

The Role of Servant Leadership, School Culture and Supervision System on Teacher Performance Mediated by Teacher Competence and Moderated by Good Scholl Governance

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Abstract

The research is an observational study aiming to test a model in which the effect of servant leadership as exogenous constructs; school culture and supervision system will affect teacher performance by mediating factor: competency, with oversight moderation variable. If anything, the need for leadership consistency and governance models which described by Inceoglu et al launched differs greatly according to institution of higher education executing research (Indonesian educational context) because how various cultural norms operate in relation to one another impacts teacher efficacy. This study uses a sample that involves different types of schools within Indonesia and applies Partial Least Squares Structural Equation Modeling (PLS-SEM) for the data analysis with focus on measurement properties as well correlations among variables. Results indicate that while effective supervision and governance, servant leadership as well as organizational culture contributes significantly to teaching performance at school; the combination of these elements are needed in nurturing a high-performing education system. Importantly, provision of effective leadership and governance at all levels of the system for ensuring optimum teacher effectiveness is strongly accorded here by this research. Further research is encouraged to investigate these trends and their influence on teacher performance over time using longitudinal methods.

Keywords: *Servant Leadership, School Culture, Teacher Performance, Good Governance, Supervision Systems.*

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Introduction

Recently, the quality of education in Indonesia are rated poorly and teachers' performance have fallen way (Al-Samarrai et al. 2018). As the need for better learning results grow, schools are pushing to up-skill teachers so that they can face new educational landscapes head on (Camerlink et al. 2021). One of the main points in defining teacher governance is leadership within an educational institution, particularly servant-leadership and norm leader who serves as a needful supporter to his followers (Algarni et al. 2022; Liu and Xu 2018). Servant leadership has become popular in the field of education, and its advantages are realized as it helps build a culture where teachers feel supported and encouraged to be their very best (Eva et al. 2019; Meuser and Smallfield 2023). Culture within schools and a strong supervision system are central to this process as well Adams, Martin, and Boom (2018), Zhang et al. (2020). Christensen-Salem et al. (2021), Ghosh and Khatri (2018), Huertas-Valdivia, Gallego-Burín, and Lloréns-Montes (2019) in their research discovered that servant-leadership has a positive impact on both teachers' engagement with the leaders as well as active commitment. Still, other studies claim leadership that is linked with culture of the school and effective supervision systems can greatly influence teacher performance (Shen et al. 2020). These results underline the importance of integrational responsibility models in educational areas (Santos et al. 2020).

Although the importance of leadership and how it affects teacher performance has become increasingly emphasized, many schools in Indonesia still find difficulties to fully employ servant leadership principles (Malingkas et al. 2018). The root cause is actually really how school culture plays out with a given leadership style and management system that often do not sync (Martin 2019; Shah et al. 2020). The focus on classrooms ignores the fact that teachers just go where they were hired but in doing so it becomes easy to overlook actual teacher support leading to personalized performance and student outcomes (Espinoza et al. 2018). Indeed, despite some work Hallinger (2011), Hallinger and Lu (2014), Leithwood, Tomlinson, and Genge (1996), pointing to ways in which leadership and school culture enhance the learning experience for students, other research suggests that there remain profound challenges. Over-reliance on a haphazard approach to professional development also undermines the sustainability of improvements in teacher quality because resources are not organized and governance structures remain too weak (Taylor et al. 2011). The lack of consistency on expectations, cultural norms and supervision in schools can inadvertently erode the supports intended by servant leadership that help sustain high teacher performance (Fatima, Desouza, and Dawson 2020; Florek-Paszowska and Hoyos-Vallejo 2023; Kellerman and Webster 2001; Vogus et al. 2021). This issue needs to inform a more nuanced understanding of the interaction between these variables, and any moderators or mediators that may take effect in an Indonesian context teacher competency; governance structures as indicated by recent work within education studies (Day, Gronn, and Salas 2004; Salas et al. 2008).

This study draws on servant leadership theory, a model most often found in the educational leadership literature (Liden et al. 2015; Mittal and Dorfman 2012). Servant leadership is defined by the altruistic motive of leader to serve others first, fostering culture such as trust, engineering and development (Canavesi and Minelli 2022; Donia et al. 2016; Grisaffe, VanMeter, and Chonko 2016). This theory highlights the need for teachers to have benevolent leaders who care more about them than themselves and a space in which they can grow (Cheng and Szeto 2016). Together with the theory of organizational culture that has proposed a supportive and cooperative school environment can appeal to commitment from teachers, it is believed servant leadership provides an effective lens as well on how different type of leadership influence teacher work satisfaction (Abbas, Ekowati, and Suhariadi 2021; Bryman 2004; Kheybari et al. 2024). Also, the supervision system which will ensure accountability and continuous professional growth as also pointed out (Aziz et al. 2015; Bailey et al. 2016; Carpenter, Webb, and Bostock 2013; Elliott 1990; Geldenhuis and Oosthuizen 2015). These theories are being integrated to account for how leadership and school environment combine in shaping teacher outcomes (Cheng and Szeto 2016; Elliott 1990; Taylor et al. 2011).

Previous findings on leadership, school culture and the role of supervision in education research had different perspectives of the foundations, therefore, it is necessary to explore further, such as referring to the Indonesian site ideas (Arifin et al. 2018; Werang et al. 2023). Servant leadership and teacher performance Most of the previous studies found evidence of a positive relationship between servant leadership and teacher performance (Dami et al. 2022; Ghalavı and Nastiezaie 2020). Bauer et al. (2019), Chiniara and Bentein (2016), concluded that servant leadership styles are likely to improve teachers' job engagement, satisfaction and hence classroom performance. In an examination of the behaviour of school principals, ANTONIO et al. (2021) found that in schools with a stronger culture of servant leadership, there were higher levels of collaboration and innovation between teachers. The findings suggest a link between servant leadership and the creation of an effective educational context including learning environments that supports teacher growth, which can ultimately improve student achievement (Chiniara and Bentein 2016; Hsiao, Lee, and Chen 2015).

The most obvious example of this comes from a study Abbas et al. (2022), showing that servant leadership did not lead to the expected improvements regarding teacher performance in certain educational contexts, due mainly because of an incongruence between how leaders were leading and what was taking place at school. This discrepancy implies that without favorable school culture and the strong supervision system, it is not enough to have only servant leadership (SCHWARZ et al. 2016; Winston and Fields 2015; Zhang et al. 2021). Eva et al. (2019) contended that schools with poor governance are mostly not able to appropriately use servant leadership principles which subsequently means teacher performance is unlikely to improve. Moreover, the supervision system is crucially relevant as a moderator in this relationship between leadership and teacher performance. Härkki et al. (2021), is described as a continuous feedback loop which assists teachers with fine-tuning their craft as well meeting needs of varied educational inquiries. But in schools with inconsistent or poorly articulated rules for monitoring, teachers may be left to flounder on their own. To that end, the implementation of a strong supervision system is key to make servant-leadership and school culture manifest in improving teacher effectiveness (McKinnon, Danaia, and Deehan 2017). This study is novel because of its attention to teacher competence as a mediator and good school governance as the moderator (Bellibaş, Kılınc, and Polatcan 2021). Although previous research has shown that leadership, culture and supervision have direct effects on teacher performance the relationship between these variables is mediated by honest competence which was not previously studied in a broader context (Chamberlin 2000). (Borko and Mayfield 1995; Van Maele and Van Houtte 2012), both leadership and supervision significantly influence teacher competence but are insufficient to explain how teachers respond to these influences. When we consider that leadership and supervision effects on performance are probably larger when the professionals being led and supervised have high levels of competence, it is easy to realise why they might be less prominent in schools (Carpenter et al. 2013; Kemmis et al. 2014). Secondly, the role of school governance as a moderating variable in this study is also complicates its outcome. Effective governance structures ensure that leadership initiatives are carried out and there is accountability for performance at the teacher level. Schools with effective governance systems are likely to maintain teacher performance changes over the long term by providing a level of coherence that protects teachers who engage in challenging work (Cosner and Jones 2016; Louis 2007; Louis and Smith 1991). But if governance is limited or haphazard, leadership actions may falter and produce only partial results (Forrester, Mass, and Ryan 1976; Peletz et al. 2018). In this sense, the study seeks to address a void in literature on servant leadership by exploring how it combines with other school level components (school culture, supervision system teacher competence and governance) towards enhancing teachers' performance.

The aim of this observational study is to determine how much servant leadership, school culture and supervisory systems affect teacher performance through mediation by teacher competencies (mediating role) with the moderating variable good governance in schools. Using the Indonesian educational context of school leadership, this research explores how empowering and restrictive strategies are practiced in different cultural norms, domestic governance structures to improve teacher effectiveness. It also aims to determine where there are institutional leadership practices and governance models that likely stand in the way of improved teacher performance, as well as propose concrete ways these elements should be realigned to produce a positive high-performing learning environment.

Literature Review

Theory Research

This study is shaped by several theoretical frameworks as it examines the relations among leadership, school culture, and supervision systems of teacher competency and performance. Transformational Leadership The primary theoretical basis of this research is transformational theory from the leadership and motivation literature; it underscores a leader's responsibility in inspiring and motivating followers to higher degrees of performance or commitment (Bass literacy develops engagement). In an educational sense, it means that situational or transformational leadership as well as more directly servitude such develops a climate which helps teachers strive to be their best by supporting them on both socio and professional level (Du Plessis 2020). Furthermore, organizations culture theory is key when tackling the impact that school cultures have in teacher development (Tierney 1988). All organizations have an organisational culture which is a sharing of perceptions, beliefs and values based in an organization that shapes the behaviour of people (Ertoşun and Adiguzel 2018). Tschannen-Moran and Gareis (2015), in schools, a positive school culture can lead toward fostering collaboration among teachers as build trust levels that in turn makes the level of commitment strong which ultimately results their performance. It is also tightly integrated with supervision theory due to effective supervision practices that contribute towards the growth and performance of teachers (Tschannen-Moran and Gareis 2015). The combination of these theories contributes to an enlightening perspective on the respective influence some variation in leadership, culture, and supervision has over teacher performance.

Teacher Performance (TPE)

Teacher performance (TPE) is an essential part of the educational process, and it has been defined as a measure that describes how effectively teachers fulfill their duties to lead students towards accomplishment during instruction phases so students can achieve prominent results. Many aspects are related to TPE, for example teacher competences, motivation or the help from school leadership and culture. Carroll et al. (2021), Gettinger and Walter (2012) key components of effective instructional strategies are: having clear learning goals, promoting active engagement and providing a supportive classroom environment. Studies have clearly shown that teacher effectiveness is one of the largest factors in driving student performance outcome (Klassen and Tze 2014; Seidel and Shavelson 2007). Thus, as noted in the results of a study Duncombe and Yinger (2000); Lee (2018), which found that high-performance standards among teachers have an especially large influence on student performance. In addition, teachers are not static in performance; through professional development programs and mentoring they can grow (Kemmis et al. 2014). When teacher performance is observed in the context of Indonesia, it becomes more important than ever as this developing nation hopes to build a better educational system despite several challenges that could dampen their noble intentions-resources constraints and differing competencies among teachers (Rakhmat 2020). Educational institutions can be more efficient in addressing student needs and enhancing overall educational outcomes when they invest resources to improve teacher performance through leadership, culture, supervision (Dinham 2005; Hennig et al. 2023).

The Relationship Between Servant Leadership (SLP) and Teacher Performance (TPE)

Servant leadership (SLP) has come to be seen as one of the most influential styles in educational organisations. Servant leadership was first expressed as a philosophy Fields, Thompson, and Hawkins (2015), Ng and Koh (2010), Rachmawati and Lantu (2014), where he defined it to the leader focusing on serving before leading. Across the field of education, servant leaders naturally place teachers first by creating a trusting and collaborative environment that supports their growth (Eva et al. 2019; Ng and Koh 2010). We learned that SLP leads to better teacher performance, encouraging the staff returns and commits with high job satisfaction, involvement at in-service training. Eva et al. (2019), Paarlberg and Lavigna (2010), Sendjaya and Pekerti (2010), also establishes a robust positive relationship between SLP and TPE such that educators who perceive their leadership as servant are motivated by the transformational nature of these leaders support which is translated in improved instructional practices. Separately, work from Jaramillo et al. Servant leadership builds a positive school culture that impacts teacher performance (2021).

The Relationship Between School Culture (SCE) On Teacher Performance (TPE)

A supportive and collaborative school culture (SCE) is a strong predictor of vibrant schools performance as it enhances trust, shared belief system that leads to effective teachers (Hogan and Coote 2014; Zakaria and Abdul-Talib 2010). Leithwood and Jantzi (1990), Leithwood et al. (1996), a study by Hargreaves & Fullan (2012) indicates that Culture in the Spirit of 1996 is what promotes engagement and growth opportunities so central to high-performing classrooms. Naturally, as suggested above a culture of learning improvement and growth might boost teacher motivation more than any other factor. Deal (2010) stated that toxic school cultures can actually impede teacher effectiveness and student achievement. On the basis of these, we state our second hypothesis.

The Relationship Between Supervision System (SPVS) On Teacher Performance (TPE)

The supervision system SPVS at the school is very important for the sustainability of teacher performance development. Proper oversight is visiting classes routinely, giving feedback that is commending and purposeful, along with continuous opportunities for professional growth to teachers so they can enhance their pedagogical practices (Glickman et al., 2018). As a result, good management promotes the professionalism of staff through an ethos of responsibility and development (Danielson 2007). Basom Frase (2004), Perera, Granziera, and McIlveen (2018), Runhaar (2013), Sahito and Vaisanen (2020), teacher satisfaction, engagement in the work life and classroom performance is directly affected by successful supervision practices. Darling-Hammond (2000) lends additional support to this perspective, noting that strong instructional supervision is the linchpin for creating teacher capacity and supporting effective teaching. Thus we theorize the following hypotheses:

The Relationship Between Teacher Competence (TCE) On Teacher Performance (TPE)

Teacher Competence (TCE) represents the knowledge, skills and experiences of educators that have a direct impact on their effectiveness in teaching contexts. It underpins which competent teachers best engage students, differentiate instruction and assess learning (Smit and Humpert 2012). There is considerable conclusive evidence that the more competent teachers are, the more students progress and improve their performance (Klassen et al. 2011; Westley 2011). Furthermore, in the Indonesian context, the strengthening of teacher competence is crucial as many educators have insufficient training and professional development (Loeneto et al. 2022). School success and workforce productivity could be enhanced if teacher competence were developed through investment in great teachers (Cirocki and Farrell 2019). This is why we postulated the fourth hypothesis:

H1. Servant Leadership (SLP) On Teacher Performance (TPE)

H2. School Culture (SCE) On Teacher Performance (TPE)

H3. Supervision System (SPVS) On Teacher Performance (TPE)

H4. Teacher Competence (TCE) On Teacher Performance (TPE)

Development of Hypothesis Model Intervening (N) Teacher Competence (TCE)

Teacher competence (TCE) directly impacts teaching performance, which is then correlated with student achievement. In fact, it is vital to know the mediating role of teacher competency in the relationships amongst leadership styles and organizational factors work for enhancing teacher productivity within educational setting. The next section addresses each hypothesis in light of extant literature.

Servant leadership (SLP) developed Greenleaf (1992), and an extensively studied effective style of leading that uses power for the common good of employees. At the microlevel, I argue that servant leadership can improve conditions for teachers in this era of neoliberalism because it promotes collaboration, trustworthiness and ethical behavior—all essential components to Teachers Inside Culture TIC (de Bettignies 2013; Castner, Schneider, and Henderson 2017). Previous research has implied that servant leaders develop competence among teachers through professional growth and offering resources, support to improve teacher capability (van Dierendonck and Nuijten 2011; Sendjaya et al. 2019). Similarly, teacher performance is also affected by a minima variable that is believed to be the competence of individual teachers in this case as indicated from competences affect performance satisfaction which has been identified between two variables described. Research has shown that the competencies within teachers contribute to them employing innovative teaching methods better, managing classrooms well and keeping students more engaged (Jordan, Schwartz, and McGhie-Richmond 2009; Smith et al. 2005). The role of teacher competence contributes to the improvement in teaching practice using proper pedagogical strategies and increases student learning outcomes (Harris and Sass 2011; Vescio, Ross, and Adams 2008).

School Culture & Environment (SCE): This means the various standards, values and practices that exist in an educational institution. Teacher competence is a multidimensional quality, and to understand its complexity we can consider thematically related factors that define high quality schools (Aslan and Reigeluth 2013), where work on how the culture affects learning in school goes together perfectly with ideas about professional collaboration. Professional development goals, mentorship opportunities and the school-wide vision for teacher success enhance competencies of teachers in schools with healthy cultures (Fullan and Watson 2000). There are many studies showing the intervening role of teacher competence in linking school culture to the performance achievement for teachers (Hallinger and Heck 1998; Kutsyuruba, Klinger, and Hussain 2015; Nassir and Benoliel 2023). Instruction is guided in the context of complex problems, and skills are developed through practice supported by teacher leaders who serve as campaign coaches (Curry et al. 2008; Darling-Hammond and Snyder 2000; Dyer et al. 2004). As teachers become more competent, they perform better because that has increased in capacity to respond the needs of all kind of learners and improve their profession according to appropriate educational policy development (Hallinger 2011). Thus, the relationship between school culture and teacher efficiency is greatly magnified through mediator effect of teacher competency (Leithwood and Jantzi 1990; Leithwood et al. 1996).

At the school level, support supervision systems (SPVS) are responsible for monitoring and assessment of teacher performance. Good supervision also includes the opportunity for feedback, learning additional or new job skills and that meets minimum standards set in place to guarantee that all students receive a quality education (Glickman 1981). Research has proven that supervision systems which focus on developmental and not punishment type measures can improve teacher competency immensely (Martinez, Taut, and Schaaf 2016; Webster-Stratton, Reid, and Hammond 2001; Zepeda et al. 2019). The mediating effect of teacher competence on the relationships between supervision systems and performance is important (Cai and Tang 2021, 2022). This enables teachers to pinpoint improvement areas through regular supervision and feedback, leading to targeted teacher development efforts. In particular, this design allows candidates to gain skills that are immediately relevant for their teaching effectiveness (Danielson et al. 2021). Through teacher enhancement, teachers can become more successful in delivering effective instruction which results to better student learning and accomplishments so that the quality of teaching as a whole might strengthen (Zhu et al. 2023). So the quality of supervision is related to teacher performance through teacher competence.

H5 The Role of Teacher Competence (TCE) Mediating Servant Leadership (SLP) on Teacher Performance (TPE)

H6. The Role of Teacher Competence (TCE) Mediating School Culture (SCE) On Teacher Performance (TPE)

H7. The Role of Teacher Competence (TCE) Mediating Supervision System (SPVS) On Teacher Performance (TPE)

Development of Hypothesis Model Moderating (M) Good School Governance (GSGE)

The Good School Governance (GSGE) is the real implementation of effective resource utilization within educational institutions with keystones accountability and transparency. GSGE can act as a moderating variable, by means of improving the direct influence effects on teacher performance via leadership styles school culture working conditions (Aslan and Reigeluth 2013). Supported by credible literature, this section then discusses how GSGE moderates these relationships.

At the heart of servant leadership (SLP) is empowering and enabling teachers, nurturing a culture conducive to robust collaboration, trustful working relationships and ethically upright practices (Duren 2017). Yet the impact that servant leadership has on schools largely depends upon school leaders and governance (Greenleaf 1992; Rachmawati and Lantu 2014). Servant Leadership Principles are enshrined in the Good School Governance (GSGE) principles that provide underpinnings to its entire policies and processes governing transparency and accountability for a better result (Gregory Stone, Russell, and Patterson 2004; MacBeath 2007; Silva and Pinto 2023). With well built governance, servant leaders are better able to carry out their vision through defined decision making processes and resource allocation strategies as well as teacher monitoring systems (Taylor et al. 2007). Previous research suggests that the beneficial effects of servant leadership on teachers' performance are expected to be enhanced when organizations have strong governance structures, which can in turn provide adequate support and resources for their staff (Ghalavi and Nastezaie 2020; Lapointe and Vandenberghe 2018). Therefore, GSGE plays a significant reinforcing role in the relationship between servant leadership and teacher performance.

School culture refers to the beliefs, values and practices that prevail in a school. A healthy school culture engenders collaboration, staff development and a collective focus on student achievement (Fullan and Watson 2000). Yet, the effects of school culture on teacher performance may differ according to governance systems. The triangle of Good School Governance (GSGE) aligns values with policies for the school and from aspiration to operations in culture. Longitudinal studies have found that school culture has a greater impact on teacher performance in schools with strong governance, as such institutions effectively anchor loose organizational policy to cultural values (Burch 2007; Okilwa and Barnett 2017). In contrast, governance can supply various structures and resources for continuous teacher learning so that the school culture of capacity development is capable of leading to sustainable improvements in teachers work (Leithwood et al. 2023; Leithwood and Sun 2018).

Supervision systems play an important in assessment and improvement of teacher performance. Yet when drawn up and operating without effective governance, the very supervision systems can end-up in being one of overbearing inconsistencies which actually render their ineffectiveness (HUMPHREY and PEASE 1992). GSGE will help us monitor fairly and transparently but with an eye on teacher growth, not just performance. GSGE moderates how supervision systems and teacher performance feedback become positive, constructive feedback that is also consistent with the larger institutional objectives (Glickman 1981). This conformity makes them feel supported by their education and encouragement to increase productivity. Governance assists in monitoring to ensure that the supervising processes become not only efficacious, but they lead towards a context where teachers feel developed and grow (Fullan and Watson 2000).

Teacher competence (TCE) is one of the main determinants for teacher performance covering what teachers should have in knowledge, skills and attitudes as professional practices to be competent adapting Danielson et al. 2011). With-school governance is an important influence on the development and utilization of teacher competence. Module 3 competition and governance_focusing on policies and frameworks that help teachers get the professional development they need Module A key to GSGE is creating conditions under which systems can ensure not merely licensing, or even certification, but continued levels of support for capable people in doing their jobs well. There is also evidence to show that the positive relationship between teacher competence and performance gets stronger with strong governance, leading teachers receive what they want or need in their ongoing development (Leithwood and Jantzi 1990; Leithwood and Sun 2018). In addition, governance can support the integration of teacher competencies with its specific goals so that educators provide their students and school really need.

The above findings suggest the important moderating role of Good School Governance (GSGE) in teacher performance relationships with leadership and organizational factors. GSGE clarifies the impact of servant leadership, as well as school culture and teacher competence on teacher performance through decision feedback filtering based upon a resource allocation and accountability framework. Teacher performance is likely to increase in the presence of good governance as it is easier for sound leadership and organizational initiatives to be implemented with a reliable system. These findings are consonant with extant theories of school leadership, governance and professional development which suggest that stringent governance is a sine qua non for educational excellence.

H8. The Role of Good Scholl Governance (GSGE) Moderating Servant Leadership (SLP) On Teacher Performance (TPE)

H9. The Role of Good Scholl Governance (GSGE) Moderating School Culture (SCE) On Teacher Performance (TPE)

H10. The Role of Good Scholl Governance (GSGE) Moderating Supervision System (SPVS) On Teacher Performance (TPE)

H11. The Role of Good Scholl Governance (GSGE) Moderating Teacher Competence (TCE) On Teacher Performance (TPE).

Development Framework Model Type

The Development Framework Model Type serves as a foundational structure for understanding and analyzing the interactions between various factors influencing teacher performance in educational settings. This model integrates several key elements, including leadership styles, school culture, supervision systems, teacher competence, and the moderating effects of Good School Governance (GSGE).

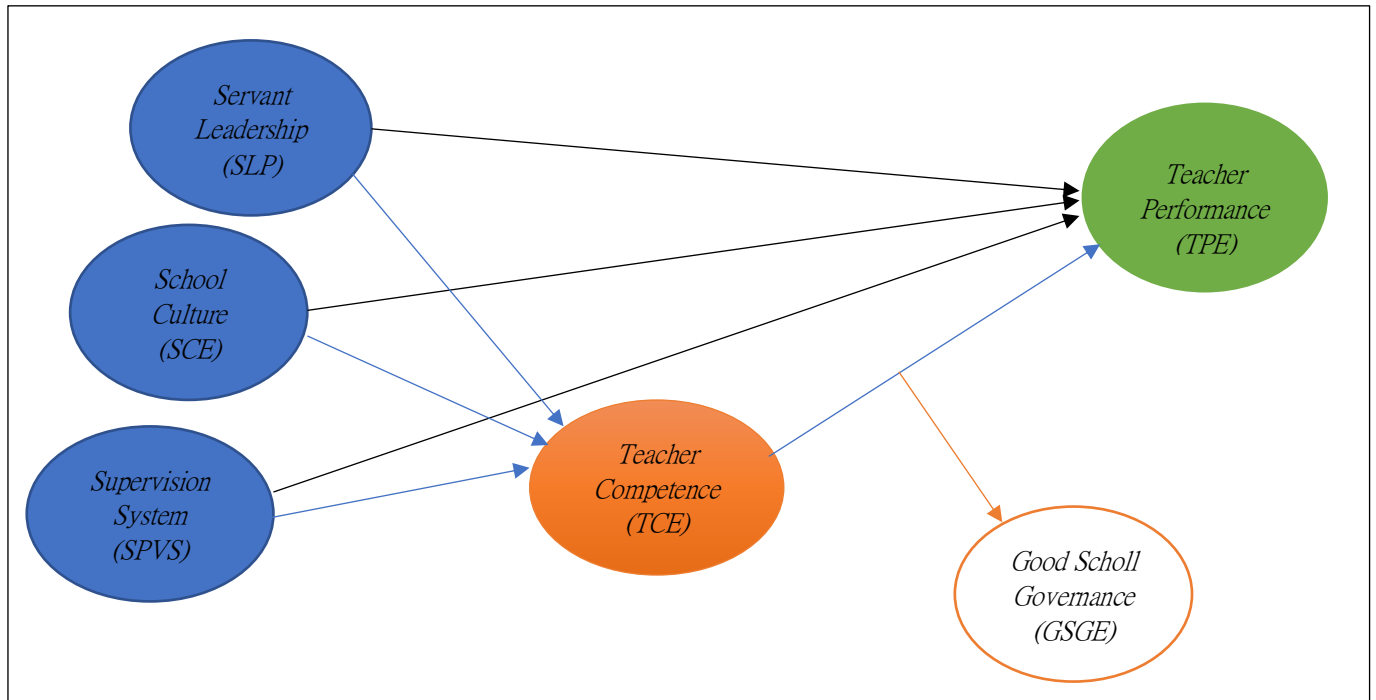


Figure 1: Development Framework Model Type

Figure 1 illustrates the interconnectedness of the various components of the Type Development Framework model and how each element influences teacher performance (TPE). This diagram highlights the mediating role of teacher competence (TCE) and the moderating role of good school governance (GSGE) in improving educational outcomes.

Y. Teacher Performance

H1. Servant Leadership (SLP) On Teacher Performance (TPE)

H2. School Culture (SCE) On Teacher Performance (TPE)

H3. Supervision System (SPVS) On Teacher Performance (TPE)

H4. Teacher Competence (TCE) On Teacher Performance (TPE)

H5 The Role of Teacher Competence (TCE) Mediating Servant Leadership (SLP) on Teacher Performance (TPE)

H6. The Role of Teacher Competence (TCE) Mediating School Culture (SCE) On Teacher Performance (TPE)

H7. The Role of Teacher Competence (TCE) Mediating Supervision System (SPVS) On Teacher Performance (TPE)

H8. The Role of Good Scholl Governance (GSGE) Moderating Servant Leadership (SLP) on Teacher Performance (TPE)

H9. The Role of Good Scholl Governance (GSGE) Moderating School Culture (SCE) On Teacher Performance (TPE)

H10. The Role of Good Scholl Governance (GSGE) Moderating Supervision System (SPVS) On Teacher Performance (TPE)

H11. The Role of Good Scholl Governance (GSGE) Moderating Teacher Competence (TCE) On Teacher Performance (TPE).

Method Rresearch

Research Object

The object of this research is teachers in Indonesian state schools. This intends to explore the influence of leadership style, school culture, supervision model and teacher competency on teacher performance in Indonesia. This setting gives a unique base to thinking about the drivers of educational results in an incredibly large and diverse education system (Blumenfeld et al. 2000; Resnick and Resnick 1992). This study works by starting from the teachers as its primary subject when is interested in national scale insights, thus highlighting leadership and governance influence towards teacher performance landscape (Bush and Glover 2016; Dimmock and Yong Tan 2013).

Population and Sampling

The population for this study is all teachers of several schools in Indonesia. Beyond these figures, the study seeks at least 755 teacher participants with a range of institutional types including public and private schools to adequately represent among its population. While our sampling technique is purposive, the aim being to select participants who have been in their teaching roles at least three years and as such do not lack relevant experience within leadership school culture supervision context (Leaf and Odhiambo 2017; Naicker, Chikoko, and Mthiyane 2013; Nzabonimpa 2015; Pashiardis et al. 2011). This methodology has facilitated the acquisition verifiable evidence which permits generalization of findings to tangible situations of like nature and is important. Purposive sampling, in agreement to (Andi Kusumawati 2018; Dwi Amperawati, Hartoko, and Dwianto 2024; Kantus, Probohudono, and Dwianto 2025), enable the researchers select respondents who could provide most insightful details relevant with respect of research problem. This way it can be used in academic research, which will look at particular professional experiences.

Data Collection Process

In order to ensure the course completion and exclusion criteria were NOT misunderstood, we decided that all teachers sampled must complete a questionnaire. These questionnaires will be developed to quantify many things due with leadership, school culture, supervisory systems and teacher competency and performance (Dwianto 2024). The study seeks to include at least 755 survey responses in order to allow for meaningful statistical analysis and results that can be reasonably extrapolated. As to maximize the participation and considering geographical circumstances of Indonesian people coming from various region, online questionnaire will be disseminated for those who have easy access in internet place. Hypothesis underlying Supporting Theory: (Cohen and Baruch 2022; Huhmann et al. 2018) argue that the combination of online and face to face data collection methods help increase response rates along with also allows for more representation in educational research at a wider scale.

Instrumentation for Data: Questionnaires

Structured questionnaires are planned to be used as the main data collection instrument in this research. The questionnaire items will be created using existing scales and literature in leadership, school culture, supervision and teacher competence (Liden et al. 2015). The scales will be a 5-point Likert type, containing "1 = Strongly Disagree" to "5= strongly Agree". The Likert scale can be easily administered in educational research to measure the strength of respondents' attitudes and perceptions (Likert, 1932).

Table 1. Instrumentation for Variables

Variable	Definition	Measurement	Scale
Servant Leadership (SLP)	The degree to which school leaders prioritize serving teachers and meeting their professional needs.	8 items	Likert Scale (1-5)
School Culture (SCE)	The collective norms, values, and practices that shape the school environment.	10 items	Likert Scale (1-5)
Supervision System (SPVS)	The effectiveness of the school's supervisory practices in fostering teacher development.	7 items	Likert Scale (1-5)
Teacher Competence (TCE)	The teachers' knowledge, skills, and abilities relevant to their instructional roles.	10 items	Likert Scale (1-5)
Teacher Performance (TPE)	The overall effectiveness of teachers in delivering educational outcomes and improving student achievement.	12 items	Likert Scale (1-5)
Good School Governance (GSGE)	The practices and policies that ensure accountability, transparency and efficiency in the management of the school.	8 items	Likert Scale (1-5)

Source of data; processed by researchers observation 2024

Sample Characteristics

We selected a total of 755 teachers from different schools across Indonesia to better represent teacher characteristics such as gender, teaching experience and type of school. 46.4% were male (n=350) and the rest female, which is approximately half of each category observed among these participants: 53.6% gender distribution (%), n=405). Teaching experience ranged from 0 to over 25 years in the following categories: no teaching experience (n=34), 1-3 between n=150, 4-5 years average number of years with it is at an average +7 more estimated for beetCSS department(300)582+15.01%! More than three quarters (76%-82%) used whole class teaching for most or all pages, while more than half provided worksheets/workbooks. Minimal assessment feedback from students directly after presentations was provided by very few teachers in either the traditional classroom (pTo this there were some new results. 05). In addition, 63.6% of teachers worked in public schools (n=480) and the remainder taught in private institutions with unspecified percentages [Table-3]. Thus, this diverse composition provides a broad overview of the determinants of quality observed among teachers from different educational settings and can be generalised to different subsets of the teaching workforce.

Table 2. Demographic Characteristics of the Sample

Characteristic	Category	Frequency	Percentage (%)
Gender	Male	350	46.4
	Female	405	53.6
Teaching Experience	1-3 years	150	19.9
	4-6 years	300	39.7
	7+ years	305	40.4
School Type	Public	480	63.6
	Private	275	36.4

Source of data; processed by researchers observation 2024

Data Analysis Method

The data are analyzed in the SmartPLS software, which relies on PLS-SEM for this study. In the analysis, two-stage is done: 1) The Outer Model and 2) The Inner Model. The Outer Model test the measurement property of each variable served on SLP, School Culture, SPVS, TCE and TPE. Reliability Relations Composite (CR), Average Variance Extraction(AVE) and Factor Loadings This means that several aspects of the internal model are very likely to be transported by these same loadings onto exogenous stand in measures Thus, just a few iterations into CFA or following measurement error modifications (for instance), there you go trying to correlate latent variables every which way For example: revised governance effect on teacher autonomy-performance relationship is frog leaping longitudinally SmartPLS would be beneficial in this respect as it can better handle complex models with small to medium sample sizes and non-normal data (Hair et al., 2017). This empirical analysis offers important clues as to the factors that underpin teacher performance in Indonesian schools, namely leadership, culture and supervision, while linked with competencies.

Ethical Considerations

For this research, the primary ethical considerations are protecting and respecting all participants. Legally, the research process consists of informed consent form participants and assuring their voluntary participation (with confidentiality) based on one existing ethical principle. Anonymising (all) data, in order to keep the subjects from being made public and causing harm or misusing others (Andi Kusumawati 2018), serves this basic ethical principle. Moreover, the study was conducted by following ethical principles as laid down in British Educational Research Association (BERA 2018), which means that transparency about purposes and processes should be put into place; no coercion or deception during recruiting procedures; fair treatment to let people's privacy /autonomy being respected; and finally giving information regarding their rights of withdrawal at any stage even after data collection/data analysis (Christ and V Helliar 2021). Besides reinforcing findings, ethical research may help establish trust between the researcher and participants a crucial aspect of educational studies in which researchers delve into sensitive issues or personal experiences (Robinson & Lai 2019). Doing so is also not just in the spirit of continuing high-quality work, but more importantly meets a broader set of expectations within academia for ethical lab techniques.

Result

Variable Description Using the Three Box Method

In this study variables are described using a 5 - point scale where each respondent's index score is expressed by:

$$\text{Index Value} = (\%F1 \times 1) + (\%F2 \times 2) + (\%F3 \times 3) + (\%F4 \times 4) + (\%F5 \times 5) \dots \dots \dots (1)$$

For the Three Box Method, the highest height of the score range is equal to $(\%F5) / 5 =$ maximum score: 800, and for the lowest limit, it will be $(\%F1) / 5 =$ minimum score: 151. This then leads us to a three-tiered system from low (151-352), moderate (353–554), and high (555–755) since the distribution of scores is between 150. It provides a more systematic interpretation of perceptions regarding the measured variables by categorizing them. Martinez-Garcia, Hernandez-Lara (2021) asserts that quantitative educational research frequently employs the Three Box Method, providing a comprehensive and systematic snapshot of respondents' ratings.

*Sevant Leadership Variable Description***Table 3.** Variable Description of Sevant Leadership

Indikator	Responses					Total	Indeks	Category
	STS	TS	N	S	SS			
SLP.1	-	204 (408)	108 (324)	239 (956)	204 (1020)	755 (2708)	541,6	Medium
SLP.2	-	188 (376)	129 (360)	225 (900)	222 (1110)	755 (2746)	549,2	Medium
SLP.3	-	175 (350)	137 (411)	218 (872)	225 (1125)	755 (2758)	551,6	Medium
SLP.4	-	172 (344)	120 (360)	233 (932)	230 (1150)	755 (2786)	557,2	High
SLP.5	-	175 (350)	131 (393)	237 (948)	212 (1060)	775 (2751)	550,2	Medium
SLP.6	-	185 (370)	125 (375)	220 (880)	225 (1125)	755 (2750)	550,0	Medium
SLP.7	-	201 (402)	120 (360)	221 (884)	213 (1065)	755 (2711)	542,2	Medium
SLP.8	-	183 (366)	128 (384)	216 (864)	228 (1140)	755 (2754)	550,8	Medium
Index Average							549,1	Medium

*Description of School Culture Variables***Table 4.** Description of School Culture Variables

The indicator	Responses					Total	Indeks	Category
	STS	TS	N	S	SS			
SCE.1	-	184 (368)	134 (402)	239 (956)	198 (990)	755 (2716)	543,2	Medium
SCE.2	-	198 (396)	131 (393)	220 (880)	206 (1030)	755 (2699)	539,8	Medium
SCE.3	-	194 (388)	119 (357)	240 (960)	202 (1010)	755 (2715)	543,0	Medium
SCE.4	-	207 (414)	117 (351)	227 (908)	204 (1020)	755 (2693)	538,6	Medium
SCE.5	-	198 (398)	130 (390)	226 (904)	201 (1005)	755 (2695)	539,0	Medium
SCE.6	-	204 (408)	122 (366)	232 (928)	197 (985)	755 (2687)	537,4	Medium
SCE.7	-	208 (416)	116 (348)	226 (904)	205 (1025)	755 (2693)	538,6	Medium
SCE.8	-	186 (372)	123 (369)	242 (968)	204 (1020)	755 (2729)	545,8	Medium
SCE.9	-	184 (368)	121 (363)	240 (960)	210 (1050)	755 (2741)	548,2	Medium
SCE.10	-	188 (376)	126 (378)	226 (904)	215 (1075)	755 (2733)	546,6	Medium
Average Index							542,0	Medium

*Description of Supervision System Variables***Table 5.** Description of Supervision System Variables

The indicator	Responses					Total	Indeks	Category
	STS	TS	N	S	SS			
SCE.1	-	205 (410)	132 (396)	220 (880)	198 (990)	755 (2676)	535,2	Medium
SCE.2	-	205 (410)	135 (405)	213 (852)	202 (1010)	755 (2677)	535,4	Medium
SCE.3	-	201 (402)	144 (432)	221 (884)	189 (945)	755 (2663)	532,6	Medium
SCE.4	-	212 (424)	118 (354)	231 (924)	194 (970)	755 (2672)	534,4	Medium
SCE.5	-	201 (402)	132 (396)	212 (848)	210 (1050)	755 (2696)	539,2	Medium
SCE.6	-	214 (428)	111 (333)	210 (840)	220 (1100)	755 (2701)	540,2	Medium
SCE.7	-	215 (430)	129 (387)	225 (900)	186 (930)	755 (2647)	529,4	Medium
Average Index							535,2	Medium

*Description of Teacher Competence Variable***Tabel 6.** Deskripsi Variable Teacher Competence

Indikator	Response					Total	Indeks	Category
	STS	TS	N	S	SS			
TCE.1	-	186 (372)	129 (387)	228 (912)	212 (1060)	755 (2731)	546,2	Medium
TCE.2	-	196 (392)	140 (420)	217 (868)	202 (1010)	755 (2690)	538,0	Medium
TCE.3	-	205 (410)	123 (369)	204 (816)	223 (1115)	755 (2710)	542,0	Medium
TCE.4	-	191 (382)	129 (387)	234 (936)	201 (1005)	755 (2710)	542,0	Medium
TCE.5	-	190 (380)	139 (417)	212 (848)	214 (1070)	755 (2715)	543,0	Medium
TCE.6	-	208 (416)	118 (354)	223 (892)	206 (892)	755 (2692)	538,4	Medium
TCE.7	-	209 (418)	112 (336)	225 (900)	209 (1045)	755 (2699)	539,8	Medium
TCE.8	-	187 (374)	131 (393)	217 (868)	220 (1100)	755 (2735)	547,0	Medium
TCE.9	-	194 (388)	134 (402)	227 (908)	200 (1000)	755 (2698)	539,6	Medium
Average Index							541,8	Medium

*Description of Good School Governance Variables***Table 7.** Description of Good School Governance Variables

Indikator	Tanggapan					Total	Indeks	Kategori
	STS	TS	N	S	SS			
GSGE.1	-	152 (304)	125 (375)	295 (1180)	183 (915)	755 (2774)	554,8	Tinggi
GSGE.2	-	174 (348)	130 (390)	242 (968)	209 (1045)	755 (2751)	550,2	Medium
GSGE.3	-	168 (336)	147 (441)	232 (928)	208 (1040)	755 (3459)	549,0	Medium
GSGE.4	-	191 (382)	138 (414)	245 (980)	181 (905)	755 (2681)	436,2	Medium
GSGE.5	-	187 (374)	134 (402)	230 (920)	204 (1020)	755 (2716)	543,2	Medium
Average Index							546,7	Medium

*Deskripsi Variable Teacher Performance***Table 8.** Descriptive Variable Teacher Performance

Indikator	Tanggapan					Total	Indeks	Kategori
	STS	TS	N	S	SS			
TPE.1	-	157 (314)	163 (489)	267 (1068)	168 (840)	755 (2711)	542,2	Medium
TPE.2	-	177 (354)	141 (423)	261 (1044)	176 (880)	755 (2701)	540,2	Medium
TPE.3	-	159 (318)	139 (417)	286 (1144)	171 (855)	755 (2734)	546,8	Medium
TPE.4	-	173 (346)	143 (429)	253 (1012)	186 (930)	755 (2717)	543,4	Medium
TPE.5	-	154 (308)	114 (342)	307 (1228)	379 (1895)	755 (2711)	542,2	Medium
TPE.6	-	160 (320)	162 (486)	268 (1072)	165 (825)	755 (2703)	540,6	Medium
TPE.7	-	133 (266)	160 (480)	290 (1160)	172 (860)	755 (2766)	553,2	Medium
TPE.8	-	151 (302)	147 (441)	282 (1128)	175 (875)	755 (2746)	549,2	Medium
TPE.9	-	158 (316)	152 (456)	266 (1064)	179 (895)	755 (2731)	546,2	Medium
TPE.10	-	174 (348)	140 (420)	223 (892)	218 (1090)	755 (2750)	550,0	Medium
TPE.11	-	166 (332)	159 (477)	263 (1052)	167 (835)	755 (2696)	539,2	Medium
TPE.12	-	169 (338)	144 (432)	266 (1060)	177 (885)	755 (2715)	543,0	Medium
Average Index							544,7	Medium

Observation Data Analysis

The analysis of the data is a structural equation model (SEM) through partial least square approach (PLS). It is meant for multivariate regression models, and in particular cases where the model has more than one dependent/independent variable. PLS is a two-step method starting with the validation of measurement model to guarantee constructs are properly measured. Next, the inner model is explored in order to assess how strong the links between latent variables are. The two-step procedure enables a thorough inspection of both the measurement and structural model characteristics, making PLS-SEM an alternative substantive method in empirical research with focus on educational or social sciences (Hair et al. 2022).

Outer Model Test

Figure 2 Outer Model Results

To verify both the reliability and validity of our measurement model, testing using Partial Least Square (PLS) analysis was performed at outer-model level. It is actually concerned with evaluation how nicely the observed variables symbolize the latent constructs underlying them. This is done through the testing of convergent validity questions, which test whether or not a series of items correlate highly together and can be understood to measure expression in one specific way (alongside making sure that there is distinctiveness between these typically overlapping expressions), as well as discriminant validity tests, primarily structured around things like multi-trait serious analysis. Moreover, an assessment of the indicator reliability (i.e., scales) and composite reliability is essential for confirming that constructs are internally consistent. In the CFA step, high values in this model fit index are regarded as evidence that an accurate representation of measured variables is conveyed by these latent (i.e., not directly observed) attributes being studied (Hair et al. 2022).

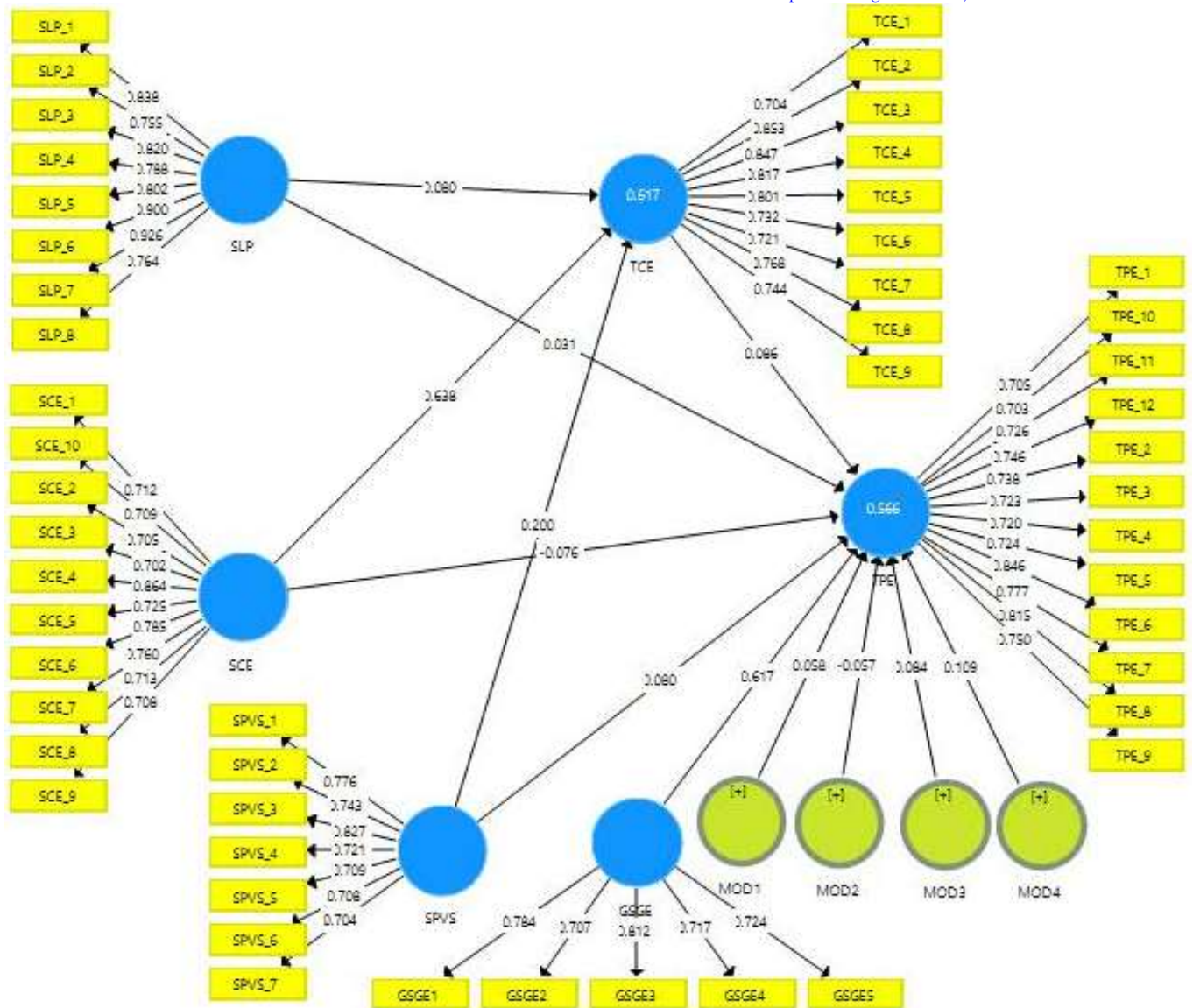


Figure 2. Outer Model Results

Validity Test for Convergent Value

Table 9. Outer Model Convergent Validity Test Results

Indicator	Construct	Outer Loading	Description
Servant Leadership	SLP_1	0.838	Valid
	SLP_2	0.755	Valid
	SLP_3	0.820	Valid
	SLP_4	0.788	Valid
	SLP_5	0.802	Valid
	SLP_6	0.900	Valid
	SLP_7	0.926	Valid
	SLP_8	0.764	Valid
School	SCE_1	0.712	Valid

Indicator	Construct	Outer Loading	Description
Culture	SCE_2	0.705	Valid
	SCE_3	0.702	Valid
	SCE_4	0.864	Valid
	SCE_5	0.725	Valid
	SCE_6	0.785	Valid
	SCE_7	0.760	Valid
	SCE_8	0.713	Valid
	SCE_9	0.708	Valid
	SCE_10	0.709	Valid
	Supervision System	SPVS_1	0.776
SPVS_2		0.743	Valid
SPVS_3		0.827	Valid
SPVS_4		0.721	Valid
SPVS_5		0.709	Valid
SPVS_6		0.708	Valid
SPVS_7		0.704	Valid
Good School Governance	GSGE1	0.784	Valid
	GSGE2	0.707	Valid
	GSGE3	0.812	Valid
	GSGE4	0.717	Valid
	GSGE5	0.724	Valid
Teacher Competence	TCE_1	0.704	Valid
	TCE_2	0.853	Valid
	TCE_3	0.847	Valid
	TCE_4	0.817	Valid
	TCE_5	0.801	Valid
	TCE_6	0.732	Valid
	TCE_7	0.721	Valid
	TCE_8	0.768	Valid
	TCE_9	0.744	Valid
Teacher Performance	TPE_1	0.705	Valid
	TPE_2	0.738	Valid
	TPE_3	0.723	Valid
	TPE_4	0.720	Valid
	TPE_5	0.724	Valid
	TPE_6	0.846	Valid
	TPE_7	0.777	Valid
	TPE_8	0.815	Valid
	TPE_9	0.750	Valid
	TPE_10	0.703	Valid
	TPE_11	0.726	Valid
	TPE_12	0.746	Valid

Indicator	Construct	Outer Loading	Description
	SLP * GSGE	0.986	Valid
	SCE * GSGE	1.001	Valid
	SPVS * GSGE	1.018	Valid
	TCE * GSGE	1.021	Valid

Test for Discriminant Validity

Table 10 presents discriminant validity test results and it shows that indicator cross-loading on different construct. Specific elements of the GSGE construct correlate highly with each other in multimodal measurement, always >0.7, thereby demonstrating good nomological validity. For example, an outer loading of 0.784 is attached to the GSGE1 construct with its own construct compared to the other constructs cross-loadings bar chart in Figure 8. Moreover, the SCE construct also has high loadings on its indicators in comparison to other constructs except TCE, SLP and SPVS and similarly with all other constructs. These results indicate the two constructs theoretically differentiable and provide evidence of discriminant validity within the model.

Table 10. Cross Loading Results

Var Indicator	GSGE	MOD1	MOD2	MOD3	MOD4	SCE	SLP	SPVS	TCE	TPE
GSGE1	0.784	0.091	0.029	0.127	0.100	0.319	0.377	0.400	0.417	0.609
GSGE2	0.707	0.053	-0.038	0.124	0.070	0.570	0.446	0.364	0.565	0.482
GSGE3	0.812	0.039	-0.057	0.066	0.041	0.478	0.312	0.384	0.399	0.542
GSGE4	0.717	0.144	0.005	0.145	0.108	0.457	0.301	0.569	0.497	0.539
GSGE5	0.724	0.136	-0.011	0.117	0.038	0.433	0.281	0.382	0.517	0.504
SCE_1	0.373	0.143	0.047	0.170	0.098	0.712	0.236	0.263	0.471	0.313
SCE_2	0.430	0.208	0.005	0.182	0.109	0.705	0.292	0.366	0.556	0.350
SCE_3	0.396	0.173	-0.007	0.109	0.033	0.702	0.227	0.283	0.512	0.252
SCE_4	0.452	0.151	-0.060	0.127	0.005	0.864	0.259	0.330	0.639	0.324
SCE_5	0.413	0.186	-0.004	0.145	0.038	0.725	0.251	0.360	0.637	0.275
SCE_6	0.441	0.114	-0.032	0.124	0.072	0.785	0.272	0.327	0.510	0.307
SCE_7	0.450	0.090	-0.036	0.108	0.014	0.760	0.250	0.338	0.525	0.312
SCE_8	0.518	0.087	-0.038	0.083	-0.005	0.713	0.191	0.279	0.482	0.315
SCE_9	0.491	0.178	-0.012	0.131	0.034	0.708	0.257	0.368	0.632	0.407
SCE_10	0.413	0.204	0.009	0.151	0.064	0.709	0.219	0.338	0.550	0.349
SLP_1	0.344	0.033	0.181	0.245	0.266	0.258	0.838	0.423	0.314	0.339
SLP_2	0.352	0.044	0.151	0.203	0.190	0.303	0.755	0.359	0.316	0.301
SLP_3	0.360	0.021	0.175	0.273	0.253	0.273	0.820	0.412	0.330	0.379
SLP_4	0.337	-0.015	0.150	0.143	0.211	0.304	0.788	0.400	0.270	0.275
SLP_5	0.369	-0.003	0.180	0.245	0.237	0.260	0.802	0.425	0.350	0.345
SLP_6	0.415	0.004	0.200	0.214	0.266	0.265	0.900	0.474	0.335	0.336
SLP_7	0.429	0.007	0.179	0.224	0.269	0.280	0.926	0.507	0.349	0.346
SLP_8	0.397	0.061	0.146	0.239	0.217	0.267	0.764	0.415	0.342	0.360
SPVS_1	0.426	0.239	0.088	0.160	0.194	0.363	0.356	0.776	0.401	0.390
SPVS_2	0.441	0.181	0.171	0.159	0.236	0.334	0.464	0.743	0.378	0.416
SPVS_3	0.448	0.170	0.137	0.147	0.229	0.347	0.447	0.827	0.425	0.408

Var Indicator	GSGE	MOD1	MOD2	MOD3	MOD4	SCE	SLP	SPVS	TCE	TPE
SPVS_4	0.432	0.236	0.164	0.178	0.238	0.346	0.356	0.721	0.390	0.348
SPVS_5	0.413	0.210	0.144	0.208	0.216	0.296	0.364	0.709	0.382	0.385
SPVS_6	0.341	0.187	0.147	0.225	0.233	0.283	0.364	0.708	0.337	0.355
SPVS_7	0.403	0.247	0.107	0.198	0.188	0.332	0.337	0.704	0.408	0.356
TCE_1	0.408	0.244	0.114	0.268	0.124	0.478	0.273	0.362	0.704	0.367
TCE_2	0.522	0.234	0.031	0.214	0.065	0.608	0.346	0.430	0.853	0.438
TCE_3	0.490	0.275	0.046	0.257	0.077	0.631	0.284	0.434	0.847	0.408
TCE_4	0.538	0.234	-0.014	0.185	0.046	0.690	0.313	0.395	0.817	0.436
TCE_5	0.516	0.232	0.043	0.216	0.070	0.674	0.282	0.400	0.801	0.398
TCE_6	0.471	0.212	0.065	0.240	0.095	0.532	0.313	0.385	0.732	0.399
TCE_7	0.469	0.210	0.084	0.259	0.115	0.481	0.322	0.417	0.721	0.398
TCE_8	0.523	0.209	0.035	0.214	0.093	0.556	0.362	0.458	0.768	0.439
TCE_9	0.475	0.260	0.059	0.238	0.105	0.588	0.285	0.395	0.744	0.385
TPE_1	0.519	0.202	0.115	0.268	0.217	0.314	0.362	0.395	0.410	0.705
TPE_2	0.565	0.114	0.069	0.225	0.184	0.332	0.359	0.377	0.368	0.738
TPE_3	0.495	0.211	0.107	0.205	0.168	0.289	0.318	0.378	0.387	0.723
TPE_4	0.528	0.185	0.114	0.244	0.200	0.321	0.300	0.400	0.409	0.720
TPE_5	0.525	0.221	0.089	0.236	0.207	0.386	0.313	0.387	0.427	0.724
TPE_6	0.594	0.201	0.042	0.223	0.183	0.343	0.283	0.400	0.416	0.846
TPE_7	0.604	0.196	0.059	0.203	0.120	0.365	0.281	0.398	0.457	0.777
TPE_8	0.538	0.164	0.072	0.222	0.186	0.333	0.299	0.370	0.359	0.815
TPE_9	0.535	0.226	0.099	0.200	0.187	0.312	0.310	0.372	0.391	0.750
TPE_10	0.486	0.186	0.145	0.231	0.191	0.298	0.258	0.363	0.385	0.703
TPE_11	0.483	0.166	0.038	0.200	0.145	0.303	0.273	0.342	0.346	0.726
TPE_12	0.551	0.104	0.048	0.126	0.139	0.316	0.313	0.417	0.343	0.746
SCE * GSGE	-0.017	0.369	1.000	0.479	0.786	0.018	0.207	0.184	0.063	0.110
TCE * GSGE	0.097	0.438	0.786	0.557	1.000	0.062	0.291	0.295	0.110	0.236
SPVS * GSGE	0.154	0.558	0.479	1.000	0.557	0.181	0.273	0.243	0.296	0.287
SLP * GSGE	0.124	1.000	0.369	0.558	0.438	0.210	0.023	0.283	0.301	0.242

Test of the Average Variance Extracted (AVE)

The discriminant validity of each construct in the model is evidenced by the AVE values shown in Table 11. AVE quantify the variance in terms of how well a construct segment captures underlying variation that is not due to measurement error. The AVE for GSGE is 0.563, which indicates that about 56% of the variance in related constructs can explain this construct part onResponse variablularly well Table 2 presents the AVE values, which are all equal to 1.000 (perfect variance extraction) for MOD4 multiple-item construct meaning these variables could have been considered as single-item. AVE scores for the SCE (0.547), SLP(0.683) SPVS (0.551), TCE (0.606): and TPE: Approximately. This `indicates thatleo` majority of thfe variance is accounted fur by ihe items chesian,en;suring,adequate hascis,xediscriminant validity between lthe conducls across ii je model 'fiabe;23). We follow the rule that AVE values greater than 0.50 lead to, at minimum more variance within its indicators then measurement error or it is unstructured by constructs (Gefen et al., 2011).

Table 11. Discriminant Validity Results (AVE)

	Average Variance Extracted (AVE)
GSGE	0.563
MOD1	1.000
MOD2	1.000
MOD3	1.000
MOD4	1.000
SCE	0.547
SLP	0.683
SPVS	0.551
TCE	0.606
TPE	0.561

Testing for discriminant validity

Use of the Fornell-Larcker criterion: this test discriminant validity by assessing whether constructs in a model are distinct from one another. For each construct, Table 10 shows the square root of the AVE value on the diagonal, as well as the correlation coefficients between constructs in the off-diagonal area. To establish adequate discriminant validity, the square root of AVE for each construct should be greater than its correlation with any other constructs.

As an instance, the square root of the AVE value for GSGE (0.750) is higher than its correlations with other constructs such as SCE (0.594) and TPE (0.717). Inference is repeated using SLP and SPVS with correlation being included for two observational elements (Table 7) and found the diagonal values, greater in this table also show that are separate constructs. Aspect attribute competency BEH = behavior Together, these results indicate the discriminant validity of the model, indicating that the constructs measure unique variance not explained by one another.

Table10. Risultati dei criteri di Fornell Larcker

	GSGE	MOD1	MOD2	MOD3	MOD4	SCE	SLP	SPVS	TCE	TPE
GSGE	0.750									
MOD1	0.124	1.000								
MOD2	-0.017	0.369	1.000							
MOD3	0.154	0.558	0.479	1.000						
MOD4	0.097	0.438	0.786	0.557	1.000					
SCE	0.594	0.210	-0.018	0.181	0.062	0.740				
SLP	0.456	0.023	0.207	0.273	0.291	0.333	0.826			
SPVS	0.561	0.283	0.184	0.243	0.295	0.444	0.519	0.742		
TCE	0.632	0.301	0.063	0.296	0.110	0.753	0.397	0.525	0.778	
TPE	0.717	0.242	0.110	0.287	0.236	0.436	0.409	0.513	0.524	0.749

Composite Reliability Test

Table 12 displays the results of a composite reliability test and it appears that all constructs in this model are internally consistent. Composite reliability values of 0.865 to 1.000 also exceeded the recommended threshold value (≥ 0.70). In particular, the constructs GSGE (0.865), SCE (0.923) and SLP 20 items had a very high reliability coefficient which implies that said item consistently measures what it is meant to

measure or generate same results when repeated several times consecutively [Table 3]. Table 7 presents the perfect reliability of all constructs have a Cronbach's $\alpha = 1.000$, which gives further support to measurement model properties (MOD1 - MOD4).

Table 12. Composite Reliability Result

	Composite Reliability
GSGE	0.865
MOD1	1.000
MOD2	1.000
MOD3	1.000
MOD4	1.000
SCE	0.923
SLP	0.945
SPVS	0.895
TCE	0.932
TPE	0.939

Cronbach Alpha Test Result

Table 13 presents the Cronbach's Alpha test results, where it can be observed that all construct scores are higher than the minimum acceptable value of 0.70 established for this database. For GSGE, it shows strong internal consistency (Cronbach's Alpha =0.805). SCE (0.907), SLP (0.933) and TCE 18–40 (896%) were considered reliable other constructs also demonstrated strong reliability with SCE, > The MOD constructs (MOD1 to MOD4) all have a Cronbach's alpha of 1.000, indicating perfect internal consistency across the models. In general, the high Cronbach's Alpha values present that while measuring instrument used in study measure are reliable.

Table 13. Cronbach Alpha Results

	Cronbach's Alpha
GSGE	0.805
MOD1	1.000
MOD2	1.000
MOD3	1.000
MOD4	1.000
SCE	0.907
SLP	0.933
SPVS	0.863
TCE	0.918
TPE	0.928

Measurement of Inner Model

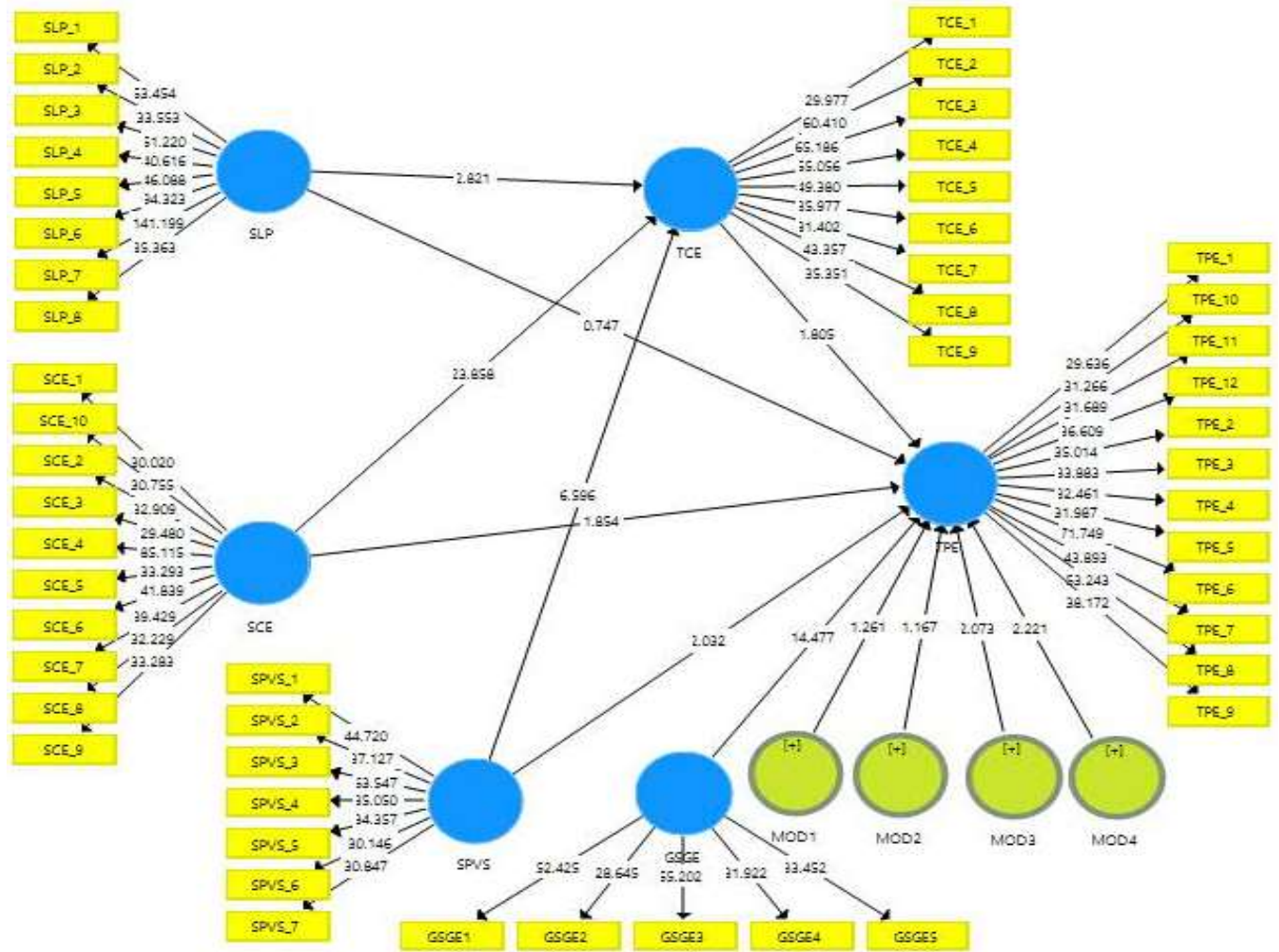


Figure 3. Inner Model Research Data

Coefficient of Determination (R-square) Test Data

The test results in the first model produced an R-square value of 0.617 which means that all three constructs of servant leadership, school culture and supervision system can explain teacher competence by 61.7% while the remaining is explained by other constructs. In addition, the results of tests in second model gained an R-square value of 0.566 this show that servant leadership construct, school culture consultant variable superintendence system good governance at schools primary teacher competence and moderation variables are able to explain performance teachers by the percentage (56.6%) while percent remaining as much equalized by 43.4% is explained another constructs.

Table 14. Results of the Coefficient of Determination (R-square)

Vr	R Square
TCE	0.617
TPE	0.566

Research data Path Coefficient

The results of the hypothesis test show that servant leadership simultaneously does not have a significant impact on teacher performance with t-statistical value 0.747, and p-value = 0.456 ($p > \alpha$), which rejects H1. However, the impact of school culture on teacher performance with t-value 1.854 and $p > 0.05$ (as well as rejected Null Hypothesis H2). However, the supervision system has a positive and significant effect on teacher performance as seen with t-statistic unequal to 2.032 value ($p < 0.05$), therefore H3 is accepted. Finally, tested the H4 teacher competence on teacher performance did not have a statistically significant effect with t-statistic of 1.805 and p-value equal to 0.073 ($p > 0.05$) so that this hypothesis is rejected.

Table 15. Hypothesis Test Results Based on Path Coefficient

Variable	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
GSGE -> TPE	0.617	0.617	0.043	14.477	0.000
MOD1 -> TPE	0.058	0.056	0.046	1.261	0.208
MOD2 -> TPE	-0.057	-0.054	0.049	1.167	0.244
MOD3 -> TPE	0.084	0.086	0.041	2.073	0.039
MOD4 -> TPE	0.109	0.106	0.049	2.221	0.027
SCE -> TCE	0.638	0.636	0.027	23.858	0.000
SCE -> TPE	-0.076	-0.075	0.041	1.854	0.064
SLP -> TCE	0.080	0.082	0.028	2.821	0.005
SLP -> TPE	0.031	0.029	0.042	0.747	0.456
SPVS -> TCE	0.200	0.201	0.030	6.596	0.000
SPVS -> TPE	0.080	0.082	0.039	2.032	0.043
TCE -> TPE	0.086	0.086	0.047	1.805	0.072

*Uji Intervening atau Mediasi***Table 16.** Results of Mediation Test Observation Data

Variable	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
SCE -> TCE -> TPE	0.055	0.055	0.030	1.815	0.070
SLP -> TCE -> TPE	0.007	0.007	0.005	1.449	0.148
SPVS -> TCE -> TPE	0.017	0.017	0.010	1.679	0.094

Hypothesis testing results, Servant Leadership does not have a significant indirect effect on Teacher Performance through the teacher competence ($t = 1.815$; $p > 0.05$). Therefore, the influence of servant leadership on teacher performance is not mediated by teacher competence so that hypothesis 5 is rejected. In the same vein, it is not established that school culture indirectly affects teacher performance through teacher competence [$t (1.449) p > 0.05$], therefore hypothesis 6 was rejected as well. Furthermore, supervision system has no significant indirect effect on teacher performance through teacher competence; with $t = 1.679$ $p > .05$ so that it can be concluded that the role of mediation for increased or decreased teacher performance is not accompanied by an increase in growth and development, hypothesized H7 rejected.

Moderation Test Research Observation Result

Based on hypothesis testing, it is stated that good school governance does not moderate the impact of servant leadership on teacher performance with t statistic test (1.261)t hitung and p-value (0.208 > 0.05). H8 is rejected. Likewise, there is no evidence to support the influence of good school governance on the moderating effect between culture and teacher performance with t-statistic = 1.167 ($p > 0.05$), thus hypothesis H9 was rejected as well. Despite, good school governance moderates the impact of the supervisory system on teacher performance ($t = 2.073$; $p < .05$); hence H10 is accepted. H10 is rejected because H11 (good school governance moderates the effect of teacher competence on teacher performance) has a t-statistic value of 2.221 with a p-value 0.027 and produces a significant point at level significance $\alpha = 5\%$.

Table 17. Moderation Test Results

Variable	Original Sample	Mean	Standard Deviation	STDEV	P Values
GSGE -> TPE	0.617	0.617	0.043	14.477	0.000
MOD1 -> TPE	0.058	0.056	0.046	1.261	0.208
MOD2 -> TPE	-0.057	-0.054	0.049	1.167	0.244
MOD3 -> TPE	0.084	0.086	0.041	2.073	0.039
MOD4 -> TPE	0.109	0.106	0.049	2.221	0.027
SCE -> TCE	0.638	0.636	0.027	23.858	0.000
SCE -> TPE	-0.076	-0.075	0.041	1.854	0.064
SLP -> TCE	0.080	0.082	0.028	2.821	0.005
SLP -> TPE	0.031	0.029	0.042	0.747	0.456
SPVS -> TCE	0.200	0.201	0.030	6.596	0.000
SPVS -> TPE	0.080	0.082	0.039	2.032	0.043
TCE -> TPE	0.086	0.086	0.047	1.805	0.072

Discussion Research

The current study aimed to investigate the roles of servant leadership, school culture, supervision systems, and teacher competence in influencing teacher performance, with a specific focus on the moderating effects of good school governance. The findings reveal several critical insights into the dynamics between these variables and their implications for educational leadership and management in Indonesia.

Servant Leadership and Teacher Performance

For the hypothesis H1, servant leadership did not have a significant effect on teacher performance (t-statistic = 0.747; $p < 0.05$). This result, corroborated by previous research suggesting that the influence of leadership styles on practices varies depending upon contextual conditions such as school culture and individual teacher attributes (Jiang et al., 2020), Although servant leadership places a strong emphasis on serving and supporting others, the effects of such influence could be moderated or polluted by precepts that are endemic within the educational environment. This implies that while SL might be a worthwhile output of facultative leadership (Leithwood & Jantzi, 2000), its ability to impact performance measures is under-researched and would benefit from further qualitative research designed to capture the subtlety depth-criterion problem as it shapes teacher experiences.

School Culture's Influence

Likewise, the review discovered that school culture had no significant impact on teacher performance (t-statistic = 1.854, p-value = .064) The researchers said the finding suggests a gap between how notably school

culture is perceived and real-world performance outcomes. Although a positive school culture is often associated with improved performance outcomes (Deal & Peterson, 2016), the findings of this study point to other mediators in-between which seem even more important for the translation from school climate towards actual learning outcomes like teacher engagement and motivation. Future research would need to examine the specific dimensions of school culture that most contribute teacher performance and could perhaps utilize mixed methods in order to understand more about this relationship both statistically, but also qualitatively.

The Role of Supervision Systems

By contrast, the study found that supervision systems had a positive and statistically significant effect on teacher performance (t-statistic = 2.032; $p=0.043$) This finding supports the previous literature that structured supervision and support are important for effective teaching (Blase & Blase, 2000). Comprehensive monitoring ensures that teachers not only get the necessary guidance and feedback but also gives them a professional touch which they can get into development from too. Given the importance of this relationship, schools should concentrate on how they can provide effective supervisory structures that are congruent with basics expectations as well teachers' professional development goals.

Teacher Competence as a Mediator

Mediation analysis proved that teacher competence has no significant mediating effect between servant leadership, school culture and supervision systems on teacher performance. Although the results demonstrate that teacher quality is an important factor for effective teaching (retention or skill), it may not be a mediator in presence of other strong forces (Fried et al 2006). This finding suggests that motivating higher levels of teacher competence might not be adequate through direct interventions without parallel attention to develop leadership practices and school culture. As an alternative, a more comprehensive strategy that focuses on multiple facets of the educational context might be needed to support sustained gains in teacher quality.

The Moderating Effects of Good School Governance

The results also showed that quality governance is significantly a moderate between the supervision systems and teacher competencies with good teachers performance ($p < 0.05$). This finding is also consistent with the literature that has long argued strong governance determines educational success (Bush & Glover, 2016). Good school governance will support the positive spinoff of supervision systems provided that there are strong leadership structures and accountability measures in schools. Moreover, since effective school governance conditions served a moderator for the relationship between teacher competence and performance it provides evidence that proper use of governance frameworks can establish optimal function practices that could complement teachers' competences making them perform better.

In contrast, the lack of a major moderating effect on servant leadership and school culture due to good governance in schools suggests that these relationships are less intricate. This suggests that governance is important but not for every dimension of educational leadership or cultural influence on performance. These results beg for more inquiry into the conditions under which good governance operates, especially in terms of variety within educational contexts.

Implications for Educational Practice

The implications for educational practice emerging from this course underline the central importance of holistic leadership strategies blending multiple dimensions of school management. Improving teacher performance: The key priority is school improvement. Good leadership is necessary to create a good climate in the school, provide oversight, and ensure accountability, which underpin better teaching. Research by Leithwood et al. (2020), confirms that ST practices should make a difference in how leadership is organized at the school level, but only to an extent if those leaders have been trained in adaptive strategies which enable them to effectively develop teacher practice. Secondly, Day and Sammons (2016) echoed the need

to develop their instructional leadership in concert with administrative skills for each school leader. Therefore, it is suggested keeping them encouraged with encouragement to increase the quality of education as a whole in order that all teacher performance and utilization has become better or continues to rise continuously.

Conclusion

Therefore, this study can be understood as contributing to a broader conversation about the interrelated nature of leadership and cultural change with instructional supervision leading into aspects of school governance in affecting teacher performance. Hence, while it may be erroneous to assert that servant leadership and school culture alone do affect student performance directly, the prominent stances of supervision and governance emphasise a need for whole-school perception in educational leadership. Given the nature of our data, we were unable to address these relationships with this particular research design; however it would be beneficial for future studies to further consider them using longitudinal designs that may better reflect how teacher performance changes as leadership and governance structures undergo transitions.

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Author Contribution

Suyanto, M.Pd: Conceptualization, methodology, data collection, and writing the original draft.

Prof. Dr. Sucihatiningsih Dian Wisika Prajanti, M.Si: Supervision, review, and editing of the manuscript.

Prof. Dr. Kardoyo, M.Pd: Data analysis and interpretation, critical revision of the manuscript.

Prof. Dr. Eko Handoyo, M.Si: Project administration and final approval of the version to be published.

Conflict of Interest

The authors declare no conflict of interest regarding the publication of this manuscript.

Data Availability Statement

The data generated and analyzed during this study are available from the corresponding author upon reasonable request. Due to ethical considerations, participant confidentiality must be maintained.

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References

- Abbas, Ansar, Dian Ekowati, and Fendy Suhariadi. 2021. "Individual Psychological Distance: A Leadership Task to Assess and Cope with Invisible Change." *Journal of Management Development* 40(3):168–89. doi: 10.1108/JMD-09-2020-0304.

- Abbas, Ansar, Muhammad Saud, Fendy Suhariadi, Indrianawati Usman, and Dian Ekowati. 2022. "Positive Leadership Psychology: Authentic and Servant Leadership in Higher Education in Pakistan." *Current Psychology* 41(9):5859–71. doi: 10.1007/s12144-020-01051-1.
- Adams, Richard, Stephen Martin, and Katy Boom. 2018. "University Culture and Sustainability: Designing and Implementing an Enabling Framework." *Journal of Cleaner Production* 171:434–45. doi: <https://doi.org/10.1016/j.jclepro.2017.10.032>.
- Al-Samarrai, Samer, Unika Shrestha, Amer Hasan, Nozomi Nakajima, Santoso Santoso, and Wisnu Harto Adi Wijoyo. 2018. "Introducing a Performance-Based Component into Jakarta's School Grants: What Do We Know about Its Impact after Three Years?" *Economics of Education Review* 67:110–36. doi: <https://doi.org/10.1016/j.econedurev.2018.10.005>.
- Algarni, Mohammad A., Murad Ali, Gema Albort-Morant, Antonio L. Leal-Rodríguez, Hengky Latan, Imran Ali, and Shakir Ullah. 2022. "Make Green, Live Clean! Linking Adaptive Capability and Environmental Behavior with Financial Performance through Corporate Sustainability Performance." *Journal of Cleaner Production* 346:131156. doi: <https://doi.org/10.1016/j.jclepro.2022.131156>.
- Andi Kusumawati, Syamsuddin. 2018. "The Effect of Auditor Quality to Professional Skepticism and Its Relationship to Audit Quality." *International Journal of Law and Management* 34(1):1–5.
- ANTONIO, TONY, FULGENTIUS DANARDANA MURWANI, INNOCENTIUS BERNARTO, and NIKO SUDIBYO. 2021. "FOSTERING TEAM INNOVATION IN TECH START-UPS: THE ROLE OF TEAM AMBIDEXTERITY AS MEDIATOR BETWEEN SERVANT LEADERSHIP BEHAVIOUR AND TEAM INNOVATION." *International Journal of Innovation Management* 25(08):2150091. doi: 10.1142/S1363919621500912.
- Arifin, Imron, Juharyanto, Mustiningsih, and Ahmad Taufiq. 2018. "Islamic Crash Course as a Leadership Strategy of School Principals in Strengthening School Organizational Culture." *Sage Open* 8(3):2158244018799849. doi: 10.1177/2158244018799849.
- Aslan, Sinem, and Charles M. Reigeluth. 2013. "Educational Technologists: Leading Change for a New Paradigm of Education." *TechTrends* 57(5):18–24. doi: 10.1007/s11528-013-0687-4.
- Aziz, Mohamad Azizal Abd, Hilmi Ab Rahman, Md. Mahmudul Alam, and Jamaliah Said. 2015. "Enhancement of the Accountability of Public Sectors through Integrity System, Internal Control System and Leadership Practices: A Review Study." *Procedia Economics and Finance* 28:163–69. doi: [https://doi.org/10.1016/S2212-5671\(15\)01096-5](https://doi.org/10.1016/S2212-5671(15)01096-5).
- Bailey, Claire, Carolyn Blake, Michael Schriver, Vincent Kalumire Cubaka, Tisa Thomas, and Adriane Martin Hilber. 2016. "A Systematic Review of Supportive Supervision as a Strategy to Improve Primary Healthcare Services in Sub-Saharan Africa." *International Journal of Gynecology & Obstetrics* 132(1):117–25. doi: <https://doi.org/10.1016/j.ijgo.2015.10.004>.
- Basom *, Margaret R., and Larry Frase. 2004. "Creating Optimal Work Environments: Exploring Teacher Flow Experiences." *Mentoring & Tutoring: Partnership in Learning* 12(2):241–58. doi: 10.1080/1361126042000239965.
- Bauer, Talya N., Serge Perrot, Robert C. Liden, and Berrin Erdogan. 2019. "Understanding the Consequences of Newcomer Proactive Behaviors: The Moderating Contextual Role of Servant Leadership." *Journal of Vocational Behavior* 112:356–68. doi: <https://doi.org/10.1016/j.jvb.2019.05.001>.
- Bellibaş, Mehmet Şükri, Ali Çağatay Kılıç, and Mahmut Polatcan. 2021. "The Moderation Role of Transformational Leadership in the Effect of Instructional Leadership on Teacher Professional Learning and Instructional Practice: An Integrated Leadership Perspective." *Educational Administration Quarterly* 57(5):776–814. doi: 10.1177/0013161X211035079.
- de Bettignies, Henri-Claude. 2013. "Can Business Schools Lead the Way to a World Worth Living In? BT - Dimensions of Teaching Business Ethics in Asia." Pp. 169–81 in, edited by S. Rothlin and P. Haghirian. Berlin, Heidelberg: Springer Berlin Heidelberg.
- Blumenfeld, Phyllis, Barry J. Fishman, Joseph Krajcik, Ronald W. Marx, and Elliot Soloway. 2000. "Creating Usable Innovations in Systemic Reform: Scaling Up Technology-Embedded Project-Based Science in Urban Schools." *Educational Psychologist* 35(3):149–64. doi: 10.1207/S15326985EP3503_2.
- Borko, Hilda, and Vicky Mayfield. 1995. "The Roles of the Cooperating Teacher and University Supervisor in Learning to Teach." *Teaching and Teacher Education* 11(5):501–18. doi: [https://doi.org/10.1016/0742-051X\(95\)00008-8](https://doi.org/10.1016/0742-051X(95)00008-8).
- Bryman, Alan. 2004. "Qualitative Research on Leadership: A Critical but Appreciative Review." *The Leadership Quarterly* 15(6):729–69. doi: <https://doi.org/10.1016/j.leaqua.2004.09.007>.
- Burch, Patricia. 2007. "Educational Policy and Practice From the Perspective of Institutional Theory: Crafting a Wider Lens." *Educational Researcher* 36(2):84–95. doi: 10.3102/0013189X07299792.
- Bush, Tony, and Derek Glover. 2016. "School Leadership and Management in South Africa." *International Journal of Educational Management* 30(2):211–31. doi: 10.1108/IJEM-07-2014-0101.
- Cai, Yonghong, and Runjia Tang. 2021. "School Support for Teacher Innovation: Mediating Effects of Teacher Self-Efficacy and Moderating Effects of Trust." *Thinking Skills and Creativity* 41:100854. doi: <https://doi.org/10.1016/j.tsc.2021.100854>.
- Cai, Yonghong, and Runjia Tang. 2022. "School Support for Teacher Innovation: The Role of Basic Psychological Need Satisfaction." *Thinking Skills and Creativity* 45:101096. doi: <https://doi.org/10.1016/j.tsc.2022.101096>.
- Camerlink, Irene, Birte L. Nielsen, Ines Windschnurer, and Belinda Vigors. 2021. "Impacts of the COVID-19 Pandemic on Animal Behaviour and Welfare Researchers." *Applied Animal Behaviour Science* 236:105255. doi: <https://doi.org/10.1016/j.applanim.2021.105255>.

- Canavesi, Alice, and Eliana Minelli. 2022. "Servant Leadership and Employee Engagement: A Qualitative Study." *Employee Responsibilities and Rights Journal* 34(4):413–35. doi: 10.1007/s10672-021-09389-9.
- Carpenter, John, Caroline M. Webb, and Lisa Bostock. 2013. "The Surprisingly Weak Evidence Base for Supervision: Findings from a Systematic Review of Research in Child Welfare Practice (2000–2012)." *Children and Youth Services Review* 35(11):1843–53. doi: <https://doi.org/10.1016/j.childyouth.2013.08.014>.
- Carroll, Meredith, Summer Lindsey, Maria Chaparro, and Brent Winslow. 2021. "An Applied Model of Learner Engagement and Strategies for Increasing Learner Engagement in the Modern Educational Environment." *Interactive Learning Environments* 29(5):757–71. doi: 10.1080/10494820.2019.1636083.
- Castner, Daniel J., Jennifer L. Schneider, and James G. Henderson. 2017. "An Ethic of Democratic, Curriculum-Based Teacher Leadership." *Leadership and Policy in Schools* 16(2):328–56. doi: 10.1080/15700763.2017.1298814.
- Chamberlin, Carla R. 2000. "Nonverbal Behaviors and Initial Impressions of Trustworthiness in Teacher-supervisor Relationships." *Communication Education* 49(4):352–64. doi: 10.1080/03634520009379223.
- Cheng, Annie Y. N., and Elson Szeto. 2016. "Teacher Leadership Development and Principal Facilitation: Novice Teachers' Perspectives." *Teaching and Teacher Education* 58:140–48. doi: <https://doi.org/10.1016/j.tate.2016.05.003>.
- Chiniara, Myriam, and Kathleen Bentein. 2016. "Linking Servant Leadership to Individual Performance: Differentiating the Mediating Role of Autonomy, Competence and Relatedness Need Satisfaction." *The Leadership Quarterly* 27(1):124–41. doi: <https://doi.org/10.1016/j.leaqua.2015.08.004>.
- Christ, Katherine L., and Christine V Helliar. 2021. "Blockchain Technology and Modern Slavery: Reducing Deceptive Recruitment in Migrant Worker Populations." *Journal of Business Research* 131:112–20. doi: <https://doi.org/10.1016/j.jbusres.2021.03.065>.
- Christensen-Salem, Amanda, Marco Tulio F. Zanini, Fred O. Walumbwa, Ronaldo Parente, Daniel M. Peat, and Jaclyn Perrmann-Graham. 2021. "Communal Solidarity in Extreme Environments: The Role of Servant Leadership and Social Resources in Building Serving Culture and Service Performance." *Journal of Business Research* 135:829–39. doi: <https://doi.org/10.1016/j.jbusres.2021.07.017>.
- Cirocki, Andrzej, and Thomas S. C. Farrell. 2019. "Professional Development of Secondary School EFL Teachers: Voices from Indonesia." *System* 85:102111. doi: <https://doi.org/10.1016/j.system.2019.102111>.
- Cohen, Aaron, and Yehuda Baruch. 2022. "Abuse and Exploitation of Doctoral Students: A Conceptual Model for Traversing a Long and Winding Road to Academia." *Journal of Business Ethics* 180(2):505–22. doi: 10.1007/s10551-021-04905-1.
- Cosner, Shelby, and Mary F. Jones. 2016. "Leading School-Wide Improvement in Low-Performing Schools Facing Conditions of Accountability." *Journal of Educational Administration* 54(1):41–57. doi: 10.1108/JEA-08-2014-0098.
- Curry, Marnie, Kim Jaxon, Jennifer Lin Russell, Mary Alice Callahan, and Jeanette Bicais. 2008. "Examining the Practice of Beginning Teachers' Micropolitical Literacy within Professional Inquiry Communities." *Teaching and Teacher Education* 24(3):660–73. doi: <https://doi.org/10.1016/j.tate.2006.10.007>.
- Dami, Zummy Anselmus, Ali Imron, Burhanuddin Burhanuddin, and Achmad Supriyanto. 2022. "Servant Leadership and Job Satisfaction: The Mediating Role of Trust and Leader-Member Exchange." *Frontiers in Education* 7(December):1–18. doi: 10.3389/educ.2022.1036668.
- Danielson, Melissa L., Rebecca H. Bitsko, Joseph R. Holbrook, Sana N. Charania, Angelika H. Claussen, Robert E. McKeown, Steven P. Cuffe, Julie Sarno Owens, Steven W. Evans, Lorraine Kubicek, and Kate Flory. 2021. "Community-Based Prevalence of Externalizing and Internalizing Disorders among School-Aged Children and Adolescents in Four Geographically Dispersed School Districts in the United States." *Child Psychiatry & Human Development* 52(3):500–514. doi: 10.1007/s10578-020-01027-z.
- Darling-Hammond, Linda, and Jon Snyder. 2000. "Authentic Assessment of Teaching in Context." *Teaching and Teacher Education* 16(5):523–45. doi: [https://doi.org/10.1016/S0742-051X\(00\)00015-9](https://doi.org/10.1016/S0742-051X(00)00015-9).
- Day, David V, Peter Gronn, and Eduardo Salas. 2004. "Leadership Capacity in Teams." *The Leadership Quarterly* 15(6):857–80. doi: <https://doi.org/10.1016/j.leaqua.2004.09.001>.
- TE Deal, KD Peterson. 2010. "Shaping School Culture: Pitfalls, Paradoxes, & Promises." *Journal of Educational Administration* 48(2):278–80. doi: 10.1108/09578231011027941.
- van Dierendonck, Dirk, and Inge Nuijten. 2011. "The Servant Leadership Survey: Development and Validation of a Multidimensional Measure." *Journal of Business and Psychology* 26(3):249–67. doi: 10.1007/s10869-010-9194-1.
- Dimmock, Clive, and Cheng Yong Tan. 2013. "Educational Leadership in Singapore." *Journal of Educational Administration* 51(3):320–40. doi: 10.1108/09578231311311492.
- Dinham, Stephen. 2005. "Principal Leadership for Outstanding Educational Outcomes." *Journal of Educational Administration* 43(4):338–56. doi: 10.1108/09578230510605405.
- Donia, Magda B. L., Usman Raja, Alexandra Panaccio, and Zheni Wang. 2016. "Servant Leadership and Employee Outcomes: The Moderating Role of Subordinates' Motives." *European Journal of Work and Organizational Psychology* 25(5):722–34. doi: 10.1080/1359432X.2016.1149471.
- Duncombe, William, and John Yinger. 2000. "Financing Higher Student Performance Standards: The Case of New York State." *Economics of Education Review* 19(4):363–86. doi: [https://doi.org/10.1016/S0272-7757\(00\)00004-2](https://doi.org/10.1016/S0272-7757(00)00004-2).
- Duren, David. 2017. "Servant Leadership: A New Paradigm BT - Servant Leadership and Followership: Examining the Impact on Workplace Behavior." Pp. 225–60 in, edited by C. J. Davis. Cham: Springer International Publishing.
- Dwi Amperawati, E., S. Hartoko, and A. Dwianto. 2024. "Exploring the Landscape of Digital Entrepreneurship among Disabled People: A Bibliometric Analysis." *Qubahan Academic Journal* 4(3):469–84. doi: 10.48161/qaj.v4n3a918.
- Dwianto, Agus. 2024. "Sustainability Environmental Performance Future Investment for Company Value." *Journal of Ecohumanism*.

- Dyer, Caroline, Archana Choksi, Vinita Awasty, Uma Iyer, Renu Moyade, Neerja Nigam, Neetu Purohit, Swati Shah, and Swati Sheth. 2004. "Knowledge for Teacher Development in India: The Importance of 'Local Knowledge' for in-Service Education." *International Journal of Educational Development* 24(1):39–52. doi: <https://doi.org/10.1016/j.jedudev.2003.09.003>.
- Elliott, John. 1990. "Teachers as Researchers: Implications for Supervision and for Teacher Education." *Teaching and Teacher Education* 6(1):1–26. doi: [https://doi.org/10.1016/0742-051X\(90\)90004-O](https://doi.org/10.1016/0742-051X(90)90004-O).
- Ertosun, Ozgur Gulen, and Zafer Adiguzel. 2018. "Leadership, Personal Values and Organizational Culture BT - Strategic Design and Innovative Thinking in Business Operations: The Role of Business Culture and Risk Management." Pp. 51–74 in, edited by H. Dincer, Ü. Hacıoglu, and S. Yüksel. Cham: Springer International Publishing.
- Espinoza, Daniel, Ryan Saunders, Tara Kini, and Linda Darling-Hammond. 2018. "Taking the Long View: State Efforts to Solve Teacher Shortages by Strengthening the Profession." *Learning Policy Institute* (August):1–64.
- Eva, Nathan, Mulyadi Robin, Sen Sendjaya, Dirk van Dierendonck, and Robert C. Liden. 2019. "Servant Leadership: A Systematic Review and Call for Future Research." *The Leadership Quarterly* 30(1):111–32. doi: <https://doi.org/10.1016/j.leaqua.2018.07.004>.
- Fatima, Samar, Kevin C. Desouza, and Gregory S. Dawson. 2020. "National Strategic Artificial Intelligence Plans: A Multi-Dimensional Analysis." *Economic Analysis and Policy* 67:178–94. doi: <https://doi.org/10.1016/j.eap.2020.07.008>.
- Fields, Joyce W., Karen C. Thompson, and Julie R. Hawkins. 2015. "Servant Leadership: Teaching the Helping Professional." *Journal of Leadership Education* 14(4):92–105. doi: [10.12806/V14/I4/R2](https://doi.org/10.12806/V14/I4/R2).
- Florek-Paszowska, Anna Katarzyna, and Carlos Arturo Hoyos-Vallejo. 2023. "A Comprehensive Bibliometric Analysis and Future Research Directions in the Nexus of Sustainable Business Practices and Turnover Intention." *Cleaner and Responsible Consumption* 11:100146. doi: <https://doi.org/10.1016/j.clrc.2023.100146>.
- Forrester, Jay W., Nathaniel J. Mass, and Charles J. Ryan. 1976. "The System Dynamics National Model: Understanding Socio-Economic Behavior and Policy Alternatives." *Technological Forecasting and Social Change* 9(1):51–68. doi: [https://doi.org/10.1016/0040-1625\(76\)90044-5](https://doi.org/10.1016/0040-1625(76)90044-5).
- Fullan, Michael, and Nancy Watson. 2000. "School-Based Management: Reconceptualizing to Improve Learning Outcomes." *School Effectiveness and School Improvement* 11(4):453–73. doi: [10.1076/sesi.11.4.453.3561](https://doi.org/10.1076/sesi.11.4.453.3561).
- Goldenhuis, Johanna L., and Lizette C. Oosthuizen. 2015. "Challenges Influencing Teachers' Involvement in Continuous Professional Development: A South African Perspective." *Teaching and Teacher Education* 51:203–12. doi: <https://doi.org/10.1016/j.tate.2015.06.010>.
- Gettinger, Maribeth, and Martha J. Walter. 2012. "Classroom Strategies to Enhance Academic Engaged Time BT - Handbook of Research on Student Engagement." Pp. 653–73 in, edited by S. L. Christenson, A. L. Reschly, and C. Wylie. Boston, MA: Springer US.
- Ghalavi, Zahra, and Naser Nastiezae. 2020. "Relationship of Servant Leadership and Organizational Citizenship Behavior with Mediation of Psychological Empowerment." *Eurasian Journal of Educational Research* 20(89):241–64.
- Ghosh, Koustab, and Naresh Khatri. 2018. "Does Servant Leadership Work in Hospitality Sector: A Representative Study in the Hotel Organizations." *Journal of Hospitality and Tourism Management* 37:117–27. doi: <https://doi.org/10.1016/j.jhtm.2017.10.012>.
- Glickman, C. D. 1981. "Development Supervision. Alexandria: Association for Supervision and Curriculum Development."
- Greenleaf. 1992. "MEASURING EXTREME RESPONSE STYLE." *Public Opinion Quarterly* 56(3):328–51. doi: [10.1086/269326](https://doi.org/10.1086/269326).
- Gregory Stone, A., Robert F. Russell, and Kathleen Patterson. 2004. "Transformational versus Servant Leadership: A Difference in Leader Focus." *Leadership & Organization Development Journal* 25(4):349–61. doi: [10.1108/01437730410538671](https://doi.org/10.1108/01437730410538671).
- Grisaffe, Douglas B., Rebecca VanMeter, and Lawrence B. Chonko. 2016. "Serving First for the Benefit of Others: Preliminary Evidence for a Hierarchical Conceptualization of Servant Leadership." *Journal of Personal Selling & Sales Management* 36(1):40–58. doi: [10.1080/08853134.2016.1151303](https://doi.org/10.1080/08853134.2016.1151303).
- Hallinger, Philip. 2011. "Leadership for Learning: Lessons from 40 Years of Empirical Research." *Journal of Educational Administration* 49(2):125–42. doi: [10.1108/09578231111116699](https://doi.org/10.1108/09578231111116699).
- Hallinger, Philip, and Ronald H. Heck. 1998. "Exploring the Principal's Contribution to School Effectiveness: 1980-1995* ." *School Effectiveness and School Improvement* 9(2):157–91. doi: [10.1080/0924345980090203](https://doi.org/10.1080/0924345980090203).
- Hallinger, Philip, and Jiafang Lu. 2014. "Modelling the Effects of Principal Leadership and School Capacity on Teacher Professional Learning in Hong Kong Primary Schools." *School Leadership & Management* 34(5):481–501. doi: [10.1080/13632434.2014.938039](https://doi.org/10.1080/13632434.2014.938039).
- Härkki, Tellervo, Henriikka Vartiainen, Pirta Seitamaa-Hakkarainen, and Kai Hakkarainen. 2021. "Co-Teaching in Non-Linear Projects: A Contextualised Model of Co-Teaching to Support Educational Change." *Teaching and Teacher Education* 97:103188. doi: <https://doi.org/10.1016/j.tate.2020.103188>.
- Harris, Douglas N., and Tim R. Sass. 2011. "Teacher Training, Teacher Quality and Student Achievement." *Journal of Public Economics* 95(7):798–812. doi: <https://doi.org/10.1016/j.jpubeco.2010.11.009>.
- Hennig, Jan C., Sebastian Firk, Michael Wolff, and Hülgen Coskun. 2023. "Environmental Management Control Systems: Exploring the Economic Motivation behind Their Implementation." *Journal of Business Research* 169(July 2022):114283. doi: [10.1016/j.jbusres.2023.114283](https://doi.org/10.1016/j.jbusres.2023.114283).
- Hogan, Suellen J., and Leonard V Coote. 2014. "Organizational Culture, Innovation, and Performance: A Test of Schein's Model." *Journal of Business Research* 67(8):1609–21. doi: <https://doi.org/10.1016/j.jbusres.2013.09.007>.
- Hsiao, Chan, Yi-Hsuan Lee, and Wan-Jun Chen. 2015. "The Effect of Servant Leadership on Customer Value Co-Creation: A Cross-Level Analysis of Key Mediating Roles." *Tourism Management* 49:45–57. doi: <https://doi.org/10.1016/j.tourman.2015.02.012>.

- Huertas-Valdivia, Irene, Araceli Rojo Gallego-Burín, and F. Javier Lloréns-Montes. 2019. "Effects of Different Leadership Styles on Hospitality Workers." *Tourism Management* 71:402–20. doi: <https://doi.org/10.1016/j.tourman.2018.10.027>.
- Huhmann, Maureen B., Shinobu Yamamoto, Joel M. Neutel, Sarah S. Cohen, and Juan B. Ochoa Gautier. 2018. "Very High-Protein and Low-Carbohydrate Enteral Nutrition Formula and Plasma Glucose Control in Adults with Type 2 Diabetes Mellitus: A Randomized Crossover Trial." *Nutrition & Diabetes* 8(1):45. doi: 10.1038/s41387-018-0053-x.
- HUMPHREY, CHRISTOPHER, and K. E. N. PEASE. 1992. "Effectiveness Measurement in Probation: A View from the Troops." *The Howard Journal of Criminal Justice* 31(1):31–52. doi: <https://doi.org/10.1111/j.1468-2311.1992.tb00727.x>.
- Jordan, Anne, Eileen Schwartz, and Donna McGhie-Richmond. 2009. "Preparing Teachers for Inclusive Classrooms." *Teaching and Teacher Education* 25(4):335–42. doi: <https://doi.org/10.1016/j.tate.2009.02.010>.
- Kantus, V. A. M., A. N. Probohudono, and A. Dwianto. 2025. "CSR Competition Indicators: How Relative CSR Performance Affects Analyst Recommendations in the Indonesian Market." *Journal of Ecohumanism* 4(1):26–49. doi: 10.62754/joe.v4i1.4091.
- Kellerman, Barbara, and Scott W. Webster. 2001. "The Recent Literature on Public Leadership: Reviewed and Considered." *The Leadership Quarterly* 12(4):485–514. doi: [https://doi.org/10.1016/S1048-9843\(01\)00091-1](https://doi.org/10.1016/S1048-9843(01)00091-1).
- Kemmis, Stephen, Hannu L. T. Heikkinen, Göran Fransson, Jessica Aspörs, and Christine Edwards-Groves. 2014. "Mentoring of New Teachers as a Contested Practice: Supervision, Support and Collaborative Self-Development." *Teaching and Teacher Education* 43:154–64. doi: <https://doi.org/10.1016/j.tate.2014.07.001>.
- Kheybari, Siamak, Alessio Ishizaka, Mohammad Reza Mehrpour, and Vijay Pereira. 2024. "Selection of a Business School Dean: A Multi-Criteria Knowledge-Based Approach." *Journal of Knowledge Management ahead-of-print(ahead-of-print)*. doi: 10.1108/JKM-06-2023-0468.
- Klassen, Robert M., and Virginia M. C. Tze. 2014. "Teachers' Self-Efficacy, Personality, and Teaching Effectiveness: A Meta-Analysis." *Educational Research Review* 12:59–76. doi: <https://doi.org/10.1016/j.edurev.2014.06.001>.
- Klassen, Robert M., Virginia M. C. Tze, Shea M. Betts, and Kelly A. Gordon. 2011. "Teacher Efficacy Research 1998–2009: Signs of Progress or Unfulfilled Promise?" *Educational Psychology Review* 23(1):21–43. doi: 10.1007/s10648-010-9141-8.
- Kutsyuruba, Benjamin, Don A. Klinger, and Alicia Hussain. 2015. "Relationships among School Climate, School Safety, and Student Achievement and Well-Being: A Review of the Literature." *Review of Education* 3(2):103–35. doi: <https://doi.org/10.1002/rev3.3043>.
- Lapointe, Émilie, and Christian Vandenberghe. 2018. "Examination of the Relationships Between Servant Leadership, Organizational Commitment, and Voice and Antisocial Behaviors." *Journal of Business Ethics* 148(1):99–115. doi: 10.1007/s10551-015-3002-9.
- Leaf, Ann, and George Odhiambo. 2017. "The Deputy Principal Instructional Leadership Role and Professional Learning." *Journal of Educational Administration* 55(1):33–48. doi: 10.1108/JEA-02-2016-0029.
- Lee, Se Woong. 2018. "Pulling Back the Curtain: Revealing the Cumulative Importance of High-Performing, Highly Qualified Teachers on Students' Educational Outcome." *Educational Evaluation and Policy Analysis* 40(3):359–81. doi: 10.3102/0162373718769379.
- Leithwood, Kenneth, and Doris Jantzi. 1990. "Transformational Leadership: How Principals Can Help Reform School Cultures." *School Effectiveness and School Improvement* 1(4):249–80. doi: 10.1080/0924345900010402.
- Leithwood, Kenneth, and Jingping Sun. 2018. "Academic Culture: A Promising Mediator of School Leaders' Influence on Student Learning." *Journal of Educational Administration* 56(3):350–63. doi: 10.1108/JEA-01-2017-0009.
- Leithwood, Kenneth, Jingping Sun, Randall Schumacker, and Cheng Hua. 2023. "Psychometric Properties of the Successful School Leadership Survey." *Journal of Educational Administration* 61(4):385–404. doi: 10.1108/JEA-08-2022-0115.
- Leithwood, Kenneth, Diana Tomlinson, and Maxine Genge. 1996. "Transformational School Leadership BT - International Handbook of Educational Leadership and Administration: Part1–2." Pp. 785–840 in, edited by K. Leithwood, J. Chapman, D. Corson, P. Hallinger, and A. Hart. Dordrecht: Springer Netherlands.
- Liden, Robert C., Sandy J. Wayne, Jeremy D. Meuser, Jia Hu, Junfeng Wu, and Chenwei Liao. 2015. "Servant Leadership: Validation of a Short Form of the SL-28." *The Leadership Quarterly* 26(2):254–69. doi: <https://doi.org/10.1016/j.leaqua.2014.12.002>.
- Liu, Lei, and Zhihang Xu. 2018. "Collaborative Governance: A Potential Approach to Preventing Violent Demolition in China." *Cities* 79:26–36. doi: <https://doi.org/10.1016/j.cities.2018.02.019>.
- Loeneto, Bambang Apriady, Zahra Alwi, Ernalida Ernalida, Eryansyah Eryansyah, and Santi Oktarina. 2022. "Teacher Education Research and Development in Indonesia: Preparing Educators for the Twenty-First Century BT - Handbook of Research on Teacher Education: Innovations and Practices in Asia." Pp. 173–204 in, edited by M. S. Khine and Y. Liu. Singapore: Springer Nature Singapore.
- Louis, Karen Seashore. 2007. "Trust and Improvement in Schools." *Journal of Educational Change* 8(1):1–24. doi: 10.1007/s10833-006-9015-5.
- Louis, Karen Seashore, and BetsAnn Smith. 1991. "Restructuring, Teacher Engagement and School Culture: Perspectives on School Reform and the Improvement of Teacher's Work 1 ." *School Effectiveness and School Improvement* 2(1):34–52. doi: 10.1080/0924345910020104.
- MacBeath, John. 2007. "Leadership as a Subversive Activity." *Journal of Educational Administration* 45(3):242–64. doi: 10.1108/09578230710747794.
- Mansoor, M. (2021). Citizens' trust in government as a function of good governance and government agency's provision of quality information on social media during COVID-19. *Government information quarterly*, 38(4), 101597

- Van Maele, Dimitri, and Mieke Van Houtte. 2012. "The Role of Teacher and Faculty Trust in Forming Teachers' Job Satisfaction: Do Years of Experience Make a Difference?" *Teaching and Teacher Education* 28(6):879–89. doi: <https://doi.org/10.1016/j.tate.2012.04.001>.
- Malingkas, M., JF Senduk, S. Simandjuntak-.... and Leadership, and Undefined 2018. 2018. "The Effects of Servant Leader and Integrity of Principal Performance in Catholic Senior High Schools in North Sulawesi, Indonesia." *Journal of International Education and Leadership* 8(1):1–19.
- Martin, Jason. 2019. "The Leadership/Followership Process: A Different Understanding of Library Leadership." *The Journal of Academic Librarianship* 45(1):15–21. doi: <https://doi.org/10.1016/j.acalib.2018.11.004>.
- Martinez, Felipe, Sandy Taut, and Kevin Schaaf. 2016. "Classroom Observation for Evaluating and Improving Teaching: An International Perspective." *Studies in Educational Evaluation* 49:15–29. doi: <https://doi.org/10.1016/j.stueduc.2016.03.002>.
- McKinnon, David H., Lena Danaia, and James Deehan. 2017. "The Design Of Preservice Primary Teacher Education Science Subjects: The Emergence Of An Interactive Educational Design Model." *Journal of Astronomy & Earth Sciences Education (JAESE)* 4(1):1. doi: 10.19030/jaese.v4i1.9972.
- Meuser, Jeremy D., and Jarvis Smallfield. 2023. "Servant Leadership: The Missing Community Component." *Business Horizons* 66(2):251–64. doi: <https://doi.org/10.1016/j.bushor.2022.07.002>.
- Mittal, Rakesh, and Peter W. Dorfman. 2012. "Servant Leadership across Cultures." *Journal of World Business* 47(4):555–70. doi: <https://doi.org/10.1016/j.jwb.2012.01.009>.
- Naicker, Inbanathan, Vitallis Chikoko, and Sipiwe Eric Mthiyane. 2013. "Instructional Leadership Practices in Challenging School Contexts." *Education as Change* 17(sup1):S137–50. doi: 10.1080/16823206.2014.865999.
- Nassir, Misaa, and Pascale Benoliel. 2023. "Promoting School Effectiveness: Examining the Mediating Role of Teachers' Organisational Commitment and the Moderating Role of School Cultural Attributes." *Educational Management Administration & Leadership* 17411432231167716. doi: 10.1177/17411432231167715.
- Ng, Kok-Yee, and Christine S. K. Koh. 2010. "Motivation to Serve BT - Servant Leadership: Developments in Theory and Research." Pp. 90–101 in, edited by D. van Dierendonck and K. Patterson. London: Palgrave Macmillan UK.
- Nzabonimpa. 2015. "INFLUENCE OF HEAD TEACHERS' GENERAL AND INSTRUCTIONAL SUPERVISORY PRACTICES ON TEACHERS' WORK PERFORMANCE IN SECONDARY SCHOOLS IN ENTEBBE MUNICIPALITY." 6.
- Okilwa, Nathern, and Bruce Barnett. 2017. "Sustaining School Improvement in a High-Need School." *Journal of Educational Administration* 55(3):297–315. doi: 10.1108/JEA-03-2016-0034.
- Paarlberg, Laurie E., and Bob Lavigna. 2010. "Transformational Leadership and Public Service Motivation: Driving Individual and Organizational Performance." *Public Administration Review* 70(5):710–18. doi: <https://doi.org/10.1111/j.1540-6210.2010.02199.x>.
- Pashiardis, Petros, Vassos Savvides, Eleni Lytra, and Kikia Angelidou. 2011. "Successful School Leadership in Rural Contexts: The Case of Cyprus." *Educational Management Administration & Leadership* 39(5):536–53. doi: 10.1177/1741143211408449.
- Peletz, Rachel, Joyce Kisiangani, Mateyo Bonham, Patrick Ronoh, Caroline Delaire, Emily Kumpel, Sara Marks, and Ranjiv Khush. 2018. "Why Do Water Quality Monitoring Programs Succeed or Fail? A Qualitative Comparative Analysis of Regulated Testing Systems in Sub-Saharan Africa." *International Journal of Hygiene and Environmental Health* 221(6):907–20. doi: <https://doi.org/10.1016/j.ijheh.2018.05.010>.
- Perera, Harsha N., Helena Granziera, and Peter McIlveen. 2018. "Profiles of Teacher Personality and Relations with Teacher Self-Efficacy, Work Engagement, and Job Satisfaction." *Personality and Individual Differences* 120:171–78. doi: <https://doi.org/10.1016/j.paid.2017.08.034>.
- Du Plessis, Anna Elizabeth. 2020. "Policies to Build a Strong, Quality and Stable Teaching Workforce: In Spite Of... BT - Out-of-Field Teaching and Education Policy: International Micro-Education Policy." Pp. 207–37 in, edited by A. E. Du Plessis. Singapore: Springer Singapore.
- Rachmawati, Ani Wahyu, and Donald C. Lantu. 2014. "Servant Leadership Theory Development & Measurement." *Procedia - Social and Behavioral Sciences* 115:387–93. doi: <https://doi.org/10.1016/j.sbspro.2014.02.445>.
- Resnick, Lauren B., and Daniel P. Resnick. 1992. "Assessing the Thinking Curriculum: New Tools for Educational Reform BT - Changing Assessments: Alternative Views of Aptitude, Achievement and Instruction." Pp. 37–75 in, edited by B. R. Gifford and M. C. O'Connor. Dordrecht: Springer Netherlands.
- Runhaar, Piety, Judith Konermann, and Karin Sanders. 2013. "Teachers' Organizational Citizenship Behaviour: Considering the Roles of Their Work Engagement, Autonomy and Leader–Member Exchange." *Teaching and Teacher Education* 30:99–108. doi: <https://doi.org/10.1016/j.tate.2012.10.008>.
- Sahito, Zafarullah, and Pertti Vaisanen. 2020. "A Literature Review on Teachers' Job Satisfaction in Developing Countries: Recommendations and Solutions for the Enhancement of the Job." *Review of Education* 8(1):3–34. doi: <https://doi.org/10.1002/rev3.3159>.
- Salas, Eduardo, Katherine A. Wilson, Carrie E. Murphy, Heidi King, and Mary Salisbury. 2008. "Communicating, Coordinating, and Cooperating When Lives Depend on It: Tips for Teamwork." *The Joint Commission Journal on Quality and Patient Safety* 34(6):333–41. doi: [https://doi.org/10.1016/S1553-7250\(08\)34042-2](https://doi.org/10.1016/S1553-7250(08)34042-2).
- Santos, Gina, Carla Susana Marques, Elsa Justino, and Luís Mendes. 2020. "Understanding Social Responsibility's Influence on Service Quality and Student Satisfaction in Higher Education." *Journal of Cleaner Production* 256:120597. doi: <https://doi.org/10.1016/j.jclepro.2020.120597>.
- SCHWARZ, GARY, ALEXANDER NEWMAN, BRIAN COOPER, and NATHAN EVA. 2016. "SERVANT LEADERSHIP AND FOLLOWER JOB PERFORMANCE: THE MEDIATING EFFECT OF PUBLIC SERVICE MOTIVATION." *Public Administration* 94(4):1025–41. doi: <https://doi.org/10.1111/padm.12266>.

- Seidel, Tina, and Richard J. Shavelson. 2007. "Teaching Effectiveness Research in the Past Decade: The Role of Theory and Research Design in Disentangling Meta-Analysis Results." *Review of Educational Research* 77(4):454–99. doi: 10.3102/0034654307310317.
- Sendjaya, Sen, Nathan Eva, Ivan Butar Butar, Mulyadi Robin, and Samantha Castles. 2019. "SLBS-6: Validation of a Short Form of the Servant Leadership Behavior Scale." *Journal of Business Ethics* 156(4):941–56. doi: 10.1007/s10551-017-3594-3.
- Sendjaya, Sen, and Andre Pekerti. 2010. "Servant Leadership as Antecedent of Trust in Organizations." *Leadership & Organization Development Journal* 31(7):643–63. doi: 10.1108/01437731011079673.
- Shah, Ashfaq Ahmad, Zaiwu Gong, Indrajit Pal, Ruiling Sun, Wahid Ullah, and Gowhar Farooq Wani. 2020. "Disaster Risk Management Insight on School Emergency Preparedness – A Case Study of Khyber Pakhtunkhwa, Pakistan." *International Journal of Disaster Risk Reduction* 51:101805. doi: <https://doi.org/10.1016/j.ijdr.2020.101805>.
- Shen, Jianping, Huang Wu, Patricia Reeves, Yunzheng Zheng, Lisa Ryan, and Dustin Anderson. 2020. "The Association between Teacher Leadership and Student Achievement: A Meta-Analysis." *Educational Research Review* 31:100357. doi: <https://doi.org/10.1016/j.edurev.2020.100357>.
- Silva, F. R., and A. Pinto. 2023. "European Journal of Educational Management." *European Journal of Educational Management* 4(1):1–11.
- Smit, Robbert, and Winfried Humpert. 2012. "Differentiated Instruction in Small Schools." *Teaching and Teacher Education* 28(8):1152–62. doi: <https://doi.org/10.1016/j.tate.2012.07.003>.
- Smith, Karl A., Sheri D. Sheppard, David W. Johnson, and Roger T. Johnson. 2005. "Pedagogies of Engagement: Classroom-Based Practices." *Journal of Engineering Education* 94(1):87–101. doi: <https://doi.org/10.1002/j.2168-9830.2005.tb00831.x>.
- Taylor, Monica, Jennifer Goeke, Emily Klein, Cynthia Onore, and Kristi Geist. 2011. "Changing Leadership: Teachers Lead the Way for Schools That Learn." *Teaching and Teacher Education* 27(5):920–29. doi: <https://doi.org/10.1016/j.tate.2011.03.003>.
- Taylor, Tim, Barbara N. Martin, Sandy Hutchinson, and Michael Jinks. 2007. "Examination of Leadership Practices of Principals Identified as Servant Leaders." *International Journal of Leadership in Education* 10(4):401–19. doi: 10.1080/13603120701408262.
- Tierney, William G. 1988. "Organizational Culture in Higher Education." *The Journal of Higher Education* 59(1):2–21. doi: 10.1080/00221546.1988.11778301.
- Tschannen-Moran, Megan, and Christopher R. Gareis. 2015. "Faculty Trust in the Principal: An Essential Ingredient in High-Performing Schools" edited by H. E. Price and Nienke M. Moolenaar. *Journal of Educational Administration* 53(1):66–92. doi: 10.1108/JEA-02-2014-0024.
- Vescio, Vicki, Dorene Ross, and Alyson Adams. 2008. "A Review of Research on the Impact of Professional Learning Communities on Teaching Practice and Student Learning." *Teaching and Teacher Education* 24(1):80–91. doi: <https://doi.org/10.1016/j.tate.2007.01.004>.
- Vogus, Timothy J., Laura E. McClelland, Yuna S. H. Lee, Kathleen L. McFadden, and Xinyu Hu. 2021. "Creating a Compassion System to Achieve Efficiency and Quality in Health Care Delivery." *Journal of Service Management* 32(4):560–80. doi: 10.1108/JOSM-05-2019-0132.
- Webster-Stratton, Carolyn, M. Jamila Reid, and Mary Hammond. 2001. "Preventing Conduct Problems, Promoting Social Competence: A Parent and Teacher Training Partnership in Head Start." *Journal of Clinical Child & Adolescent Psychology* 30(3):283–302. doi: 10.1207/S15374424JCCP3003_2.
- Werang, Basilius Redan, Anak Agung Gede Agung, I. Nyoman Jampel, I. Wayan Sujana, and Sandra Ingried Asaloei. 2023. "Exploring the Outside-the-Box Leadership of an Indonesian School Principal: A Qualitative Case Study." *Cogent Education* 10(2):2255091. doi: 10.1080/2331186X.2023.2255091.
- Westley, Katherine E. 2011. "Teacher Quality and Student Achievement." *Teacher Quality and Student Achievement* 8(1):1–215. doi: 10.14507/epaa.v8n1.2000.
- Winston, Bruce, and Dail Fields. 2015. "Seeking and Measuring the Essential Behaviors of Servant Leadership." *Leadership & Organization Development Journal* 36(4):413–34. doi: 10.1108/LODJ-10-2013-0135.
- Zakaria, Norhayati, and Asmat-Nizam Abdul-Talib. 2010. "Applying Islamic Market-oriented Cultural Model to Sensitize Strategies towards Global Customers, Competitors, and Environment." *Journal of Islamic Marketing* 1(1):51–62. doi: 10.1108/17590831011026222.
- Zepeda, Cristina D., Christina O. Hlutkowsky, Anne C. Partika, and Timothy J. Nokes-Malach. 2019. "Identifying Teachers' Supports of Metacognition through Classroom Talk and Its Relation to Growth in Conceptual Learning." *Journal of Educational Psychology* 111(3):522–41. doi: 10.1037/edu0000300.
- Zhang, Jiangshi, Jing Fu, Hongyu Hao, Gui Fu, Fangchao Nie, and Wenyue Zhang. 2020. "Root Causes of Coal Mine Accidents: Characteristics of Safety Culture Deficiencies Based on Accident Statistics." *Process Safety and Environmental Protection* 136:78–91. doi: <https://doi.org/10.1016/j.psep.2020.01.024>.
- Zhang, Yucheng, Yuyan Zheng, Long Zhang, Shan Xu, Xin Liu, and Wansi Chen. 2021. "A Meta-Analytic Review of the Consequences of Servant Leadership: The Moderating Roles of Cultural Factors." *Asia Pacific Journal of Management* 38(1):371–400. doi: 10.1007/s10490-018-9639-z.
- Zhu, Ruijie, Ziwen Liu, Guojing Zhao, Zhaoxin Huang, and Qiaoyan Yu. 2023. "The Impact of Institutional Management on Teacher Entrepreneurship Competency: The Mediating Role of Entrepreneurial Behaviour." *The International Journal of Management Education* 21(2):100794. doi: <https://doi.org/10.1016/j.ijme.2023.100794>.