relationships between variables x1 and y and variables x2 and y.
   b. The formula expresses simple Linear Regression Equation:

\[
Y = a + bx
\]

(Sugiyono, 2017:66)

Description:
- Y = Predicted variable value
- x = An independent variable that has a certain value to be predicted
- a = The value of the constant Y, if x = 0
- b = The value of the direction as a predictor that shows the increasing value (+) or decreasing value (-) of the y variable
The values of a and b can be determined using the Least Square method, with the following equation:

\[
b = \frac{n \sum xy - (\sum x)(\sum y)}{n \sum x^2 - (\sum x)^2}
\]

\[
a = y - bx = \frac{\sum y - bx}{N}
\]

(Sugiyono, 2017:6)

Description:

- \(B\) = Coefficient of regression direction
- \(A\) = Intercept value
- \(Y\) = Regression value
- \(\sum xy\) = Total score of items to total score
- \(\sum x\) = The total score of items
- \(\sum y\) = Total score
- \(\sum x^2\) = Number of squares of item scores
- \(\sum y^2\) = The sum of the squares of the total score
- \(N\) = Number of samples

c. Multiple Regression is used to prove the presence or absence of a functional relationship or a causal relationship between the independent variables \(x_1\) and \(x_2\) on the variable \(y\). Multiple linear regression equations used are as follows:

\[
Y = a + b_1x_1 + b_2x_2
\]

(Wijaya, 2000:66)

Description:

- \(Y\) = Predicted variable value
- \(x\) = An independent variable that has a certain value to be predicted
- \(a\) = The value of the constant \(Y\), if \(x = 0\)
- \(b_1\) and \(b_2\) = Partial regression coefficient

Data Normality Test

Testing the normality of each variable was carried out to know whether the distribution of data for each variable did not deviate from the normally distributed data's characteristics in testing the data's normality using the Kolmogorov-Smirnov test with the SPSS program. The test criteria are to compare the probability value with a significance of 0.05. If the probability is smaller than the 5% significance level, then the data is normally distributed, and if it is greater, the data distribution is not normally distributed.

Hypothesis Testing

First, several things need to be done describing the data, calculating the analysis requirements, and testing the hypothesis. The statistic used to test the three hypotheses is the one-sample t-test.
Meanwhile, the Pearson Product Moment Correlation Test is the statistic used to test the associative hypothesis. To test the correlation is used t-test and F test with their respective formulas as follows:

\[ t = \frac{r \sqrt{n - 2}}{\sqrt{1 - r^2}} \]

(Sugiyono, 2017:257)

**Description:**
- \( t \) = calculated t-value
- \( r \) = variable correlation value x
- \( n \) = Number of sample members

The price of the product-moment correlation coefficient is entered into the formula above to test the significance of the relationship; the t price is then compared with the table price, if the t count is far from the rejection area of Ho, it can be stated that the null hypothesis is rejected and the alternative hypothesis Ha is accepted, or valid. The statistical hypothesis is as follows:

- Ho : \( \mu = 0 \) (no effect)
- Ha : \( \mu \neq 0 \) (has an effect)

The F test formula is used to test both variables (x1, x2) together compared to the variable (y); the following formula is used

\[ F = \frac{R^2/k}{1 - R^2} \]

\[ F = \frac{n - k - 1}{n - k - 1} \]

(Sugiyono, 2017:286)

**Description:**
- \( R \) = Multiple correlation coefficient
- \( k \) = number of independent variables
- \( n \) = number of sample members

If the F-count is much greater than F-table or (F_count > F_table), the multiple correlation coefficient tested is significant; it can be applied to the entire population.

3. **FINDINGS AND DISCUSSION**

**The Effect of Principal’s Managerial Ability on Teacher Competence**

In general, the managerial ability of principals in junior high schools in Central Cilacap Subdistrict was answered with quite high criteria. However, some indicators need to be improved: the implementation of tasks and the grouping of interrelated tasks. The results of the hypothesis test show that the managerial ability of the principal has an effect of 30% on teacher competence, while other factors influence 70%. Thus the managerial ability of the principal has a positive effect on teacher competence; this means that the higher the managerial ability of the principal, the greater the teacher’s competence. The research results above are in line with the research results conducted by Adi Anwar Faisal (2012) under the research title “The Effect of Principal Managerial Ability on Teacher Performance in Public Elementary Schools in Kotagede Subdistrict, Yogyakarta.” The results showed as follows: (1) the principal’s managerial ability consists of planning, organizing, evaluating, and leadership in the good category with an average score of 3.03. (2) teacher performance consists of aspects of preparation, process, and learning assessment in the good category with an average value of 3.35. (3) the influence of the principal’s managerial ability on the teacher’s performance, indicating...
that the managerial ability factor contributes effectively to 0.591, which means that the principal’s managerial ability influences 59% of the teacher’s performance. It can also be interpreted that 41% is the influence of variables that are not examined, such as the ability of teachers to develop their professionalism, the availability of supporting facilities needed in the learning process, moral and material support from school leaders.

In addition to carrying out management processes that refer to management functions, a school principal must also understand and apply all the substance of educational activities. Wayan Koster in Permadi (2001: 97) suggests that in the context of MPMBS, school principals are required to have the ability to:

(1) describe school resources to support the implementation of the teaching and learning process, (2) head of administration, (3) as planning manager and teaching leader, and (4) have the task of regulating, organizing, and leading the overall implementation of educational tasks in schools.

As the head of administration, the principal is tasked with building school management and is responsible for implementing management decisions and policies.

Meanwhile, Hadari (2005) that in the perspective of improving the quality of education, there are four abilities that an educational leader, namely, must possess:

(1) the ability to organize and assist staff in formulating improvements to teaching in schools in the form of a complete program; (2) the ability to generate and cultivate self-confidence from teachers and other school staff members; (3) the ability to foster and foster cooperation in proposing and implementing supervision programs; and (4) the ability to encourage and guide teachers and all other school staff so that they willingly and responsibly participate actively in every school’s efforts to achieve the school’s goals as well as possible.

Based on some of the opinions above, it can be explained that the managerial ability of the principal that must be possessed by an educational leader, in this case, is the ability, skill, or strength to organize work or good cooperation by using existing people and resources to achieve goals.

**The Influence of Teacher Work Culture on Teacher Competence**

The work culture of teachers in junior high schools in the Cilacap Tengah sub-district is in the frequent answers with quite high criteria. However, several indicators must be improved, including enforcing sanctions and providing rewards. The hypothesis test results indicate that the teacher’s work culture affects 44.2% of teacher competence while 55.8% by other factors. Thus, the teacher's work culture positively affects teacher competence; the higher the teacher’s work culture, the higher the teacher’s competence.

The results of the research above are in line with the results of research conducted by Ahmad Zulfikar (2013) entitled “The Influence of Work Culture, Ability and Organizational Commitment on the Performance of Employees of the Financial Management Bureau of the Bengkulu Province Secretariat”. It can be concluded that the results obtained were partial variables of work culture, ability, and organizational commitment that have a significant effect on the performance of the employees of the Financial Management Bureau of the Bengkulu Province Regional Secretariat. From the results of research and discussion, it can be concluded that work culture, abilities, and organizational commitment positively and significantly influence the performance of the Bengkulu Province Regional Secretariat Financial Management Bureau employees. The study results can also be concluded that organizational commitment strongly influences employee performance.

The culture that exists and develops in society does not appear instantly but through various stages and a long process. Likewise, organizational culture is formed based on various stages and long processes. The work culture values issued by the Menpan in 2002, 34 value elements or 17 pairs...
of values are expected to foster motivation and responsibility for increasing productivity and performance. The 17 pairs of basic values referred to in Gering Supriyadi (2003) are as follows:

1) Commitment and consistency (towards the vision, mission, organizational goals, state policies, and applicable laws and regulations,
2) Authority and responsibility,
3) Sincerity and honesty,
4) Integrity and professionalism,
5) Creativity and sensitivity (to the task environment),
6) Leadership and example,
7) Cooperation and working group dynamics,
8) Accuracy and speed,
9) Rationality and emotional intelligence,
10) Firmness and firmness,
11) Discipline and work order,
12) Courage and wisdom,
13) Dedication and loyalty,
14) Passion and motivation,
15) Perseverance and patience,
16) Fairness and openness,
17) Mastery of science and technology.

In leadership theory, it is stated that forming organizational culture emphasizes the relationship of the leader with group members of the organization and the influence of leadership style on the formation of relevant groups of organizational members by focusing on forming organizational culture. While the learning theory states that leaders create an organizational culture, and one of the most powerful functions of leaders is creation, and management and if necessary, it can destroy a culture. Organizational culture is largely determined by the organization's founders, where the founders' actions become the core of the initial culture of the organization.

The Effect of Principal Managerial Ability and Teacher Work Culture on Teacher Competence

The competence of teachers in junior high schools in the Central Cilacap sub-district is generally in the answer always with quite high criteria. However, some indicators need to be improved: utilizing information and communication technology for learning purposes. The results of hypothesis testing indicate that the principal’s managerial ability and teacher work culture affect 48.2% of teacher competence while 51.8% are influenced by other factors, such as school organizational climate, teacher academic qualifications, management information systems, and others. Thus the managerial ability of the principal and the teacher’s work culture has a positive effect on teacher competence; this means that the higher the managerial ability of the principal and the higher the teacher’s work culture, the more teacher competence will increase.

This study’s results align with the research conducted by Ismuha (2016), entitled "Managerial Competence of Principals in Improving Teacher Performance at SD Negeri Lamklat, Darussalam District, Aceh Besar District." The results of the study show: 1) Programs to improve teacher performance are compiling learning planning tools, designing and utilizing learning media, utilizing ICT in learning, developing educators and education staff according to needs, improving services in supporting learning activities, planning and taking action. Further evaluation results of the implementation of learning activities. 2) The program’s implementation begins with dividing tasks according to abilities and expertise by applying a lesson study approach among fellow teachers. The
program’s implementation has not been fully based on the schedule listed in the school planning documentation. This can be seen in the frequency of supervision, the number of meetings or meeting activities, the schedule for meeting activities, which has not been maximized in the 2013 curriculum development, the use of technology and information for teachers to maximize learning and implementation learning evaluation. 3) Evaluations carried out by school principals to improve teacher performance have not been by the schedule and carried out naturally, and there is no clear and measurable evaluation instrument. Evaluation activities are usually carried out once a year at the end of the school year. The evaluation results have not been carried out as reporting documentation on implementing the principal’s managerial activities.

Competent and professional teachers are skilled teachers in carrying out their profession. Law no. 14 of 2005 concerning Teachers and Lecturers explained that competence is a set of knowledge, skills, and behaviors that must be possessed, internalized, and mastered by teachers in carrying out their professional duties. These competencies include 1) pedagogic competence, 2) social competence, 3) personality competence, and 4) professional competence. Based on the description above, teacher competence can be defined as mastery of knowledge, skills, values, and attitudes reflected in the habit of thinking and acting in carrying out the profession.

Teacher competence is comprehensive and is a unit that is interconnected and mutually supportive. The pedagogic competencies referred to in this paper include understanding students in-depth and organizing educational learning. An understanding of students includes an understanding of the psychology of child development, while educational learning includes the ability to design learning, implement learning, assess learning processes and outcomes, and make continuous improvements.

4. CONCLUSION

Based on the discussion that has been carried out, several conclusions can be drawn according to the problems studied, as follows:
1. The managerial ability of principals in junior high schools in Central Cilacap sub-district is generally in the answer always with quite high criteria. However, some indicators need to be improved: the implementation of tasks and the grouping of interrelated tasks. The hypothesis test results indicate that the managerial ability of the principal has a positive effect on teacher competence; this means that the higher the managerial ability of the principal, the greater the teacher’s competence.

2. The work culture of teachers in junior high schools in the Central Cilacap sub-district, in general, is in the answer often with quite high criteria. However, several indicators must be improved, including enforcement of sanctions and providing rewards. The hypothesis test results show that the teacher's work culture positively affects teacher competence; this means that the higher the teacher’s work culture, the higher the teacher’s competence.

3. The competence of teachers in junior high schools in the Central Cilacap sub-district is generally always answered with quite high criteria. However, some indicators need to be improved: utilizing information and communication technology for learning purposes. The results of hypothesis testing indicate that the principal’s managerial ability and teacher work culture positively affect teacher competence; this means that the higher the principal’s managerial ability and the higher the teacher’s work culture, the higher the teacher’s competence.
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