

## **The Impact of School Culture on Teacher Efficacy through Teacher Leadership as an Intervening Variable in Regents Secondary School Bali**

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### **ABSTRACT**

*Teacher efficacy is a central aspect of education that reflects a teacher's belief in their ability to influence student learning outcomes. A conducive school culture, including commitment and collegial support, plays an important role in strengthening teachers' confidence in teaching effectively. Additionally, the role of teacher leadership in motivating and guiding is significant in improving teacher efficacy. This study aims to explore the effect of school culture on teacher efficacy through the mediation of teacher leadership. Using a saturated sample technique, this study involved 39 respondents from Regents Secondary School Bali. Data analysis using SEM (SmartPLS) showed a positive effect of school culture on teacher efficacy, but no significant effect of teacher leadership on teacher efficacy. The study also found that there was no direct effect of school culture on teacher efficacy, nor through teacher leadership. These findings emphasize the importance of a deeper understanding of the dynamics of school culture and the role of teacher leadership in strengthening teacher efficacy to sustainably improve education quality.*

**Keywords:** School Culture, Teacher Efficacy, Teacher Leadership

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### **INTRODUCTION**

Quality education is one of the essential pillars in the sustainable development of human resources. Good education plays a crucial role in enhancing global competitiveness and national development. The quality of education greatly depends on the effectiveness of teachers in carrying out their duties. Teachers have a

strategic role in determining the direction of national education, making it vital to improve their skills and knowledge.

Teacher efficacy holds a significant role in determining the quality of education at various levels. Teacher efficacy directly influences students' learning outcomes and overall educational success, making it an

important factor to consider in efforts to raise educational standards. A study conducted by Hidayah, Wangid, Wuryandani, and Salimi (2023), which reviewed 40 articles from various countries with a total sample of 52,209 people, found that the quality of education is greatly influenced by teacher efficacy, with no indication of publication bias in the study. This result shows that teacher efficacy has a significant impact on the quality of education at all levels.

Other empirical studies, such as those conducted by Sandaraj and Hashim (2022), García-Lázaro et al. (2022), and Rahemi (2007), also state that teacher self-efficacy is an aspect that needs attention in the educational world as it has been proven to affect the quality of education.

School culture plays an important role in shaping teacher efficacy. A positive school culture that supports collaboration, innovation, and professional development can boost teachers' confidence and effectiveness. School culture is an atmosphere where a sense of belonging as part of a community, family, and team is created; experiences inside and outside of school are shared; common goals are established; and curricular and instructional elements are agreed upon (Wagner, 2006). This is related to teachers' feelings, skills, and engagement in their work, as well as administrators' demands and expectations (Demirtaş, 2010). According to social cognitive theory, the school culture where a teacher works affects their ability as individuals and as a community to educate students (Goddard, 2001).

In line with this, Bozkurt, Çoban, Özdemir, and Özdemir (2021) stated that the school culture where teachers work shapes their ideas and opinions. If the school culture provides a conducive and collaborative environment, teachers can collaborate, engage in reflective dialogue, and share responsibilities. This can positively impact

teacher efficacy. Teacher efficacy refers to teachers' perceptions at school that the entire school environment can regulate and carry out the necessary actions to positively impact students (Goddard & Goddard, 2001). Ross, Hogaboam-Gray, and Gray (2004) and MacNeil, Prater, and Busch (2009) found strong evidence of a correlation between school culture and teacher efficacy.

An effective school culture also encourages the emergence of teacher leadership, values teachers who go beyond traditional roles, and creates a culture that supports continuous learning and development, which ultimately can enhance teachers' self-efficacy. A previous study conducted by Kara (2022) on school culture and teacher leadership showed that all sub-dimensions of school culture, namely assignment culture, support culture, success culture, and bureaucratic culture, are major determinants that influence teacher leadership.

Another study conducted by Manliguis and Tagadiad (2023) revealed that leadership significantly mediates the relationship between school culture and teaching efficacy. Akman (2021) also disclosed that all dimensions of teacher leadership (organizational development, professional development, and cooperation) show a significant positive correlation with teacher efficacy. Although teacher leadership in this study was not a mediating variable, it confirms that teacher leadership helps explain the positive and significant relationship with teacher efficacy.

However, a survey conducted by Dunamis Education shows a misalignment between school culture and teacher efficacy. The survey results in a school indicated that the aspect of school culture scored 73% (satisfactory category), while the aspect of teacher efficacy scored 66% (needs improvement category), indicating no strong correlation between the two.

In their research, Gümüş, Çağatay Kılınç, and Bellibaş (2022) revealed that there is an influence of teacher leadership on teacher efficacy, but the impact is statistically small. In other words, although there is evidence that teacher leadership affects teacher efficacy, the impact may not be very large or profound.

Based on these results, there is a misalignment between previous research findings and the current study's outcomes regarding the significant influence of teacher leadership on teacher efficacy. Some studies show that teacher leadership has a small direct influence on teacher efficacy, while others show a strong and significant relationship between teacher leadership and teacher efficacy. Additionally, there is also a misalignment in research and survey results between school culture and teacher efficacy. These results will be used as a reference for further research.

Based on the background of the problem, the following issues can be formulated:

1. Is there an impact of school culture on teacher leadership at Regents Secondary School Bali?
2. Is there an impact of teacher leadership on teacher efficacy at Regents Secondary School Bali?
3. Is there an impact of school culture on teacher efficacy at Regents Secondary School Bali?
4. Does school culture have an indirect impact on teacher efficacy through teacher leadership at Regents Secondary School Bali?

The significance of this study lies in its potential to contribute to the existing body of knowledge on the dynamics of school culture, teacher leadership, and teacher efficacy. By examining these relationships within the context of Regents Secondary School Bali, this study aims to provide insights that can inform policy and practice in educational settings.

Specifically, understanding whether school culture impacts teacher leadership and efficacy can help school administrators and policymakers develop strategies to foster a positive school environment and enhance teacher performance.

The findings of this study have several pedagogical implications. Firstly, it emphasizes the importance of a positive school culture that supports teacher leadership, enabling school leaders to foster a more collaborative and empowering environment for teachers.

Secondly, the study highlights the role of teacher leadership in enhancing teacher efficacy, suggesting that professional development programs focusing on leadership skills can help teachers positively influence their peers.

Lastly, understanding the interplay between school culture, teacher leadership, and teacher efficacy can help educators and administrators develop targeted interventions to improve teaching and learning outcomes, benefiting students and the broader school community.

## **THEORETICAL FOUNDATION**

This section explains the theoretical foundations of the research variables (school culture, teacher leadership, and teacher efficacy).

### **School Culture**

School culture is not something visible, but rather the feelings of the organization's members and the outsiders who interact with it. The concept of culture is deeply rooted in anthropology (Glisson, 2000; Hoy & Hoy, 2003; Schein, 2010; Van Houtte, 2005) and has been the subject of study by many educational researchers (Van Houtte, 2005).

Culture is generally used to describe the unique personality of an organization, including its values, goals, traditions, behaviours, and operational framework. Additionally, culture is not only a feature of an

organization but also its distinctive characteristic (Van Houtte, 2005). Similarly, Hongboontri & Keawkhong (2014) in their book define culture as shared values, traditions, and common goals. This shapes people's perceptions when they encounter new experiences, which in turn affects future culture and experiences. Simply put, culture can be defined as "the way things are done" (Glisson & James, 2002, p. 769).

Research on school culture has increased significantly over the last 50 years, following innovative findings on how school culture affects school effectiveness (Van Houtte, 2005). Peterson and Deal (2009) argue that school culture has a broad impact on all aspects of school life, including "how staff dress, what they talk about, their willingness to change, the practice of instruction, and the emphasis given on student and faculty learning" (p. 28).

Three subscales of RSEQ in Stokes, E. W. (2016), which will also be indicators in this study, are as follows: Shared Leadership (XSL), Professional Commitment (XPC), and Collegial Teachers and Learning (XCTL).

### **Teacher Leadership**

Administrative processes in schools, especially in the context of school leadership, are largely handled by the principal. However, the traditional approach to leadership, which conceptualizes the roles and responsibilities of the principal, has lost its validity in achieving school effectiveness and goals (Araşkal & Kılınc, 2019). The increasing complexity of school leadership is due to the evolution of times (Harris, 2002). Factors such as the development of information and communication technology, different societal expectations of educational leaders and schools, and new roles and responsibilities for school administrators have increased the need for collaboration and the sharing of responsibilities among school stakeholders. Therefore, the idea that teachers,

even without formal administrative positions, can and should take on leadership roles has become a recent issue (Bozkuş, Taştan & Turhan, 2015).

The concept of teacher leadership has become an agenda in education due to a shift in leadership understanding towards shared leadership with employees, from a leader-follower axis to a cooperation influencer axis (Beycioğlu & Aslan, 2012). The concept of school leadership is approached with a more collective and participatory perspective, eliminating the monopoly of the principal. Since the early 1980s, there has been an increasing scientific interest in the concept of teacher leadership, resulting in a substantial knowledge base (York-Barr & Duke, 2004).

The definition of teacher leadership offers diverse perspectives on the scope and substance of the concept. Although there are many definitions, there is no consensus on the concept as it can be interpreted differently in each school context. This is believed to be related to the diversity of activities, roles, and behaviours (Harris, 2005; Muijs & Harris, 2003). Teacher leadership is defined as a model where teachers at various levels have the opportunity to exert influence (Harris & Lambert, 2003). In this perspective, teacher leadership can be understood as actions that unite members to enhance the well-being of each individual in the school, and as a result, extend the influence of teachers beyond the classroom (Pineda Báez, Bauman & Andrews, 2020). The traditional understanding of teaching emphasises tasks within the classroom, whereas the concept of teacher leadership extends teachers' influence beyond the classroom and asserts informal responsibilities in addition to formal ones.

Kara and Bozkurt (2022) discuss teacher leadership from a broader perspective. They describe it as enhancing student learning outcomes by implementing high-level teaching practices in the classroom and sharing them

with other teachers. Wenner and Campbell (2017) analyzed the literature on teacher leadership and identified five themes: (a) Teacher leadership extends beyond the classroom, (b) Teacher leadership involves promoting professional learning, (c) Teacher leadership involves shared policy and decision-making, (d) The purpose of teacher leadership is to enhance student learning and achievement, and (e) Teacher leadership is the process of facilitating overall school change and improvement (Wenner & Campbell, 2017, p. 127).

Based on further research conducted by Angelle and DeHart (2016) on the Comparison and Evaluation of Four Models of Teacher Leadership, the following three models are recommended for future research: Sharing Expertise (ZSE), Leadership Engagement (ZLE), and Leadership Opportunities (ZLO).

These three models encourage collaboration among teachers in sharing expertise, provide opportunities for active engagement in leadership, and create a supportive environment for the development of teacher leadership. Thus, the implementation of these models can enrich teachers' professional experiences, improve student learning quality, and build strong leadership capacity throughout the school organization.

### **Self-Efficacy**

Self-efficacy refers to an individual's belief in their ability to competently or effectively complete tasks in a specific domain. It is important to note that people with the same level of skill may perform tasks differently based on their self-efficacy beliefs. Everyone views situations differently based on their level of self-efficacy. For example, two students with the same mathematical ability may have different attitudes towards math based on their self-efficacy perceptions (Bandura, 1993). Furthermore, an individual may achieve great success in one task but not in another due to differences in self-

efficacy beliefs for each task (Bandura, 1993, 1997).

Bandura (1993) states that self-efficacy influences cognitive, motivational, affective, and selection processes, as identified in his earlier work. He asserts that individuals are greatly influenced by their beliefs about their ability to control their functioning and, to some extent, events in their lives. Some people believe that abilities are fixed from birth, while others with strong self-efficacy understand that abilities can be enhanced through hard work and determination. It is important to avoid using language that implies a bias towards one belief or the other. Certain abilities are considered fixed and unchangeable. Some people believe that abilities are fixed from birth, while others with strong self-efficacy believe that abilities can be enhanced through hard work and determination. Additionally, successful individuals work harder to overcome obstacles.

Bandura (1997) identifies the factors that influence self-efficacy in individuals:

1. **Mastery Experiences.** According to Bandura (1997), the most influential source of self-efficacy is mastery experiences, which refer to past performances and originate from within an individual.
2. **Vicarious Experiences.** The experiences of others determine an individual's perception of success or failure, so it can be said that this source comes from external experiences.
3. **Social Persuasion.** Self-efficacy can also be obtained, strengthened, or weakened through social persuasion. Under the right conditions, persuasion from others can influence self-efficacy.
4. **Emotional/Psychological States.** A person's stress levels, mood, and emotional well-being affect their self-efficacy.

In this research, teacher efficacy consists of three different indicators: Efficacy in Student Engagement (YESE), Efficacy in Classroom Management (YECM), and Efficacy

in Instructional Strategies (YEIS) (Tschannen Moran & Hoy, 2001).

## CONCEPTUAL FRAMEWORK

The following is the conceptual framework used to structure, formulate, and guide this research:

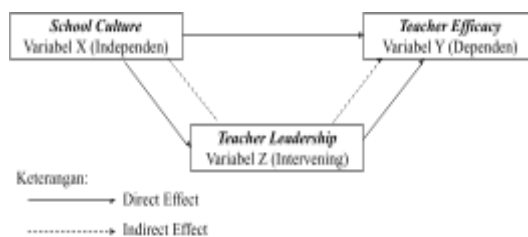


Figure 1. Research Conceptual Framework

Based on the background, literature review, previous research, and the conceptual framework of this study, four hypotheses can guide this research. They are as follows:

- H1: It is hypothesized that school culture at Regents Secondary School Bali has a significant effect on teacher leadership.
- H2: It is hypothesized that teacher leadership at Regents Secondary School Bali has a significant effect on teacher efficacy.
- H3: It is hypothesized that school culture at Regents Secondary School Bali has a significant effect on teacher efficacy.
- H4: It is hypothesized that school culture has an indirect effect on teacher efficacy through teacher leadership at Regents Secondary School Bali.

## METHODS

The population of this study consists of all teachers at Regents Secondary School Bali. The sampling technique used in this study is saturated sampling, amounting to 39 individuals.

The research adopts a quantitative approach, employing Structural Equation Model (SEM) analysis through SmartPLS software to explore the relationships between variables. Following Hair et al. (2019), the data analysis procedures encompass validity and reliability testing. Validity testing involves assessing convergent and discriminant validity,

where criteria include an outer loading value  $> 0.70$ , AVE (Average Variance Extracted) value  $> 0.50$ , and ensuring cross-loading values indicate stronger correlations with their respective indicators compared to others. Reliability testing necessitates Cronbach's Alpha  $\geq 0.70$  and Composite Reliability ( $\rho_c$ )  $\geq 0.70$ . Additionally, the structural model evaluation focuses on ensuring VIF values are  $< 5$  to avoid multicollinearity. Hypothesis testing relies on a significance level ( $p$ -value  $< 0.05$ ) to accept or reject hypotheses, indicating significant relationships between variables. Path coefficients, ranging from 0 to 1 for positive relationships and -1 to 0 for negative ones, and effect size measures ( $f^2$ ) further elucidate the impact of independent variables on endogenous variables, classified as small (0.02), medium (0.15), or large (0.35) effects.

The researcher uses a questionnaire as the main data collection tool. The questionnaire is distributed online by sending a Google Form link via WhatsApp group. The questionnaire uses a Likert scale with scores ranging from 1 to 5. The researcher then calculates the average score per item and groups them based on indicators. Here are the ranges of average values and their categories to provide a clearer picture:

**Table 1. Mean Score Categories and Corresponding Descriptions**

Mean	Category
1.00 - 1.49	Poor
1.50 - 2.49	Fair
2.50 - 3.49	Good
3.50 - 4.49	Very Good
4.50 - 5.00	Excellent

In this study, the researchers distributed questionnaires to 31 respondents to test the validity and reliability of the instruments used. All respondents have the same characteristics as

the research subjects. The validity and reliability values of the instrument can be seen in Table 2 and Table 3.

**Table 2. Table of Convergent Validity and Reliability Test**

Variable	Indicator	Outer Loading	AVE	Results	Cronbach's alpha	Composite reliability (rho_c)	Results
<i>School Culture (X)</i>	XSL	0,949	0,909	valid	0,950	0,968	Reliable
	XPC	0,980		valid			
	XCTL	0,931		valid			
<i>Teacher Leadership (Z)</i>	ZSE	0,702	0,760	valid	0,941	0,962	Reliable
	ZLE	0,972		valid			
	ZLO	0,918		valid			
<i>Teacher Efficacy (Y)</i>	YESE	0,894	0,895	valid	0,833	0,903	Reliable
	YEIS	0,964		valid			
	YECM	0,978		valid			

Based on Table 2, the initial data processing found that all indicators for school culture, teacher leadership, and teacher efficacy variables have outer loading values greater than 0.7. Additionally, all Average Variance Extracted (AVE) values are greater than 0.5. Therefore, it can be concluded that all indicators are valid, have met the requirements

for convergent validity, and are suitable for further analysis.

In addition, the results of Cronbach's Alpha, and Composite Reliability (rho\_c) testing on all variables show a value > 0.7, which means that all variables are declared reliable. These results indicate that each statement item in each research variable has met the requirements.

**Table 3. Tabel of Discriminant Validity Test**

Indicator	School Culture (X)	Teacher Leadership (Z)	Teacher Efficacy (Y)
XSL	<b>0,949</b>	0,783	0,527
XPC	<b>0,980</b>	0,844	0,512
XCTL	<b>0,931</b>	0,972	0,292
ZSE	0,546	<b>0,702</b>	0,462
ZLE	0,931	<b>0,972</b>	0,292
ZLO	0,858	<b>0,918</b>	0,201
YESE	0,355	0,272	<b>0,894</b>
YEIS	0,433	0,320	<b>0,964</b>
YECM	0,505	0,379	<b>0,978</b>

Table 3 shows that the loading value of each indicator on its construct is greater than the cross-loading value. This ensures that each indicator used in this study has good discriminant validity, with the construct indicator block performing better than other blocks.

**RESULTS**

The analysis of the collected data was conducted to determine the relationships between school culture, teacher leadership, and teacher efficacy. Using structural equation modelling, the aim was to assess the validity of the proposed model and the significance of the hypothesized paths. The results of the descriptive analysis of the data can be seen in Table 4.

**Table 4. Tabel of Descriptive Analysis**

<u>Variable</u>	<u>Mean</u>	<u>Information</u>
<i>School Culture</i>	4,0	Very Good
<i>Teacher Leadership</i>	3,7	Very Good
<i>Teacher Efficacy</i>	4,3	Very Good

From the results of the descriptive analysis, it is evident that the average value for teacher efficacy is 4.3, which is the highest among the variables examined. This indicates that, on average, teachers perceive their efficacy more positively compared to their perceptions of school culture and teacher leadership. In comparison, the average value for school culture is 4.0, and for teacher leadership, it is 3.7. The higher average value for teacher efficacy suggests that teachers feel more confident in their abilities and effectiveness in their roles. Conversely, the slightly lower averages for school culture and teacher leadership reflect a relative perception

of these aspects as less strong or supportive compared to the teachers' efficacy. These findings highlight a positive view of teacher efficacy within the school but also point to areas where perceptions of school culture and teacher leadership may need further attention or improvement.

**Outer Model**

Table 5 describes the outcomes of the SEM analysis for the outer model, offering insights into the validity and reliability of the constructs. This analysis reveals the extent to which the indicators accurately reflect the underlying theoretical constructs.

**Table 5. Table of Outer Loading, AVE, and Composite Reliability**

<b>Variable</b>	<b>Indicator</b>	<b>Outer Loading</b>	<b>AVE</b>	<b>Cronbach's alpha</b>	<b>Composite reliability (rho_c)</b>
<i>School Culture (X)</i>	XSL	0,710	0,632	0,703	0,836
	XPC	0,791			
	XCTL	0,874			
<i>Teacher Leadership (Z)</i>	ZSE	0,726	0,647	0,723	0,845
	ZLE	0,892			
	ZLO	0,787			
<i>Teacher Efficacy (Y)</i>	YESE	0,799	0,652	0,734	0,848
	YEIS	0,889			
	YECM	0,727			



The School Culture variable is measured by 3 (three) indicators, each with valid outer loadings ranging from 0.710 to 0.874, indicating that all three indicators validly reflect school culture. The level of convergent validity, as indicated by the AVE value of 0.632 ( $> 0.50$ ), meets the criteria for good convergent validity. The reliability of the variable is acceptable, demonstrated by Cronbach's alpha and composite reliability above 0.70 (reliable).

Among these indicators, XCTL has the highest outer loading of 0.874, indicating that this indicator, related to Collegial Teachers and Learning, is perceived positively by teachers. Meanwhile, indicators XSL and XPC are also good but may require further enhancement in school policy programs.

Three indicators used to measure the Teacher Leadership variable are categorically valid, with outer loadings ranging from 0.726 to 0.892, all reflecting teacher leadership at Regents Secondary School Bali. The AVE value of 0.647 indicates good convergent

validity ( $> 0.50$ ). The reliability level, demonstrated by Cronbach's alpha and composite reliability, is above 0.70 (reliable).

The ZLE indicator, Leadership Engagement in the Teacher Leadership variable, achieved the highest outer loading of 0.892 among the indicators, indicating that Leadership Engagement is well-perceived by teachers.

For the Teacher Efficacy variable, the 3 (three) indicators used have outer loadings ranging from 0.727 to 0.889, indicating that these indicators validly reflect teacher efficacy. The AVE value of 0.652 is the highest among the variables, meeting the criteria for good convergent validity. Additionally, the reliability level, indicated by Cronbach's alpha and composite reliability, is above 0.70 (reliable).

Based on the discriminant validity method, this study used cross-loading evaluation to assess the validity of the three indicators. The results of the cross-loading values are shown in Table 6.

**Table 6. Table of Cross-Loading Result**

Indicator	School Culture (X)	Teacher Leadership (Z)	Teacher Efficacy (Y)
XSL	<b>0,710</b>	0,667	0,271
XPC	<b>0,791</b>	0,564	0,395
XCTL	<b>0,874</b>	0,679	0,358
ZSE	0,663	<b>0,726</b>	0,290
ZLE	0,681	<b>0,892</b>	0,295
ZLO	0,586	<b>0,787</b>	0,176
YESE	0,378	0,297	<b>0,799</b>
YEIS	0,386	0,303	<b>0,889</b>
YECM	0,254	0,151	<b>0,727</b>

Based on the cross-loading method, the 3 (three) indicators in the School Culture variable (X), namely XSL, XPC, and XCTL, have higher values compared to indicators in other variables (Teacher Leadership and Teacher Efficacy). Similarly, the three indicators in the Teacher Leadership variable, ZSE, ZLE, and ZLO, also have higher values compared to other variables. The same pattern

is observed for the Teacher Efficacy variable. Therefore, it can be concluded that discriminant validity using the cross-loading method is satisfied.

#### **Inner Model**

The results of the Inner Model VIF values are shown in Table 6

**Table 7. Tabel of VIF Result**

Variable	VIF
School Culture -> Teacher Leadership	1,000
Teacher Leadership -> Teacher Efficacy	2,841
School Culture -> Teacher Efficacy	2,841

The estimation results show the Inner Model VIF values in Table 6. All of them are below 5, indicating a low level of multicollinearity among variables. These

results strengthen the parameter estimation in SEM PLS as robust (unbiased)

**Hypothesis**

The following is a description of the direct influence hypothesis test table:

**Table 8. Direct Effect Hypothesis Testing Table**

Hypothesis	Path Coefficient	p-value	95% confidence intervals		f square
			min.	max.	
H1. School Culture → Teacher Leadership	0,805	0,000	0,682	0,904	1,841
H2. Teacher Leadership → Teacher Efficacy	-0,068	0,820	0,569	0,594	0,002
H3. School Culture → Teacher Efficacy	0,484	0,131	-0,242	1,033	0,101

Based on the hypothesis testing results above, the findings are as follows:

- Hypothesis one (H1) is accepted, indicating a significant and positive effect of school culture on teacher leadership with a path coefficient of 0.805 and p-value ( $0.000 < 0.05$ ). Every change in school culture enhances teacher leadership. The significant effect of school culture on teacher leadership has a large impact, as indicated by the  $f^2$  value of  $1.841 > 0.35$ . Within a 95% confidence interval, the substantial impact of school culture in enhancing teacher leadership ranges from 0.682 to 0.904. This means that every program aimed at fostering a conducive school culture can increase teacher leadership up to 0.904.
- Hypothesis two (H2) is rejected, indicating no statistically significant negative relationship with a path coefficient of -0.068 and p-value:  $0.820 > 0.05$ . The influence of teacher leadership on teacher efficacy is very weak and insignificant ( $f^2$ : 0.002, well below 0.02). This implies that while an increase in teacher leadership might lead to a slight improvement in teacher efficacy, the effect is minimal and insignificant. Within a 95% confidence interval, the impact of teacher

leadership in enhancing teacher efficacy is between 0.569 and 0.594. This means that any program aimed at enhancing teacher leadership would only increase teacher efficacy up to 0.594.

- Hypothesis three (H3) is rejected, indicating a positive but statistically insignificant relationship with a path coefficient of 0.484 and p-value:  $0.131 > 0.05$ . The  $f^2$  value is 0.101, approaching 0.15, categorizing the effect of school culture on teacher efficacy as moderate. This suggests that an increase in school culture could significantly improve teacher efficacy to a meaningful extent. Within a 95% confidence interval, the impact of school culture on enhancing teacher efficacy ranges from -0.242 to 1.033. This means that any program aimed at enhancing school culture could increase teacher efficacy up to 1.033.

Indirect or mediation hypothesis testing was also conducted to explore and understand the role of intervening variables in the relationship between independent and dependent variables. To measure the effect or how significant it is, researchers used the mediation effect (v). According to Lachowicz et al. (2018), the mediation effect is calculated

with the statistic  $\nu$  (v), derived from the square of the path coefficient. The interpretation of  $\nu$  values follows the recommendations by Ogbeibu et al. (2021): 0.01 (low mediation effect), 0.075 (medium mediation effect), 0.175 (high mediation effect)

$$\text{Upsilon mediation size effect } (\nu) = \beta^2_{MX}\beta^2_{YM^{\circ}X^{\circ}}$$

**Legend:**

$\beta^2_{MX}$  = path coefficient influence of X on M  
 $\beta^2_{YM^{\circ}X^{\circ}}$  = path *coefficient* influence of M on Y

$$\begin{aligned} \text{Upsilon mediation size effect } (\nu) &= \beta^2_{MX}\beta^2_{YM^{\circ}X^{\circ}} \\ &= (0,805)^2 \times (-0,068)^2 \\ &= 0,003 \end{aligned}$$

**Table 9. Table of Indirect Effect Hypothesis Result**

Hypothesis	Path Coefficient	p-value	95% confidence intervals		upsilon $\nu$
			min.	max.	
H4. School Culture → Teacher Leadership → Teacher Efficacy	-0,055	0.825	-0,472	0,494	0,003

Based on the hypothesis testing results above, Hypothesis four (H4) is rejected, indicating no statistically significant negative relationship with a path coefficient of -0.055 and p-value:  $0.825 > 0.05$ . The mediation effect statistic  $\nu$  is 0.003, well below 0.01, indicating a low mediation effect of teacher leadership as a mediating variable.

**DISCUSSION**

**The Impact of School Culture on Teacher Leadership**

Significant positive influence occurs on teacher leadership from school culture with a path coefficient of 0.805 and a p-value ( $0.000 < 0.05$ ). Previous research by Öztürk (2015) found that organizational culture predicts teacher leadership. Similarly, Kara, M. (2022) demonstrated that school culture significantly predicts teacher leadership.

The school culture variable has a substantial effect on teacher leadership with an  $f^2$  value of  $1.841 > 0.35$ . A school culture emphasizing collaboration, innovation, and professional development can enhance teacher engagement in leadership roles. Teachers working in supportive environments are more motivated to take initiative and additional responsibilities. Norms and practices supporting teacher leadership development, such as mentoring programs, leadership

training, and opportunities for leadership roles, can strengthen teachers' abilities and confidence in leadership.

Shared Leadership as an indicator of school culture fosters a culture where leadership is distributed, while Leadership Opportunity as an indicator of teacher leadership provides structure and real opportunities for teachers to participate in leadership. When school principals provide leadership opportunities, it reinforces teachers' opportunities to develop leadership skills.

Respondents' perceptions of school culture at Regents Secondary School Bali are generally positive, as seen from the mean score of the three school culture variables, which is 4.0 out of 5. This suggests that the majority of respondents have a positive perception of the school culture at Regents Secondary School. A conducive school culture can foster commitment among its teachers. Peterson & Deal (2009) argue that school culture fosters a sense of community and commitment among its members, with shared norms and values as the core identity of the school. This sense of community can impact not only teachers but also all staff members and students.

A school culture committed to continuous improvement of the learning process and support among teachers to be a source of assistance and support for colleagues,

known as Professional Commitment (Olivier, 2001), aligns with the concept of teacher leadership. According to Taylor, M., Goeke, J., Klein, E., Onore, C., & Geist, K. (2011), the concept of teacher leadership encompasses three main areas of improvement for teachers: (1) personal development, (2) collaboration with colleagues, and (3) organizational improvement. Teacher leaders focus on enhancing themselves personally and

professionally, collaborating with colleagues, and contributing to school progress.

### **The Impact of Teacher Leadership on Teacher Efficacy**

Over the past two decades, teacher leadership has been one of the most studied concepts in Educational Leadership and Management Research, alongside increasing demands for accountability and calls for implementing shared leadership practices in schools. Despite various conceptualizations promising improvements in school efforts and qualitative research findings often aligning with these promises, quantitative evidence remains scarce.

This study found no statistically significant influence between teacher leadership and teacher efficacy, with a p-value of 0.820, which is greater than the threshold value of 0.05. Additionally, an  $f^2$  value of 0.002, well below 0.02, indicates that increases in teacher leadership do not significantly impact teacher efficacy. Similar findings were also revealed in previous research by Gümüş, S., Çağatay Kılınç, A., & Bellibaş, M. S. (2022), indicating that teacher leadership does not have a statistically significant influence on teacher self-efficacy. Teacher participation in leadership activities does not show a significant increase in their self-efficacy. Leithwood et al. (2008) suggest that these activities may be more focused on administrative or managerial tasks rather than direct teaching aspects.

Bandura's theory (1997) of self-efficacy emphasizes that direct experience in overcoming challenges and seeing positive outcomes from one's efforts is key to building self-efficacy. In this context, leadership activities indirectly related to teaching may not provide sufficient experience to strengthen teachers' efficacy in managing classrooms, engaging students, or implementing effective teaching strategies.

Opportunities provided by school principals for teachers to lead do not significantly enhance teacher efficacy. However, if these opportunities are not accompanied by appropriate support and training, their impact on teacher efficacy may be minimal. Opportunities without additional recognition or support may not be sufficient to influence teachers' self-confidence (Tschannen-Moran & Hoy, 2001).

Based on the path coefficient result of -0.068, when one variable increases, the likelihood of the other variable decreasing is high. This warns that when teachers share knowledge and skills in managing classrooms, engaging students, or using effective teaching strategies, they need to consider the proportion of their successes and failures. As Bandura (1997) suggests, through others' experiences, individual efficacy can increase when witnessing others' successes, but it can decrease when observing similar individuals experiencing failures. Additionally, Bandura (1997) notes that under appropriate conditions, persuasion from others can influence self-efficacy. However, if such persuasive strategies are deemed ineffective or irrelevant by colleagues, it may reduce the efficacy of social persuasion efforts.

### **The Impact of School Culture on Teacher Efficacy**

This study also examined the influence of school culture and teacher self-efficacy, showing that although there is a positive relationship, it lacks statistically significant

influence with a path coefficient of 0.484 and a p-value of 0.131, which is greater than 0.05. Similar results were found in previous research by Lan, G. S. (2014), showing a positive correlation between teacher leadership and teacher efficacy. The  $f^2$  value of 0.101 approaching 0.15 in this study indicates that the influence of school culture on teacher self-efficacy is at a moderate level. School culture was measured through three indicators: Shared Leadership, Professional Commitment, and Collegial Teachers and Learning. Teacher efficacy was measured through three indicators: Efficacy in Student Engagement, Efficacy in Classroom Management, and Efficacy in Instructional Strategies. Shared Leadership reflects a continuous process to achieve school goals through collaboration and support among school organization members, seemingly insufficient to significantly enhance teachers' efficacy in engaging students, managing classrooms, or using effective teaching strategies. While a collaborative work environment can support collective efficacy, its impact on individual efficacy may not be strong without direct experiences supporting personal teaching abilities (Bandura, 1997; Goddard et al., 2000).

Professional Commitment, involving commitment to improving professional effectiveness and providing support to colleagues, also shows a positive yet non-significant influence on teacher self-efficacy. Strong professional commitment is indeed important in creating a supportive learning environment, but it may not be sufficient to increase individuals' confidence in their ability to manage classrooms and engage students effectively without being followed by more specific and direct interventions (Tschannen-Moran & Hoy, 2001).

Collegial Teachers and Learning, describing collaborative efforts to enhance learning through joint planning, reflection, and dialogue, shows that a collegial learning culture

is important but not statistically significant in enhancing teacher self-efficacy. Although collaborative work and joint planning can create a supportive environment, increased self-efficacy requires practical experiences demonstrating success in managing classrooms and implementing effective teaching strategies (Olivier, 2001).

Bandura's theory (1997) emphasizes that individuals can learn from both direct experience (social persuasion) and vicarious experience. In the school context, a culture that promotes collaboration, collegial support, and positive interactions between teachers and administrators can serve as models influencing teachers' perceptions of their own capabilities. If the school culture sets an example of how collaboration enhances learning outcomes or how collegial support strengthens teachers' confidence, this can enhance teacher efficacy.

Vicarious experience is one of the primary ways in which self-efficacy can be influenced by school culture. If teachers see their colleagues successfully overcoming obstacles or demonstrating high efficacy in teaching tasks, this can boost their own confidence. A school culture that promotes learning from colleagues' experiences and sharing best practices can collectively strengthen teachers' efficacy.

The moderate-level positive influence of a positive school culture on teacher efficacy suggests that while important, other factors may be more determinant in shaping teacher efficacy. Factors such as strong administrative support, successful teaching experiences, and relevant professional training may have a more significant impact. According to Bandura (1997), direct experience and positive feedback are key to building self-efficacy. Therefore, while a positive school culture is an important foundation, additional focused interventions are needed to significantly enhance teacher efficacy.

### **The Impact of School Culture on Teacher Efficacy Through Teacher Leadership**

The results of this study also indicate that the indirect influence of school culture on teacher self-efficacy through teacher leadership is negative and not statistically significant, with a path coefficient of -0.055 and a p-value of 0.825 (greater than 0.05). The statistical mediation value (upsilon,  $\nu$ ) of 0.003, far below 0.01, suggests that the role of teacher leadership as a mediating variable is very low. Hypothesis one (H1), indicating a significant positive relationship between school culture and teacher leadership with a path coefficient of 0.805 and a p-value of 0.000, as well as an  $f^2$  value of 1.841, confirms that school culture indeed has a significant influence on teacher leadership. However, teacher leadership does not effectively mediate this relationship to enhance teacher efficacy.

School culture was measured through indicators such as Shared Leadership, Professional Commitment, and Collegial Teachers and Learning. Shared Leadership reflects collaborative processes and strong support among school organization members, but it appears insufficient to mediate the relationship between school culture and teacher efficacy. Professional Commitment, involving a commitment to continuously improve professional effectiveness, also does not significantly enhance efficacy through teacher leadership. Additionally, Collegial Teachers and Learning, emphasizing the importance of collegial learning and collaborative work, also fails to significantly mediate this relationship.

Although a school culture that supports shared leadership, professional commitment, and collegial learning is important in enhancing teacher leadership, the results indicate that this is not strong enough to influence teacher efficacy through.

### **CONCLUSION**

Based on the research results obtained, it can be summarized as follows:

1. There is an effect of school culture on teacher leadership at Regents Secondary School Bali.
2. There is no effect of teacher leadership on teacher efficacy at Regents Secondary School Bali.
3. There is no effect of school culture on teacher efficacy at Regents Secondary School Bali.
4. There is no effect of school culture on teacher efficacy through teacher leadership at Regents Secondary School Bali.

The researcher suggests testing the levels of conduciveness for school culture and teacher efficacy to provide more comprehensive data on their achievements in the studied subjects. Furthermore, future research should consider a longitudinal approach to track changes in teacher efficacy over time and identify potential mediator and moderator variables. Longitudinal studies can identify variables that influence the relationship between Teacher Leadership and Teacher Efficacy, including mediators that explain how the relationships occur and moderators that affect their strength or direction.

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