The Role of Principals’ Leadership Abilities in Improving School Performance through the School Culture

Tonich¹

Abstract
The purpose of this study was to determine the effect of principals’ leadership abilities on school performance, both directly and through their schools’ organizational culture. This study adopted a survey design and applied a quantitative approach when analyzing the data. The dependent variable for this research was school performance, an interactive variable was school culture, and the independent variable was school principal leadership. The population for this study was the school principals in charge of the schools/madrasahs under the auspices of Palangka Raya City Education Office, with these ranging from elementary schools to high schools and involving 46,194 people. The study’s sample comprised 350 school principals who had served at least one year to ensure that they had applied leadership methods and established a new school organizational culture during their one year in office. To collect data, this study used survey questionnaires, which were divided over three parts, namely the principal’s managerial style, school organizational culture, and school performance. All the instruments were developed by the researcher with reference to the theories, dimensions, and indicators that have been previously put forward by experts and researchers. Our results show that a principal’s leadership ability can have a significant effect on school performance, but it also influences the organizational culture of the school and improves performance through this channel. However, the direct influence of a principal’s ability on school performance is greater than when it transmits through the school’s organizational culture, because a school’s organizational learning also affects school performance.

Keywords: competence, organizational culture, school performance, principal

Introduction
The emergence and development of education cannot be separated from policy support. Policies that support the development of education greatly determine how it evolves over time (Gocen, 2021; Shelley & Purzer, 2018; Tonich, 2020; Walter et al., 2021). In Palangka Raya City, Central Kalimantan, Indonesia, the city’s policy to develop education is very clear and systematic. This is exemplified in the city’s vision as laid out in the RPJMD 2008–2013: “The realization of the City of Palangka Raya as a city of education, services, and high-quality tourism, being organized and

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environmentally friendly in the shift towards a prosperous society according to the ‘Betang’
cultural philosophy.”

Unfortunately, the leadership abilities of school principals are still somewhat lacking in Central
Kalimantan, including in Palangka Raya City, and this is reflected in the small number of schools
that have received an A accreditation. Indeed, only 28% of schools are accredited an A, 58% are
accredited a B, and 10% are accredited a C, with the remainder not yet being accredited because
they are too new (National Accreditation Board, 2020).

The low level of principal leadership in Palangka Raya also reflects in the fact that there are only
0.1% international-standard schools and 1% pilot-level international-standard schools, with the
majority (98.09%) still following national standards. The low level of school principal leadership
is also evident in the limited number of learning innovations that have been successfully deployed
by teachers. Indeed, most teachers still use conventional learning methods, such as lectures,
question-and-answer sessions, and assignments (86.5%). Few teachers (13.5%) have implemented
cooperative learning (Palangka Raya City Education Office, 2020).

The practice of using two languages, namely Indonesian and English, for all subjects has also not
gone well, with only 2% of subjects being delivered in two languages, with these efforts only being
made at international-standard and pilot-level international-standard schools. Another problem in
schools is the organizational culture, which can provide a conducive learning environment at the
school level, thus increasing the motivation to learn and enhancing student achievement. The
organizational culture at the school level remains dull and monotonous, however, with schools
providing a tedious experience rather than a fun environment in which to learn (Alzahrani & Flynn-
Wilson, 2021; Brown et al., 2020; Etim, Etim, & Blizard, 2020; Honegger, 2020; Koyuncuoglu,
2021; Namyssova et al., 2019). Indeed, the learning process in schools is rigid, and students’
creativity remains to be developed. Most students seem overwhelmed by the entire learning
content.

Various efforts have been made to increase the number of schools receiving an A or B
accreditation, such as by establishing international-standard schools and encouraging the use of
two languages in instruction for all subjects. Palangka Raya City Education Office has also tried
to increase the use of innovative teaching practices, but it has not enjoyed optimal results, despite
its vision being “the realization of the city of Palangka Raya as a city of education.”
Operationally, the vision and mission of developing Palangka Raya in the field of education has been set out by technical agencies, specifically the Office of Youth and Sports Education Office for Palangka Raya City. Its stated mission is to 1) realize the expansion of, and equal access to, opportunities for a quality education based on national standards; 2) position Palangka Raya as an education-oriented city with a global outlook and a culture that is knowledgeable, faithful, healthy, skilled, and devoted to God almighty; 3) establish well-planned, orderly, high-quality, effective, and efficient educational facilities and infrastructure as centers of excellence for servicing the community; and 4) provide the professional staff and other human resources needed to provide excellent education services to the community.

Many studies have demonstrated the important role that leadership’s managerial ability plays in organizational performance, including for schools, both directly and through the school culture. For example, one study found that leaders must have good managerial abilities and technology (Boyatzis & Ratti, 2009; Kopish, & Marques, 2020), while the study of Morley et al. (2010) identified three factors related to global leadership competencies, namely management perceptions, cognitive-oriented competencies, and interpersonal and intrapersonal competencies. The results of further research by Morley et al. (2010b) concluded that leadership and cognitive competence are closely related to improving organizational performance. Another study by Avolio et al. (2009) found that the ability to work with schemas is important to cognitive leadership, because it can help leaders understand a specific context when trying to improve organizational performance. It also showed a clear link between leadership competence and organizational performance.

Likewise, Cappeli & Neumark (2001) found organizational performance to be strongly linked to the managerial ability of leaders and the organizational cultures they develop. Plaatjies’ (2019) research, meanwhile, revealed that school principals have poor leadership abilities, especially in areas like making decisions and developing professionalism, so this problem needs to be rectified. In a related study, Martinez & Tadeu (2018) concluded that a principal’s leadership affects how other management and teaching staff develop a professional identity. Principals therefore need to collaborate with teachers and encourage them to collaborate with other teachers to improve their professionalism and ultimately the school’s overall performance. Several studies, however, state that school leadership has no managerial effect on school performance (e.g., Mastrangelo et al., 2014), nor does it significantly affect organizational culture. This is supported by the study of
Jafari & Bidarian (2012), which found that competent leadership does not directly influence a school’s culture or organizational performance. Based on the abovementioned issues, this study aims to examine the influence of principals’ leadership on their schools’ performance, both directly and through organizational culture.

**Research Questions**

Based on the study’s background and the theoretical gaps identified in several previous studies, the research questions for this study are:

1) Does a principal’s leadership have any significant effect on the organizational culture of a school in Palangka Raya, Central Kalimantan, Indonesia?

2) Does organizational culture have any significant effect on the performance of a school in Palangka Raya, Central Kalimantan, Indonesia?

3) Does a principal’s leadership have any significant effect on the performance of a school in Palangka Raya, Central Kalimantan, Indonesia?

4) Does a principal’s leadership have any significant effect on performance through the intervening variable of organizational culture for a school in Palangka Raya, Central Kalimantan, Indonesia?

**Hypotheses**

Based on the research questions above, the following hypotheses were developed:

Ha₁: A principal’s leadership has a significant influence on the organizational culture of a school in Palangka Raya, Central Kalimantan.

Ha₂: Organizational culture has a significant influence on performance at a school in Palangka Raya, Central Kalimantan.

Ha₃: The managerial ability of a school principal has a significant influence on performance at a school in Palangka Raya, Central Kalimantan.

Ha₄: The managerial ability of a school principal has a significant influence on performance through the intervening variable of organizational culture for a school in Palangka Raya, Central Kalimantan.
Literature Review

Principals’ Leadership

Schools are unique and complex institutions. They are complex because a school, as an organization, has various dimensions that are interrelated and thus influence each other. They are unique because each school has its own character for conducting the teaching–learning process and providing a place for culturing human life. Due to this complex and unique nature, schools require a high level of coordination, and the success of a school is the success of its principal (Yulk, 2001).

The word “principal” derives from the Latin word *principal* is, referring in this context to “first” or “chief.” Simply put, a principal is usually a teacher who is assigned the task of leading a school and directing its teaching and learning processes (Mulyasa, 2011). A school’s success essentially depends on the effectiveness of its leader, namely the principal. Principals therefore need to have strong leadership qualities to ensure a school’s success.

The progression of a school depends on the quality of the graduates it produces (Dunkin & Biddle, 1974), and the quality of graduates is very much dependent on whether or not the school is run efficiently, which in turn is very dependent on the ability of the principal. A school’s performance can also be measured through the performance of its teachers in the school organization, which is again influenced by the principal’s leadership, and it reflects upon the achievements of their students (Moedjiarto, 2002).

School organizations need to prioritize quality and identify market opportunities, meaning they should adapt to the needs of their consumers (i.e., the students and their future employers). This adjustment is essential for an organization to move forward by modifying its structure (Robbins, 1989), processes, and behaviors (Pidarta, 1990). A school is an organization that is engaged in education, but it must of course also develop itself to progress in accordance with the needs and desires of not just the school environment but also the community (Ozturk, 2020; Suharsaputra, 2010).

The principal presents one medium through which to advance a school, because his or her role is very important in various activities, such as managing organizational aspects of the school, and he or she needs to consider various aspects related to management so that organizational goals can be set accordingly. It is challenging, however, for a principal to properly drive a school’s organization and cultivate the performances of its teachers. Indeed, many things need to be understood, many
problems need to be resolved, and many strategies must be mastered. An organization’s strategy needs to be developed in a way that involves all parties that are relevant to any activity in the organization, including making decisions, being open to suggestions and opinions, and allowing other forms of participation (Williams, 2002).

Leadership Competence
Almatrooshi, Singh & Farouk (2016) state that leadership is a determinant of organizational success. The beliefs and values of organizational leaders also inevitably affect their performance (Soebbing et al., 2015). Ssekakubo et al. (2014) studied leadership competencies and their effects on organizational performance, finding that it can improve employee performance, which is in turn reflected in organizational performance. Leadership makes a key contribution to organizational performance. According to Mastrangelo et al. (2014), competent leaders influence their followers and play an important role in achieving organizational goals by creating a conducive environment that encourages good attitudes and behavior, as well as motivation. However, as mentioned by Jafari & Bidarian, (2012), competent leadership challenges employees to engage and improve their performances, so leadership abilities determine organizational success. Creating an effective approach to coaching and managing an organizational workforce requires expertise in human resources and the support of the executive leadership. If an organization aims to develop innovative, high-quality products, employee performance plays an integral role in achieving that goal (Cho & Dansereau, 2010).

Organizational Culture
Organizational culture represents the model of norms, values, beliefs, and attitudes that direct organizational behavior. Kavanagh & Ashkanasy (2006) position organizational culture as “a shared philosophy, ideology, values, assumptions, beliefs, expectations, behavior and norms that bind an organization.” Robbins (1990), meanwhile, refers to it as “the general perception held by members of the organization,” while Jones (2010) defines it as “the design of informal values, norms that control how people and groups in the organization interact with each other and with parties outside the organization” (Berson, Oreg, & Dyir, 2005). A shared pattern of values and beliefs can help individuals to understand organizational functioning and provide them with a guide for how to behave in an organization (Deshpande & Webster, 1989; Nasir, 2020).
The culture has clear implications for improving the performance of a community (Sergiovanni & Green, 2015). In educational organizations, culture positively influences not just the students but also the staff (Jerald, 2006). The organizational culture in schools is like the spirit of life (Hinde, 2004) in that it influences each person’s thoughts, feelings, and actions in every aspect of schooling (Recepoglu, 2013). In this context, Kaplan & Owings (2013) also suggest that “culture is able to change everything to change.” Peter and Waterman (2004) also concluded that every change and influence in an organization is highly dependent on organizational culture.

Organizational culture is a primary construct in management research due to its influence on organizational behavior and sustainability (Meier, 2019; Schwartz, 1994). Several conceptualizations for organizational culture can be seen in the literature (Gregory et al., 2009), but generally, the term “culture” refers to core organizational values and norms (Flamholtz, 2001), which in turn influence various factors in organizational settings.

According to Moorman (1995), organizational culture influences organizations because it can affect, first, “the choice of company results and, second, the ways to achieve those results, including organizational structures and processes.” Jones (1983) argues that organizational culture acts as a cognitive map for providing the mechanisms, norms, and values that members should internalize and follow. Organizational culture also influences how people think, both consciously and unconsciously, and make decisions, ultimately affecting how they perceive, feel, and act (Lok & Crawford, 2004). It has also been shown to significantly affect performance (Rashid et al., 2003; Mannion et al., 2005). Organizational culture is considered “one of the most interesting yet difficult to understand topics for management researchers” (Harris & Ogbonna, 2002). The central role of organizational culture in the business and management literature is based upon the belief that social characteristics are powerful determinants of organizational, group, and individual behavior (Hartnell et al., 2011).

**Organizational Performance**

A business’s potential success depends on its organizational ability in terms of implementing strategies effectively to achieve institutional goals (Randeree & Al Youha, 2009). Several variables exist to represent organizational performance, such as business model effectiveness, efficiency, and final results (Deshpandé et al., 1997; Boyatzis & Ratti, 2009; Ryan et al., 2009). The performance of an organization depends on its leader’s level of expertise for implementing
strategies based on a conditional relationship between the leader and his or her followers. Organizational performance and leadership competencies correlate with social, cognitive, and emotional intelligence (Ryan et al., 2012). Boyatzis & Boyatzis (2009) position social intelligence as a leader's ability to focus on innovation and motivate team members. Leadership ability and organizational performance, according to Cho & Dansereau (2010), are closely related to company performance. Likewise, Tomal & Jones (2015) define organizational performance as the actual outcomes of an organization in comparison to its desired outcomes.

Methods

Design
This study used a survey design with a quantitative approach to analyze the phenomenon (Cresswell, 2014). The dependent variable for this research was school performance, an interactive variable was school culture, and the independent variable was the school principal’s leadership. The purpose of this study was to determine the effect of principals’ leadership abilities on school performance, both directly and through their schools’ organizational culture. The data were analyzed using SPSS version 19.0. SEM approach with a two-sided t-test to show the direction of the effect of the independent variable on the dependent variable was used. The study took place in Palangkaraya, Indonesia.

Population and Sample
The population for this study was all the school principals of the schools/madrasahs under the auspices of the Palangka Raya City Education Office, with them ranging from elementary to high schools and involving 46,194 people. The study sample comprised 350 school principals with at least one year in the job to ensure they had applied their leadership methods within their current schools and established a new organizational culture. The distribution of schools in the research sample is shown in Table 1.

Table 1.

<table>
<thead>
<tr>
<th>District</th>
<th>Primary school</th>
<th>Junior high school</th>
<th>Senior high school/Vocational school</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pahandut</td>
<td>30</td>
<td>20</td>
<td>20</td>
<td>70</td>
</tr>
<tr>
<td>Jekan Raya</td>
<td>30</td>
<td>20</td>
<td>20</td>
<td>70</td>
</tr>
</tbody>
</table>
Instrument
This study used a survey questionnaire to collect data. The questionnaire was divided over three parts relating to the principals’ managerial ability, organizational culture, and school performance. There were seven items about managerial ability, eight for organizational culture, and nine for school performance, making for a total of 24 instruments (Table 2). All instruments were developed by the researcher based on the theories, dimensions, and indicators that had been previously put forward by previous experts and researchers. To determine the validity of the instrument items, the product-moment correlation test was used to correlate the item scores to the total score. All items had a correlation above 0.6 and a significance below 0.05, so all 24 items were suitable for use in the research.

The instrument’s reliability was tested using Cronbach’s alpha. The results for all variables demonstrated a good reliability level above 0.7, so the instrument was suitable for our research (Table 3).

Table 2. Research instrument

<table>
<thead>
<tr>
<th>Variable</th>
<th>Dimension</th>
<th>Item</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal leadership</td>
<td>Leadership style</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Coordination</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cooperation</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Organizational culture</td>
<td>Organizational climate</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Social relations between workers</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Organizational environment</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>School organizational performance</td>
<td>Target</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Output</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Stakeholder satisfaction level</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>24</td>
<td>24</td>
</tr>
</tbody>
</table>

Table 3. Results of the reliability test

<table>
<thead>
<tr>
<th>Cronbach's Alpha</th>
<th>Alpha Based on Standardized Items</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership</td>
<td>0.854</td>
<td>0.823</td>
</tr>
</tbody>
</table>
From Table 3, we can see that for the leadership variable, the Cronbach’s alpha value is 0.854, which is greater than 0.60, so this seven-item instrument is reliable. For the organizational culture variable, the Cronbach’s alpha value is 0.823, which is greater than 0.60, so this eight-item instrument is reliable. Finally, for the organizational culture variable, the Cronbach’s alpha is 0.798, which is again greater than 0.60, so this nine-item instrument is reliable.

### Data Collection

The collection of data from the sample was achieved using questionnaires that were designed and structured to reveal each principal’s managerial ability. The participating principals who returned valid questionnaires included 150 primary school principals, 100 junior high school principals, and 100 high school or vocational high school principals, for a total of 350 principals (Table 1). There were actually 385 respondents, but due to some being incomplete or flawed, only 350 could be retained for analysis.

### Data Analysis

Data analysis was performed over three steps: First, a normality test confirmed that the sample followed a normal distribution. Second, the descriptive statistics were tested to show the central tendency of the results. Third, hypothesis testing was performed to see if the independent variables influenced the dependent variable. All analyses were applied using SPSS Version 19. The results of the Kolmogorov–Smirnov test for normality are shown in Table 4, and they convey that the sample was not significantly different from the population. Quantitative descriptive analysis is intended to present data in the form of a central measure and a measure of the spread of each indicator, namely through the average, median, mode, minimum, maximum, range, and total. The spread is represented through variance and standard deviation. Accordingly, research hypotheses were tested using the SEM approach, allowing a two-sided t-test to show the direction of the effect of the independent variable on the dependent variable. A two-sided test was used because the
independent variable both positively and negatively affects the dependent variable (Helm et al., 2010).

**Descriptive Statistic Data**

The data sourced from the sample related to areas of the principals’ managerial ability, organizational culture, and school performance. These were analysed using structural equation modelling (SEM) in the LISREL 8.8 software, which was chosen because its analysis involves both indigenous and exogenous variables. In addition to the dependent and independent variables, there is also an intervening variable.

The SEM data analysis comprised two steps: The measurement instrument was validated through confirmatory factor analysis, and then the structural model was estimated. To test the hypotheses, the correlation test looked at the r coefficient between variables and the t-test results. If the t-test results had a significance below 0.05, the correlation results were significant, so the null hypothesis could be rejected in favour of the working hypothesis.

**Results**

**Demography Analysis**

Details about the number of elementary schools (SD/MI) in Palangka Raya and their students are shown in Table 4.

**Table 4.**

<table>
<thead>
<tr>
<th>No</th>
<th>District</th>
<th>Schools</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Public</td>
<td>Private</td>
</tr>
<tr>
<td>1</td>
<td>Pahandut</td>
<td>35</td>
<td>13</td>
</tr>
<tr>
<td>2</td>
<td>Jekan Raya</td>
<td>34</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>Sebangau</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>Bukit Batu</td>
<td>14</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>Rakumpit</td>
<td>9</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>100</td>
<td>20</td>
</tr>
</tbody>
</table>

Source: Basic Education Data for Palangka Raya

There are 120 schools at the SD/MI (Elementary School/Madrasah Ibtidayah) level in Palangka Raya, mostly public schools (100 or 83.33%), while the rest were private (20 or 16.67%).
### Table 5.

**Number of junior high schools and their students in Palangka Raya**

<table>
<thead>
<tr>
<th>No</th>
<th>District</th>
<th>Schools</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Public</td>
<td>Private</td>
<td>Total</td>
</tr>
<tr>
<td>1</td>
<td>Pahandut</td>
<td>6</td>
<td>11</td>
</tr>
<tr>
<td>2</td>
<td>Jekan Raya</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>Sebangau</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>Bukit Batu</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>Rakumpit</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>25</td>
<td>23</td>
<td>48</td>
</tr>
</tbody>
</table>

Source: Basic Education Data for Palangka Raya

There are 48 schools at the SMP/MT level (Junior High School/Madrasah Tsanawiyah) in Palangka Raya. Of these, just over half are public schools (25 or 52.08%), while the rest are private (23 or 47.92%).

### Table 6.

**Number of high schools and their students in Palangka Raya**

<table>
<thead>
<tr>
<th>No</th>
<th>District</th>
<th>Schools</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Public</td>
<td>Private</td>
<td>Total</td>
</tr>
<tr>
<td>1</td>
<td>Pahandut</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>2</td>
<td>Jekan Raya</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>Sebangau</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>Bukit Batu</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>Rakumpit</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>21</td>
<td>28</td>
</tr>
</tbody>
</table>

Source: Basic Education Data for Palangka Raya

There are 28 schools at the SMA/MA (Senior High School/Madrasah Aliyah) level in Palangka Raya City. Of these, most are private schools (21 or 75.00%), while the rest are public schools (7 or 25.00%). These 28 schools are confined to four sub-districts in in Palangka Raya City, with Rakumpit District having no such schools at all. The greatest number of SMA/MA schools (14) is found in Pahandut District, followed by Jekan Raya District (10 schools), Bukit Batu District (three schools), and Sabangau District (one school). This is conveyed in more detail in Table 6.

**Normality Test**

The Kolmogorov–Smirnov Z test was used to test for normality in the three research variables. The results of this are shown in Table 7.
The results of the one-sample Kolmogorov-Smirnov test for normality yielded Asymp Sig (2-tailed) values that were all greater than 0.05, indicating that the data from the sample for the three variables could be regarded as being normally distributed.

**Descriptive Statistical Analysis**

The results of the descriptive analysis for the three research variables are presented in Table 8.

**Table 8.**

*The principals’ leading abilities in school*

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Very good</th>
<th>Good</th>
<th>Quite good</th>
<th>Poor</th>
<th>Very poor</th>
<th>Average</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal’s managerial success</td>
<td>22.15</td>
<td>54.46</td>
<td>19.38</td>
<td>3.08</td>
<td>0.92</td>
<td>3.94</td>
<td>Good</td>
</tr>
<tr>
<td>Principal’s managerial track record</td>
<td>19.22</td>
<td>55.37</td>
<td>22.15</td>
<td>2.61</td>
<td>0.65</td>
<td>3.90</td>
<td>Good</td>
</tr>
</tbody>
</table>

Source: Primary Data Processing

For the track-record indicator of school principal leadership, most of the respondents (55.37%) thought it was good, followed by another 22.15% who thought it was quite good, 19.22% who thought it was very good, 2.61% who thought it was poor, and 0.66% who thought it was very poor.
In terms of the principals’ ability to develop student achievement in the intracurricular and extracurricular fields, 43.38% of respondents thought it was good, followed by 33.54% who thought it was quite good, 20.31% who thought it was very good, 2.46% who thought it was poor, and 0.31% who thought it was very poor. Meanwhile, in terms of the principals’ ability to introduce breakthroughs to increase the effectiveness of learning methods, some 55.52% of respondents thought it was good, followed by 30.06% who said it was quite good, 11.04% who said it was very good, 2.76% who thought it was poor, and 0.61% who thought it was very poor.

For the principals’ ability to increase student interest in independent study, most respondents (48.16%) thought it was quite good, followed by 34.66% who thought it was good, 11.66% who thought it was very good, 5.21% who thought it was poor, and 0.31% who thought it was very poor.

As can be gleaned from Table 10, the overall abilities of the school principals for improving school performance can be regarded as already being relatively good, as illustrated by the 72.87% of respondents who gave a “Good” or “Very good” rating. Unfortunately, many school principals only scored “Quite good” (22.56% of respondents), and a handful even scored “poor” or “very poor” (3.66% and 0.91% of respondents, respectively).

Table 10.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Interval</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very poor</td>
<td>37.00–66.60</td>
<td>3</td>
<td>0.91</td>
</tr>
<tr>
<td>Poor</td>
<td>66.70–96.30</td>
<td>12</td>
<td>3.66</td>
</tr>
<tr>
<td>Quite good</td>
<td>96.40–126.00</td>
<td>74</td>
<td>22.56</td>
</tr>
<tr>
<td>Good</td>
<td>126.10–155.70</td>
<td>164</td>
<td>50.00</td>
</tr>
<tr>
<td>Very good</td>
<td>155.80–185.40</td>
<td>75</td>
<td>22.87</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>328</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Primary Data Processing
Table 11.
The principals’ ability to cultivate a school culture

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Very good</th>
<th>Good</th>
<th>Quite Good</th>
<th>Poor</th>
<th>Very Poor</th>
<th>Average</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student achievements in intracurricular and extracurricular fields</td>
<td>20.31</td>
<td>43.38</td>
<td>33.54</td>
<td>2.46</td>
<td>0.31</td>
<td>3.81</td>
<td>Good</td>
</tr>
<tr>
<td>Breakthroughs in creating learning methods</td>
<td>11.04</td>
<td>55.52</td>
<td>30.06</td>
<td>2.76</td>
<td>0.61</td>
<td>3.74</td>
<td>Good</td>
</tr>
<tr>
<td>Increased student interest in independent learning</td>
<td>11.66</td>
<td>34.66</td>
<td>48.16</td>
<td>5.21</td>
<td>0.31</td>
<td>3.36</td>
<td>Good</td>
</tr>
</tbody>
</table>

Source: Primary Data Processing

In terms of the principals’ overall ability to develop student achievement in intracurricular and extracurricular fields, 43.38% of respondents thought it was good, followed by 33.54% who thought it was quite good, 20.31% who thought it was very good, 2.46% who thought it was poor, and 0.31% who thought it was very poor. Meanwhile, in terms of the principals’ abilities to make breakthroughs to increase the effectiveness of learning methods, 55.52% of respondents thought it was good, followed by 30.06% who said it was quite good, 11.04% who said it was very good, 2.76% who thought it was poor, and 0.61% who said it was very poor.

For the principals’ overall ability to increase student interest in independent study, most respondents (48.16%) thought it was quite good, followed by 34.66% who thought it was good, 11.66% who expressed a very good opinion, 5.21% who thought it was poor, and 0.31% who thought it was very poor.

Hypothesis Testing

Before the data were analyzed to answer the four research questions, normality and other assumption tests were carried out. Data normality was confirmed by estimating the slope and kurtosis of each measurement item. The slope values ranged from 0.342 to 0.124, and the kurtosis values ranged from -0.017 to 0.243., and because these values are between ± 2 and ± 5, they are considered as confirming a normal distribution (Basrowi & Kasinu, 2006).

Referring to the results of the analysis using LISREL, the result for the ratio coefficient $\chi^2 / df$ (i.e., 267.49 > 3.03) can be used to indicate an acceptable fit for the model. Other goodness of fit indicators include RMSEA = 0.087, NFI = 0.978, NNFI = 0.954, CFI = 0.957, GFI = 0.945, AGFI = 0.954. Based on the above, it was concluded that this study’s model was feasible and acceptable,
being in accordance with the standards recommended by Hu and Bentler (1999). The results of the above analysis (see Table 12) indicate that the model created by the researcher accords with the empirical data (Kline 1998).

### Table 12.
**Goodness of fit criteria**

<table>
<thead>
<tr>
<th>GOFI</th>
<th>Score</th>
<th>Good standard of fit</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \text{nilai } \chi^2 )</td>
<td>0.056</td>
<td>( \text{Nilai } p &gt; 0.05 )</td>
<td>Fit</td>
</tr>
<tr>
<td>RMSEA</td>
<td>0.087</td>
<td>RMSEA ( \leq 0.08 )</td>
<td>Fit</td>
</tr>
<tr>
<td>NFI</td>
<td>0.978</td>
<td>NFI ( \geq 0.90 )</td>
<td>Fit</td>
</tr>
<tr>
<td>NNFI</td>
<td>0.954</td>
<td>NNFI ( \geq 0.90 )</td>
<td>Fit</td>
</tr>
<tr>
<td>CFI</td>
<td>0.957</td>
<td>CFI ( \geq 0.90 )</td>
<td>Fit</td>
</tr>
<tr>
<td>GFI</td>
<td>0.945</td>
<td>GFI ( \geq 0.90 )</td>
<td>Fit</td>
</tr>
<tr>
<td>AGFI</td>
<td>0.954</td>
<td>AGFI ( \geq 0.90 )</td>
<td>Fit</td>
</tr>
</tbody>
</table>

Source: primary data, processed with LISREL version 8.80.

All research hypotheses were tested using the SEM approach. We applied a two-sided t-test to show the direction of the effect of the independent variable on the dependent variable. As stated by Helm et al. (2010), if an independent variable can both positively and negatively affect the dependent variable, a two-sided test should be used.

According to the two-tailed test (df = 350), a significance level of 0.05 (\( p < 0.05 \)) requires a t-value greater than 1.96, while a significance level of 0.01 (\( p < 0.01 \)), requires a t-value greater than 2.63, and a significance level of 0.001 (\( p < 0.001 \)) requires an t-value greater than 3.40.

**Figure 1. Structural model results**

Based on the diagram above, the results can be tabulated in a summary form, as shown in Table 13.

### Table 13.
**Path coefficients**

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Aspect</th>
<th>Path coefficient</th>
<th>t-Statistic</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principals’ managerial ability (PMA)</td>
<td>School organizational culture (SOC)</td>
<td>0.66</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>School performance (SP)</td>
<td>0.76</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

62
The results therefore confirm hypothesis H₁, which states that a principal’s managerial ability has a positive effect on a school’s organizational culture (β = 0.66, t = 9.32, p: 0.000).

H₂ posits that a school’s organizational culture has a positive effect on that school’s performance in Palangka Raya, Central Kalimantan. The result (β = 0.64, t = 11.32, p: 0.000) also confirms that this hypothesis can be accepted.

H₃ states that a principal’s managerial ability has a positive impact on a school’s performance in Palangka Raya, Central Kalimantan. The analysis results (β = 0.76, t = 11.62, p: 0.000) confirm that this hypothesis is also accepted.

Finally, H₄ asserts that a principal’s managerial ability will have a positive effect on school performance through a school’s organizational culture. The results (β = 0.42, t = 6.88, p: 0.000) support this hypothesis, so it can be accepted.

Discussion

This research aims at determining the effect of principals’ leadership abilities on school performance through schools’ organizational culture. Results show that principal’s managerial ability affects schools’ performance and organizational culture. To interpret the results of the study the following discussion is addressed.

Principals’ Managerial Abilities and School Performance

Principals often do their best to serve both staff and students, and they know a lot about their duties and set the rhythm for the school. They are clearly important in organizing school life in order to achieve optimal outcomes. Successful principals understand their schools as unique, complex organizations and are able to take a leading role in them. Leadership means having the ability to use all the available resources in an organization in the best way possible to achieve the stated goals.

According to Robbins (1989), in organizational practice, the word “lead” implies moving, directing, guiding, protecting, fostering, giving examples, giving encouragement, providing
assistance, and so on, and this gives an indication of the breadth of the duties and roles of an organizational leader. Leadership is usually defined by experts according to their personal views, as well as aspects of particular interest for the expert concerned. Yukl (2001) defines leadership as a trait, a personal behavior, an influence on others, a pattern of interaction, a cooperative relationship between roles, an administrative position, and a perception as someone worthy of influence. Leadership is the ability to move, motivate, and influence people to take actions that will help achieve organizational goals while courageously making decisions about activities.

Qualified principals will have some basic abilities, personal qualifications, and professional knowledge and skills. According to Mulyasa (2011), these abilities must be possessed by any kind of leader, and they include conceptual skills, human skills, and technical skills. More specifically, 1) technical skills relate to processes, procedures, or techniques, as well as special skills for analyzing certain matters and utilizing specific facilities, equipment, techniques, and knowledge. 2) Human skills represent the ability to work effectively as a member of a group to foster collaborative efforts within that group. 3) Conceptual skills reflect the ability of a leader to view the organization as a whole.

In addition to these basic abilities, principals should have personal qualifications in the form of traits that are essential for any leader. In other words, leadership must be supported by good mental, physical, and emotional health, as well as suitable social characters, attitudes, ethics, and personalities. The novelty of this research lies in establishing that when a principal has good leadership abilities, his or her school’s performance will improve. The process of improving school performance also starts by raising the ability of teachers to apply good learning methods, which in turn improves their students’ outcomes. The better that the quality of a school’s teaching is, the better its performance is.

Principals’ Leadership and Organizational Culture

The government has established standards for the skills of school principals, and these are mandated in the Regulation of the Minister of National Education Number 13 of 2007 concerning Standards for School and Madrasah Principals. In the context of school management, a school principal must build a school’s culture through planning, developing the organization, leading the school, managing change, regulating the school climate, managing school facilities and infrastructure, managing community relationships, managing students, managing curriculum
development and learning activities, managing school finances, administering the school, developing methods for special learning, managing school information systems and taking advantage of technology, and monitoring, evaluating, and reporting the status of the school’s activities.

The description above agrees with that of Kotter (1996), who states that organizational culture can be a strategic asset for making an organization more adaptable and suitable to its environment. Likewise, the results of this study agree with Peters & Waterman’s (2004) opinion that dynamically speaking, a strong organization is a harmonious and systematic collaboration process between organizational members in a formal and hierarchical order, with everyone acting in accordance with agreed terms to effectively and efficiently achieve goals.

The principals in Palangka Raya have already implemented good leadership management, including building an organizational culture. Bertocci (2009), Lumby (2012), Zhu & Engels (2013) explain that organizational culture is a system of meaning that is followed by organizational members as a relatively new phenomenon.

A novel finding of this research is that principals’ managerial abilities are related to improving a school’s organizational culture. The better the leadership abilities of a principal, the better his or her school’s performance will be. Conversely, when a principal has poor managerial abilities, the school’s performance will also be limited.

**Organizational Culture and School Performance**

Organizational culture is desirable to improve the performance of a school (Robbins, 1990). It is the invisible hand guiding people’s behavior (Peterson, 2013; Singh, 2014). However, it is an individual “character” that unites, provides meaning and direction, and mobilizes and influences the thoughts, feelings, and actions of organizational members, and this is reflected in a principal’s good managerial competence (Duchon & Plowman, 2005; Sampson, Ifenthaler, Spector & Isaias, 2014; Storey, 2011), because organizational culture is the “core and spirit” of a school. Without this, a school will tend to be incomplete and unable to succeed (Fry & Cohen, 2009; Mitchell & Sackney, 2016). Culture in any organization, including schools, acts as an adaptive and regulative mechanism (Georgiades, 2015; Parameshwar, 2005).

Strong leadership in an organization, including schools, is very important, because this determines the organizational culture (Yuan & Lee, 2011). The results of this study concur with those of
several other recent studies that have shown that leadership contributes significantly to the quality of organizational culture and performance (Bendikson, 2012; Harwiki, 2013; Murphy & Torre, 2015). Indeed, effective leadership is the main precondition for creating a conducive organizational culture that can strengthen systems that may otherwise fail or become difficult to control. Without good leadership and a sound organizational culture, any organization will likely collapse (Ali & Ngang, 2011; Eric, Steven & Bovberg, 2016). Organizations rely heavily on strong leadership for dealing with unexpected changes in everyday operations. Indeed, many studies have found that even strong organizations can fail due to weak leadership (Cross, Ernst & Pasmor, 2013).

Strengthening an organizational culture must therefore be achieved by upholding good leadership through the use of various direct and indirect strategies (Lin & McDonough, 2011). The findings of this study are consistent with those of Ostroff and Schmitt (1993) in that organizational effectiveness is influenced by organizational culture. Juechter, Fisher & Alford (1998) conducted a study that found that organizational culture greatly influences the effectiveness of business organizations. Likewise, Thibodeaux & Favilla (1995) made use of planning and goal setting, flexibility and adaptation, information management, communication, readiness, evaluation by external entities, and the concept of organizational effectiveness stability to examine strategic management processes and found significant correlation.

This study also confirms the findings of Asree et al. (2010), who stated that organizational culture—including vision, integrity, openness, dedication, and creativity among leaders—helps improve organizational performance. The success of an organization therefore ultimately depends on the competence of its leaders and its organizational culture (Soebbing et al., 2015).

This study is novel in finding that when a school’s organizational culture is good, its level of performance will also increase, because it improves the morale of teachers and other staff, as well as the students.

**Principals’ Leadership, Performance, and Organizational Culture**

The principal, as a school’s administrator, holds the key to driving a school’s progress. He must be able to lead and fulfil his role, such that all activities are controlled and directed toward innovative efforts to try new ideas and new practices to achieve a more effective and efficient classroom experience. The principal is also fully responsible for fostering an organizational culture
for education in his or her school, so school performance can improve. To be able to carry out their duties properly, principals should understand and master all the activities within their purview as an educational administrator, so they can improve the organizational culture and consequently school performance.

Furthermore, the management of a principal should be directed at improving the performance of teachers, students, and other educational components, but this will also improve the organizational culture and consequently school performance. The educational paradigm offers broad authority to schools to develop various organizational cultures, but this requires able principals that are adept in various managerial aspects to achieve a school’s goals and ultimately improve school performance.

The principal is essentially a teacher who has been assigned the task of leading a school and building its organizational culture such that school performance is improved (Moedjiarto, 2002). Such a role cannot easily be filled by anyone, so candidates are selected according to factors like experience, age, rank, and integrity, in accordance with Permendiknas Number 28 of 2010 concerning the Assignment of Teachers as Principals of Schools/Madrasahs.

This study’s findings strongly support those of Pradhan & Pradhan (2015) in that leadership is currently considered a keyword because those in charge of organizations prefer to be called leaders rather than managers. According to McNair et al. (2011), leaders must learn the art of motivating a team of people to act appropriately, thus building an organizational culture, in order to achieve shared goals. Leadership is a way to recruit followers through the skilled creation of organizational culture, thus improving organizational performance (Lee et al., 2015). Pradhan & Pradhan (2015) suggest that the competence of a leader is best measured by his or her ability to improve organizational culture and performance.

Ssekakubo et al. (2014) studied leadership abilities and their consequences for organizational culture and performance through efforts to enhance employee performance.

Leaders who can achieve the best performance act as agents of change, because this triggers improvements in organizational culture and consequently employee and organizational performance. Indeed, Bass & Steidlmeier (1999) emphasize that management can support its commitment to operating a successful business through achieving a good organizational culture and meeting established goals.
This study also supports the findings of Bass & Steidlmeyer (1999) in that leadership ability reflects on overall success through building an organizational culture and achieving high performance. Alatrooshi, Singh & Farouk (2016) found that due to their good management, leaders are able to implement leadership strategies and techniques and build a good organizational culture that enables employees to achieve their full potential (Siddique, 2012).

A novel finding is that a principal’s managerial abilities can help improve the performance of a school, both directly and through the organizational culture.

**Implications**

This study has practical implications for improving school performance, because this can be facilitated by improving the managerial skills of principals, which in turn will give them the ability to create a conducive organizational culture in school. When these two things are done effectively, school performance should improve significantly.

**Conclusion**

In summary, this study reveals that a principal’s managerial ability exerts a significant influence over a school’s organizational culture and overall school performance. What is more, a good school culture can significantly contribute to improving school performance. However, the managerial abilities of school principals make a greater direct contribution to the performance of schools than they do indirectly through organizational culture, so efforts to optimize the managerial abilities of school principals should be prioritized over improving a school’s organizational culture, because this will yield stronger and quicker improvements in school performance.

This study however has its limitation in that the elaboration of cultural organization is limited. The future research is suggested to enlarge the indicators of cultural organization by connecting with the leadership style to improve the limitation of the study. In addition, school performance is added to see the policy of principals in context of digital leadership.

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